

REPORT ON THE LEPIDOPTERA OF THE SMITHSONIAN
BIOLOGICAL SURVEY OF THE PANAMA CANAL ZONE.

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The present paper deals with the so-called Macrolepidoptera collected in Panama under the auspices of the Smithsonian Biological Survey, in the Canal Zone and from localities outside of it.

Most of the specimens here treated were collected by Mr. August Busck, who went primarily to collect "Micros" and took the "Macros" only as a side issue. Consequently the larger "Macros," especially the Papilionoidea and the larger moths will be found poorly represented in this list. The little "Macros," especially the small Noctuidæ, Lithosiidæ, and Pyralidæ, will be found unusually well represented, many hitherto undiscovered species being among them.

There are reported on here 8,254 specimens in 1,713 species. Some additional material, which proved impracticable to incorporate, will raise the total number of specimens in the collection to about 9,000, but will not increase the number of species greatly.

Superfamily PAPHILIONOIDEA.

Family PAPHILIONIDÆ.

PAPHILIO THOAS NEACLES Rothschild and Jordan.

2. ¹ Cabima, ² May, 1911 (Busck); Ancon, Canal Zone (O. Celestine).

PAPHILIO ERITHALION Boisduval.

9. Porto Bello, March, 1911 (Busck); Trinidad River, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

PAPHILIO POLYDAMAS Linnæus.

1. Ancon, Canal Zone (O. Celestine).

PAPHILIO XANTICLES Bates.

1. La Chorrera, May, 1912 (Busck).

PAPHILIO ILUS Fabricius.

1. Cabima, May, 1911 (Busck).

¹ The number preceding the localities indicates the number of specimens of the species before me.

² The locality Panama is to be understood in each instance.

Family PIERIDÆ.

PIERIS MARGARITA Hübner.

1. Trinidad River, June, 1912 (Busck).

PIERIS MONUSTE Linnæus.

2. Panama City, January, 1913 (B. G. Ireneo.)

PIERIS PANDROSIA Hewitson.

9. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Paraiso, Canal Zone, April, 1911 (Busck).

PIERIS KICAHA Reakirt.

1. Alhajuelo, April, 1911 (Busck).

PIERIS JOSEPHA Godman and Salvin.

2. Alhajuelo, April, 1911 (Busck).

PIERIS MELENEKA Hewitson.

3. Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

The three specimens are females and all differently marked.

CALLIDRYAS EUBULE Linnæus.

5. Ancon, Canal Zone (O. Celestine); La Chorrera, April, 1912 (Busck); Panama City, May, 1912 (B. G. Ireneo).

CALLIDRYAS PHILEA Linnæus.

2. La Chorrera, May, 1912 (Busck).

PHOEBIS ARGANTE Fabricius.

7. Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck); Paraiso, Canal Zone, June, 1911 (Busck); Trinidad River, June, 1912 (Busck).

PHOEBIS AGARITHE Boisduval.

1. La Chorrera, May, 1912 (Busck).

APHRISSA STATIRA Cramer.

5. Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

RHABDODRYAS TRITE Linnæus.

1. Trinidad River, June, 1912 (Busck).

DISMORPHIA DISCREPANS Butler.

2. Trinidad River, March, 1911 (Busck).

TERIAS NEDA Godart.

1. Paraiso, Canal Zone, February, 1911 (Busck).

TERIAS TENELLA Boisduval.

2. Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TERIAS ALBULA Cramer.

7. Porto Bello, March, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Taboga Island, June, 1911 (Busck).

TERIAS CEPIO Butler.

15. Taboga Island, February, 1912 (Busck); Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck).

TERIAS ELATHEA Cramer.

1. Ancon, Canal Zone (O. Celestine).

TERIAS PERSISTENS Butler.

1. La Chorrera, May, 1912 (Busck).

Family NYMPHALIDÆ.

Subfamily NYMPHALINÆ.

METAMORPHA DIDO Linnæus.

1. Trinidad River, May, 1911 (Busck).

COLAENIS JULIA Fabricius.

10. Porto Bello, February, 1911, April, 1912 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck); Trinidad River, March, 1912 (Busck).

COLAENIS PHÆRUSA Linnæus.

10. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck); Trinidad River, May, 1911 (Busck); Ancon, Canal Zone (O. Celestine).

AGRAULIS VANILLÆ Linnæus.

1. Ancon, Canal Zone (O. Celestine).

EUPTOIETA HEGESIA Cramer.

2. Ancon, Canal Zone (O. Celestine); Panama City, June, 1912 (B. G. Ireneo).

SYNCHLOË LACINIA Geyer.

2. Ancon, Canal Zone (O. Celestine); Penonome, Province of Coele, February, 1913 (B. G. Ireneo).

SYNCHLOË HYPERIA Fabricius.

6. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

ERESIA CLARA Bates.

3. Paraiso, Canal Zone, February, 1911 (Busck).

ERESIA OFELLA Hewlton.

1. Alhajuelo, April, 1911 (Busck).

ERESIA DRYPATIS Godman and Salvin.

2. Trinidad River, March and June, 1912 (Busck).

PHYCIODES LEUCODESMA Felder.

8. Paraiso, Canal Zone, January, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Ancon, Canal Zone (O. Celestine).

PHYCIODES FRAGILIS Bates.

4. Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

PHYCIODES PTOLYCA Bates.

4. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

PHYCIODES TULCIS Bates.

6. Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Trinidad River, May, 1911 (Busck); Panama City, February, 1913 (B. G. Ireneo).

JUNONIA CÆNIA Hübner.

1. Alhajuelo, April, 1911 (Busck).

ANARTIA JATROPHÆ Linnæus.

9. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, April, 1912 (Busck); Panama City, September, 1912 (B. G. Ireneo).

ANARTIA FATIMA Fabricius.

11. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, April, 1912 (Busck); Ancon, Canal Zone (O. Celestine); Panama City, September, 1912 (B. G. Ireneo); Trinidad River, March, 1912 (Busck).

EUNICA MODESTA Bates.

1. Porto Bello, April, 1911 (Busck).

NICA CANTHARA Doubleday.

5. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, June, 1911 (Busck); Trinidad River, March, 1912 (Busck).

EPICALIA NYCTIMUS Westwood.

2. Cabima, May, 1911 (Busck).

EUBAGIS SALPENZA Felder.

2. Porto Bello, February, 1911 (Busck).

EUBAGIS POSTVERTA Cramer.

4. Taboga Island, February, 1912 (Busck).

EUBAGIS PIERIDOIDES Felder.

2. Taboga Island, February, 1912 (Busck); Trinidad River, June, 1912 (Busck).

GYNÆCIA DIRCE Linnæus.

2. Panama City, September, 1912 (B. G. Ireneo); Trinidad River, March, 1912 (Busck).

CALLIZONA ACESTE Linnæus.

1. Trinidad River, March, 1912 (Busck).

PERIDROMIA FERONIA Linnæus.

2. Paraiso, Canal Zone, June, 1911 (Busck); Trinidad River, March, 1912 (Busck).

PERIDROMIA FERENTINA Godart.

2. La Chorrera, May, 1912 (Busck); Ancon, Canal Zone (O. Celestine).

TIMESTES CHIRON Fabricius.

1. Alhajuelo, May, 1911 (Busck).

PYRRHOGYRA CRAMERI Aurivillius.

1. Trinidad River, June, 1912 (Busck).

ADELPHA URRACA Felder.

1. Porto Bello, April, 1912 (Busck).

ADELPHA CYTHEREA Linnæus.

4. Porto Bello, February, 1911 (Busck); Trinidad River, March and June, 1912 (Busck).

ADELPHA IPHICLA Linnæus.

1. Taboga Island, February, 1912 (Busck).

Subfamily SATYRINÆ.

PIERELLA LUNA Fabricius.

1. Porto Bello, March, 1911 (Busck).

ANTIRRHEA MILTIADES Fabricius.

1. Taboga Island, February, 1912 (Busck).

EUPTYCHIA OCIRRHOE Fabricius.

2. Porto Bello, February, 1911, April, 1912 (Busck).

EUPTYCHIA MOLLINA Hübner.

5. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, March, 1911, April, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

EUPTYCHIA CONFUSA Staudinger.

1. Paraiso, Canal Zone, February, 1911 (Busck).

EUPTYCHIA EBUSA Cramer.

1. Paraiso, Canal Zone, January, 1911 (Busck).

EUPTYCHIA LIBYE Linnæus.

4. Paraiso, Canal Zone, January, 1911 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

EUPTYCHIA MARISEA, new species.

Dark brown; fore wing with a black spot centrally above vein 1 surrounding a longitudinal tuft of hair; no markings. Beneath light lilacine gray; both wings with two broad straight central rusty brown bands as in *libye* Linnæus; a double narrow marginal line and broad wavy submarginal one. Fore wing with a small subapical ocellus, followed below by a brown band. Hind wing with five ocelli, second and fifth from apex large. Expanse, 31 mm.

Type.—Male No. 15752, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

EUPTYCHIA PHARES Godart.

5. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck).

EUPTYCHIA CAMERTA Cramer.

20. Paraiso, Canal Zone, January, 1911 (Busck); Taboga Island, February, 1912 (Busck); Porto Bello, March, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

TAYGETIS KERIA Butler.

1. Alhajuelo, April, 1911 (Busck).

TAYGETIS ANDROMETA Cramer.

8. Taboga Island, January, 1911, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

Subfamily BRASSOLINÆ.

ERYPHANIS AUTOMEDON Cramer.

1. Taboga Island, February, 1912 (Busck).

CALIGO EURYLOCHUS Cramer.

1. Porto Bello, February, 1911 (Busck).

CALIGO OILEUS HYPOSCHESES, new subspecies.

Differs from *oileus* Felder in the basal two-thirds of fore wing being washed with pale ochereous. Spots at apices of fore wing nearly obsolete. Hind wing strongly touched with white on margin. Expanse, 97 mm.

Cotypes.—Two males, No. 15753, U.S.N.M.; Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, May, 1911 (Busck).

The specimens are small. The variety *scamander* Boisduval has an ochereous band beyond cell, but in this the color is evenly diffused nearly to base.

BRASSOLIS ISTHMIA Bates.

4. Taboga Island, February, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); also pupæ, Ancon, Canal Zone (H. F. Schultz); adults, larva and pupa from cocoanut trees, Panama City, April, 1913 (B. G. Ireneo).

OPSIPHANES INVIRÆ Hübner.

1. Paraiso, Canal Zone, January, 1911 (Busck).

OPSIPHANES CASSLÆ Linnæus.

1. Ancon, Canal Zone (O. Celestine).

Subfamily MORPHINÆ.

MORPHO PELEIDES Kollar.

15. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

MORPHO AMATHONTE Deyrolle.

2. Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911, (Busck).

Subfamily DANAINÆ.

DANAIS PLEXIPPUS Linnæus.

1. Ancon, Canal Zone (O. Celestine).

DANAIS GILIPPUS Cramer.

1. Ancon, Canal Zone (O. Celestine).

DANAIS BERENICE Cramer.

1. Paraiso, Canal Zone, June, 1911 (Busck).

LYCOREA CLEOBÆA Godart.

1. Chiriqui, September, 1912 (B. G. Ireneo).

TITHOREA HIPPOTHOUS Godman and Salvin.

1. Porto Bello, February, 1912 (Busck).

MELINEA IDÆ Felder.

5. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); Trinidad River, May, 1911, June, 1912 (Busck); Ancon, Canal Zone (B. G. Ireneo).

AERIA AGNA Godman and Salvin.

4. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck); Paraiso, Canal Zone, January, 1911 (Busck).

MECHANITIS MACRINUS Hewitson.

2. Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

MECHANITIS ISTHMIA Bates.

9. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); Ancon, Canal Zone (O. Celestine); Panama City (B. G. Ireneo).

SCADA XANTHINA Bates.

1. Trinidad River, June, 1912 (Busck).

CERATINIA MEGALOPOLIS Felder.

1. Porto Bello, February, 1911 (Busck).

CERATINIA LEUCANIA Bates.

3. Trinidad River, June, 1912 (Busck); Panama City (B. G. Ireneo).

CERATINIA CLEIS Bates.

3. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); Ancon, Canal Zone (B. G. Ireneo).

DIRCENNA EUCHYTMA Felder.

2. Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

EPITHOMIA CALLIPERO Bates.

6. Trinidad River, March, 1912, May, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

CALLOLERIA TUTIA Hewitson.

2. Paraiso, Canal Zone, January, 1911 (Busck); Trinidad River, June, 1912 (Busck).

LEUCOTHYRIS PAULA Weymer.

2. Porto Bello, March, 1911 (Busck); Trinidad River, June, 1912 (Busck).

HYPOLERIA LIBERA Godman and Salvin.

1. Cabima, May, 1911 (Busck).

Subfamily *HELICONINÆ*.*HELICONIUS JUCUNDUS* Bates.

6. Cabima, May, 1911 (Busck); Porto Bello, May, 1911 (Busck); Trinidad River, March, 1912, May, 1911, June, 1912 (Busck).

HELICONIUS ALBUCILLA Bates.

4. Trinidad River, March, 1912 (Busck); Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck).

HELICONIUS ISMENIUS Latreille.

1. Porto Bello, February, 1911 (Busck).

HELICONIUS CHARITHONIA Linnæus.

2. La Chorrera, May, 1912 (Busck); Ancon, Canal Zone (O. Celestine).

HELICONIUS CLAUDIA Godman and Salvin.

1. Paraiso, Canal Zone, February, 1911 (Busck).

HELICONIUS PETIVERANUS Doubleday.

42. Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck); Arajan, May, 1911 (Busck); Taboga Island, June, 1911 (Busck); Paraiso, Canal Zone, June, 1911 (Busck); Trinidad River, June, 1912 (Busck); Panama City (B. G. Ireneo).

HELICONIUS MELPOMENE Linnæus.

16. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); Paraiso, Canal Zone, June, 1911 (Busck); Taboga Island, June, 1911 (Busck); Panama City (B. G. Ireneo).

HELICONIUS CHIONEUS Bates.

1. Cabima, May, 1911 (Busck)

HELICONIUS ZULEIKA Hewitson.

1. Trinidad River, March, 1912 (Busck).

HELICONIUS MAGDALENA Bates.

11. Trinidad River, March, 1912, May, 1911, and June, 1912 (Busck); Cabima, May, 1911 (Busck).

HELICONIUS ERATO Linnæus.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

EUEIDES ZORCAON Reakirt.

5. Paraiso, Canal Zone, May, 1911 (Busck).

EUEIDES ALIPHERA Godart.

1. Alhajuelo, April, 1911 (Busck).

Family RIODINIDÆ.

EURYBIA LYCISCA Doubleday and Hewitson.

1. Porto Bello, April, 1912 (Busck).

EURYBIA UNXIA Godman and Salvin.

4. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck).

EURYBIA HALIMEDE Hubner.

2. Alhajuelo, April, 1911 (Busck).

DIORHINA PERIANDER Cramer.

1. Trinidad River, March, 1912 (Busck).

ERYCINA INCA Staudinger.

1. Trinidad River, March, 1912 (Busck).

MESOSEMIA TELEGONE Boisduval.

9. Taboga Island, February and June, 1911 (Busck); Trinidad River, March, 1912 (Busck).

MESOSEMIA MOLINA Godman and Salvin.

3. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

MESOSEMIA ASA Hewitson.

2. Porto Bello, February, 1911 (Busck).

CHIMASTRUM ARGENTEUM Bates.

1. Taboga Island, February, 1912 (Busck).

OTACUSTESIS, new genus.

Venation essentially as in *Cartea* Kirby,¹ but vein 5 arising from upper fourth of cross vein and 10 arising shortly beyond end of cell instead of from the same point as 6, 6 therefore well beyond 10. Palpi short, not visible from above.

Type of the genus—*Otacustesis pericopidis*, new species.

OTACUSTESIS PERICOPIDIS, new species.

Fore wing black; a row of four white-hyaline elongate spots across the apex between veins 3 to 7; a subhyaline streak in lower half of cell, one above vein 2 and two in submedian interspace, all faintly washed with violaceous. Hind wing reddish orange with black border, strongly indented on the veins. Body black; orbits, collar, palpi, and anal tuft orange; abdomen washed with whitish on the sides and venter.

Type.—No. 15754, U.S.N.M., Paraiso, Canal Zone, February, 1911 (Busck).

MESENE RUBELLA Bates.

1. Paraiso, Canal Zone, February, 1911 (Busck).

BAEOTIS ZONATA Felder.

1. Taboga Island, February, 1911 (Busck).

PEROPHTHALMA TENERA Westwood.

3. Paraiso, Canal Zone, January, 1911 (Busck).

CHARIS AVIUS Cramer.

2. Porto Bello, February and March, 1911 (Busck).

CHARIS HERMODORA Felder.

14. Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); Porto Bello, April, 1911 (Busck); Taboga Island, June, 1911 (Busck); Paraiso, Canal Zone, June, 1911 (Busck).

CHARIS GYNAEA Godart.

5. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, March, 1912 (Busck); Taboga Island, June, 1911 (Busck).

SAROTA CHRYSUS Cramer.

3. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck).

¹ See Stichel, Gen. Ins., Lep. Rhop., Riodinidae, 1910, pl. 10, fig. 39, p. 157.

ANTEROS FORMOSUS Cramer.

1. Porto Bello, April, 1912 (Busck).

EMESIS FASTIDIOSA Ménétries.

2. Taboga Island, February, 1912, and June, 1911 (Busck).

METACHARIS VICTRIX Hewitson.

5. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

LEMONIAS LEUCIANUS Hübner.

14. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck).

LEMONIAS CILISSA Hewitson.

1. Cabima, May, 1911 (Busck).

LEMONIAS PELARGE Godman.

1. Taboga Island, February, 1912 (Busck).

THISBE IRENAEA Cramer.

1. Taboga Island, February, 1912 (Busck).

NYMPHIDIUM ADELPHINUM Godman and Salvin.

1. Chiriqui, September, 1912 (B. G. Ireneo).

NYMPHIDIUM MANTUS Cramer.

2. Trinidad River, March and April, 1912 (Busck).

NYMPHIDIUM LAMIS Cramer.

1. Alhajuelo, April, 1911 (Busck).

NYMPHIDIUM ASCOLIA Hewitson.

2. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

NYMPHIDIUM MOLPE Hübner.

2. Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck).

ARICORIS JANSONI Butler.

3. Porto Bello, February, 1911 (Busck); Trinidad River, March and June, 1912 (Busck).

HAMEARIS EROSTRATUS Doubleday and Hewitson.

1. Taboga Island, June, 1911 (Busck).

HAMEARIS DOMINA Bates.

3. Porto Bello, April, 1912 (Busck); Taboga Island, June, 1911 (Busck).

THEOPE VIRGILIUS Fabricius

1. Taboga Island, February, 1912 (Busck).

THEOPE FOLIORUM Bates.

2. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck).

Family LYCAENIDÆ.

THECLA DAMO Druce.

1. Taboga Island, February, 1912 (Busck).

THECLA HEMON Cramer.

1. Alhajuelo, April, 1911 (Busck).

THECLA AUFIDENA Hewitson.

3. Paraiso, Canal Zone, January, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Taboga Island, June, 1911 (Busck).

THECLA PHALEROS Linnæus.

3. Taboga Island, February, 1912 (Busck).

THECLA TOGARNA Hewitson.

12. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

THECLA DOLYLAS Cramer.

1. Cabima, May, 1911 (Busck).

THECLA PALEGON Cramer.

1. Porto Bello, April, 1912 (Busck).

THECLA ERICUSA Hewitson.

1. Paraiso, Canal Zone, January, 1911 (Busck).

THECLA CYDRARA Hewitson.

1. Trinidad River, March, 1912 (Busck).

THECLA ECHION Linnæus.

3. Taboga Island, February, 1912 (Busck).

THECLA HESPERITIS Butler and Druce.

3. Taboga Island, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); Trinidad River, June, 1912 (Busck).

THECLA BEON Cramer.

19. Paraiso, Canal Zone, January, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Trinidad River, June, 1912 (Busck).

THECLA TREBULA Hewitson.

5. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck).

THECLA CERATA Hewitson.

9. Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

THECLA SYNCELLUS Cramer.

1. Taboga Island, February, 1912 (Busck).

THECLA POLITUS H. H. Druce.

1. Alhajuelo, April, 1911 (Busck).

THECLA XENETA Hewitson.

3. Taboga Island, February, 1912 (Busck); Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck).

THECLA TAREMA Hewitson.

1. Tabernilla, Canal Zone, May, 1907 (Busck).

THECLA ELIMES, new species.

Male.—Costa of fore wing angled above base; black, light blue at base, sharply limited, two-thirds of cell, small area above base of

vein 2 to inner margin before tornus. Hind wing all blue except costal area just encroaching on cell, then above vein 6 at margin. A long slender tail at vein 2, short one at 3. Below soft light gray. Fore wing with large area of rough scales covered by costal expansion of hind wing. An outer broken white line from subcostal to 2. Hind wing with outer line white, broken into spots, a large one above vein 7 edged within by black, forming a dentate line at 1b and 2; submarginal line parallel to the edge, blackish, powdery, in white irrorations, distinct near inner margin; a red spot with black center in interspace 2-3; black powderings on white in 1b-2. Expanse, 33-35 mm.

Cotypes.—Two males, No. 15756, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Apparently near *ecameda* Hewitson and *sichæus* Cramer.

THECLA BURICA, new species.

Male.—Bright blue; fore wing with large stigma in cell black, apex broadly black. Hind wing with a narrow black margin, becoming broad on inner margin. Long slender tail at vein 2. Beneath gray bronzy; fore wing with dark area in cell by transparency; outer line faint, white, dark-edged from subcoastal to 2. Hind wing with outer line irregular, segmented, forming a W at veins 1b to 3, white, edged by black within; black and white powderings submarginally from tornus to 3, no red; edge black, preceded by whitish. Expanse, 25 mm.

Type.—Male, No. 15757, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Apparently near to *leberna* Hewitson.

THECLA CLIMICLES, new species.

Male.—Fore wing with costa angled opposite cell; bright blue, shading to black at costa and margin. Hind wing blue, costa black to subcostal and 6 and margin narrowly; fringe white. A long tail at vein 2, short one at 3. Below white, scarcely gray tinted; fore wing with faint dusky outer line to vein 2. Hind wing with outer line angularly crenulate, faint, forming no W; submarginal line faint dusky, crenulate; a small red-edged black dot in interspace 2-3 and dot at tornus. Expanse, 25 mm.

Type.—Male, No. 15758, U.S.N.M.; Taboga Island, February, 1912 (Busck).

Resembles *dindymus* Cramer.

THECLA POSETTA, new species.

Fore wing angled opposite base of cell; black, shaded with lilacine blue over base to beyond middle. Hind wing blue shaded, except along margin; red scales and white dot at tornus. Below brownish gray; fore wing with the outer broad rusty brown band from costa to vein 2, running close beyond cell. Hind wing with similar broad

band forming the inner edge of a white line that becomes a blunt W at veins 1b to 3, the dark edge of the inner limb narrow; submarginal line dusky, parallel to edge of wing; a red spot with black center in interspace 2-3; black patch on tornus preceded by white, then a red bar. Expanse, 27 mm.

Type.—Male, No. 15759, U.S.N.M.; Porto Bello, April, 1912 (Busck).

Resembles *ecbatania* Hewitson.

THECLA CALLIDES, new species.

Brown-gray; fore wing uniform; hind wing slightly whitish bordered toward margin with red patch in interspace 2-3 and tornus and black one between; termen with white interlined with black. A long tail at vein 2, short one at 3, black, white-tipped. Below gray, slightly coppery; fore wing with white segmented outer line from costa to vein 2, preceded by a red border; subterminal line dusky, segmented. Hind wing with white outer line segmented, dislocated on vein 4, forming a W from 3 to margin, preceded by a rather broad red band; submarginal line dusky, forming an arc over a large red spot in interspace 2-3, red-edged next to tornus; black pupil in red spot placed outwardly; a black spot at tornus; black powdering between. Terminal line black, preceded by whitish. Expanse, 21 mm.

Cotypes.—Two females, No. 15760, U.S.N.M.; La Chorrera, April, 1912 (Busck); Trinidad River, March, 1912 (Busck).

Resembles *sangala* Hewitson. Possibly it is the female of *xeneta* Hewitson.

THECLA HERALDICA, new species.

Black; fore wing with blue tint at base; hind wing with large shining blue area occupying all but broad costal and inner areas and narrow outer margin. Tail at vein 2 filiform. Below gray, lighter on marginal area; fore wing with outer line from costa to vein 1, in-angled in submedian, white, reddish gray within. Hind wing with a similar line, dislocated on vein 4, forming a shallow W between vein 3 and margin, with more red scales in the dark edge than on fore wing; a red spot with black center in interspace 2-3; red at tornus; terminal line black, preceded by white. Expanse, 20 mm.

Type.—No. 15761, U.S.N.M.; Porto Bello, April, 1912 (Busck).

Resembles *hycara* Hewitson.

THECLA MESCA, new species.

Grayish black. Hind wing with red crescent before a black spot in interspace 2-3, preceded and followed by clouded white crescents; a small red patch at tornus; terminal line black, preceded by white. Below whitish gray. Fore wing with outer line from costa to vein 2, white, preceded by gray; submarginal line clouded, segmented, dusky. Hind wing with mesial line white, preceded by reddish gray, seg-

mented and dislocated by all the veins, the W slight, hardly more than the other dislocations, the bar 1b-margin black; termen broadly mottled, gray with a row of white crescents before and centrally; a large red patch in interspace 2-3 with black spot outwardly; tornus diffusely red-scaled over black dot. Expanse, 27 mm.

Type.—No. 15762, U.S.N.M.; Taboga Island, June, 1911 (Busck).

Resembles *bebrycia* Hewitson and *chonida* Hewitson.

LYCAENA HANNO Stoll.

10. Paraiso, Canal Zone, January, 1911 (Busck); Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1911 (Busck).

Family HESPERIIDÆ.

PYRRHOPYGE PHIDIAS Linnæus.

1. Paraiso, Canal Zone, February, 1911 (Busck).

MYSORIA VENEZUELÆ Cramer.

2. Ancon, Canal Zone (O. Celestine, B. G. Ireneo).

EUDAMUS PROTEUS Linnæus.

1. Ancon, Canal Zone (B. G. Ireneo).

EUDAMUS SIMPLICIUS Stoll.

1. Ancon, Canal Zone (O. Celestine).

EUDAMUS EURYCLES Hübner.

4. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck).

EUDAMUS DORYSSUS Drury.

1. Taboga Island, February, 1912 (Busck).

EUDAMUS DORANTES Stoll.

1. Taboga Island, June, 1911 (Busck).

EUDAMUS CATILLUS Cramer.

1. Taboga Island, February, 1912 (Busck).

EUDAMUS ASINE Hewitson.

1. Paraiso, Canal Zone, April, 1911 (Busck).

GONIURUS COELUS Cramer.

1. Taboga Island, February, 1912 (Busck).

GONIURUS TALUS Cramer.

1. Porto Bello, February, 1911 (Busck).

SPATHILEPIA CLONIUS Cramer.

2. Paraiso, Canal Zone, April, 1911 (Busck).

TELEMIADES AMPHION Geyer.

1. Taboga Island, February, 1912 (Busck).

BUNGALOTIS SEBRUS Felder.

1. Cabima, May, 1911 (Busck).

CECROPTERUS NEIS Gmelin.

6. Taboga Island, February and June, 1911 (Busck); Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

COGIA CALCHAS Herrich-Schäffer.

2. Trinidad River, March, 1912 (Busck); Taboga Island, June, 1911 (Busck).

The specimens are both males and very small (30 mm.).

HYDRAENOMIA ORCINUS Felder.

1. Porto Bello, February, 1911 (Busck).

HYALOTHYRUS NELEUS Linnæus.

1. Alhajuelo, April, 1911 (Busck).

LIGNYOSTOLA LACYDUS Druce.

1. Paraiso, Canal Zone, January, 1911 (Busck).

PYTHONIDES CERALIS Cramer.

1. Taboga Island, February, 1912 (Busck).

PELLICIA THYESTES Godman and Salvin.

2. Porto Bello, February, 1911 (Busck).

CELAENORRHINUS VARIEGATUS Godman and Salvin.

1. Taboga Island, February, 1912 (Busck).

ACHYLODES COELIGINEA Mabille.

2. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck).

ACHYLODES PLAUTIA Möscher.

1. Alhajuelo, April, 1911 (Busck).

ACHYLODES TERRENS Schaus.

5. Taboga Island, February, 1912 (Busck).

SOSTRATA SCINTILLANS Mabille.

1. Alhajuelo, April, 1911 (Busck).

SOSTRATA LEUCORHOA Godman and Salvin.

1. Paraiso, Canal Zone, January, 1911 (Busck).

PACHES LOXUS Westwood.

5. Paraiso, Canal Zone, January, 1911 (Busck); Taboga Island, February, 1912 (Busck); Porto Bello, February, 1911 and April, 1912 (Busck).

PACHES SUBALBATUS Plötz.

1. Paraiso, Canal Zone, January, 1911 (Busck).

EANTIS THRASO Hübner.

1. Taboga Island, June, 1911 (Busck).

CAMPTOPLEURA THERAMENES Mabille.

1. Taboga Island, February, 1912 (Busck).

CAMPTOPLEURA TISIAS Godman and Salvin.

1. Alhajuelo, April, 1911 (Busck).

STAPHYLUS MAZANS Reakirt.

2. Taboga Island, February, 1912, and June, 1911 (Busck).

STAPHYLUS EVIPPE Godman and Salvin.

1. Trinidad River, March, 1912 (Busck).

HELIOPETES ARSALTE Linnæus.

4. Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

HELIOPETES ALANA Reakirt.

1. Taboga Island, February, 1912 (Busck).

HESPERIA SYRICHTUS Fabricius.

3. Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck).

HESPERIA NOTATA Blanchard.

2. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

APAUSTUS MENES Cramer.

1. Porto Bello, March, 1911 (Busck).

HYLEPHILA PHYLAEUS Drury.

1. Porto Bello, April, 1912 (Busck).

THYMELICUS ATHENION Hübner.

8. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Porto Bello, March, 1911 and April, 1912 (Busck).

CATIA PUSTULA Hübner.

1. La Chonera, April, 1912 (Busck).

PRENES NERO Fabricius.

1. Taboga Island, June, 1911 (Busck).

PARAIDES OCRINUS Plötz.

2. Paraiso, Canal Zone, April, 1911 (Busck).

OXYNTHES CORUSCIS Herrich-Schäffer.

1. Alhajuelo, April, 1911 (Busck).

RHINTHON ALUS Godman and Salvin.

1. Alhajuelo, April, 1911 (Busck).

LERODEA TRIPUNCTATA Herrich-Schäffer.

1. Alhajuelo, April, 1911 (Busck).

COBALUS VIRBIUS Cramer.

3. Trinidad River, March, 1912 (Busck).

COBALUS CANNAE Herrich-Schäffer.

1. Paraiso, Canal Zone, February, 1911 (Busck).

ONOPHAS COLUMBARIA Herrich-Schäffer.

1. Taboga Island, February, 1912 (Busck).

PERIMELES REMUS Fabricius.

8. Taboga Island, February and April, 1912, June, 1911 (Busck).

EUTYCHIDE MIDIA Hewitson.

1. Trinidad River, 1912 (Busck).

EUTYCHIDE PHAETUSA Hewitson.

1. Trinidad River, June, 1912 (Busck).

EUROTO LYDE Godman and Salvin.

2. Taboga Island, February, 1912 (Busck); Cabima, May, 1911. (Busck).

EUROTO MICYTHUS Godman and Salvin.

1. Taboga Island, February, 1912 (Busck).

LEREMA ACCIUS Smith and Abbot.

1. Taboga Island, February, 1912 (Busck).

METISCUS ATHEAS Godman and Salvin.

1. Trinidad River, March, 1912 (Busck).

THARGELLA FULIGINOSA Godman and Salvin.

1. Paraiso, Canal Zone, January, 1911 (Busck).

MNASITHIUS SIMPLICISSIMUS Herrich-Schäffer.

3. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Porte Bello, March, 1911 (Busck).

VEHILIUS VENOSUS Plötz.

7. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck).

MEGISTIAS LABDACUS Godman and Salvin.

1. Porto Bello, March, 1911 (Busck).

MEGISTIAS CERDO Boisduval.

1. Alhajuelo, April, 1911 (Busck).

CARYSTUS FANTASOS Cramer.

2. Taboga Island, February and June, 1911 (Busck).

PARACARYSTUS HYPARGYRA Herrich-Schäffer.

1. Porto Bello, April 1912 (Busck).

CALLIMORMUS JUVENTUS Scudder.

1. Paraiso, Canal Zone, January, 1911 (Busck).

CALLIMORMUS GRACILIS Felder.

3. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March and June, 1912 (Busck).

THRACIDES AROMA Hewitson.

1. Trinidad River, March, 1912 (Busck).

TAGIADES SERGESTUS Cramer.

1. Ancon, Canal Zone (B. G. Ireneo).

Superfamily SPHINGOIDEA.

Family SPHINGIDÆ.

HERSE CINGULATA Fabricius.

3. Cabima, May, 1911 (Busck).

COCYTIUS CLUENTIUS Cramer.

1. Paraiso, Canal Zone, January, 1911 (Busck).

COCYTIUS ANTAEUS MEDOR Cramer.

2. Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

PROTOPARCE HANNIBAL Cramer.

2. Cabima, May, 1911 (Busck).

PROTOPARCE LEFEBUREI Ménétries.

1. La Chorrera, May, 1912 (Busck).

ERINNYIS ALOPE Merian.

1. Cabima, May, 1911 (Busck).

ERINNYIS ELLO Linnæus.

14. Paraiso Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

ERINNYIS CENOTRUS Stoll.

3. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

PACHYLIA FICUS Linnæus.

1. Trinidad River, May, 1911 (Busck).

PACHYLIA DIRCETA Druce.

1. Porto Belli, April, 1912 (Busck).

PACHYLIA RESUMENS Walker.

1. Taboga Island, February, 1912 (Busck).

ENYO JAPIX Cramer.

1. Cabima, May, 1911 (Busck).

ALEURON NEGLECTUM Rothschild.

1. Cabima, May, 1911 (Busck).

EPISTOR LUGUBRIS Linnæus.

3. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, January, 1911 (Busck).

EPISTOR OCYPETE Linnæus.

2. Paraiso, Canal Zone, May, 1911 (Busck).

SEZIA FADUS Cramer.

2. Paraiso, Canal Zone, January, 1911 (Busck); Ancon, Canal Zone (B. G. Ireneo).

SEZIA TITAN Cramer.

2. Paraiso, Canal Zone, January, 1911 (Busck); La Chorrera, April, 1911 (Busck).

PHOLUS LICAON Cramer.

3. Porto Bello, March, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PHOLUS VITIS Merian.

1. La Chorrera, May, 1912 (Busck).

PHOLUS EACUS Cramer.

1. Porto Bello, March, 1911 (Busck).

XYLOPHANES PLUTO Fabricius.

5. Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

XYLOPHANES PISTACINA Boisduval.

1. Taboga Island, February, 1912 (Busck).

XYLOPHANES NEACHUS Cramer.

1. Paraiso, Canal Zone, January, 1911 (Busck).

XYLOPHANES LIBYA Druce.

1. Trinidad River, March, 1912 (Busck).

XYLOPHANES TERSA Linnæus.

2. Cabima, May, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck).

XYLOPHANES TITANA Druce.

2. Cabima, May, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck).

XYLOPHANES TURBATA Edwards.

1. La Chorrera, May, 1912 (Busck).

Superfamily SATURNOIDEA.

Family SATURNIIDÆ.

ROTHSCHILDIA LEBEAU Guerin.

1. La Chorrera, May, 1912 (Busck).

DIRPHIA EUMEDIDE Stoll.

1. Trinidad River, May, 1911 (Busck).

DIRPHIA AGIS Cramer.

1. Trinidad River, March, 1912 (Busck).

DIRPHIA HIRCIA Cramer.

1. Porto Bello, April, 1912 (Busck).

DIRPHIA SPECIOSA Cramer.

14. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1911 (Busck).

MOLIPPA SABINA Walker.

2. Paraiso, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

DYSDEMONIA TAMERLAN Maassen.

1. La Chorrera, May, 1912 (Busck).

AUTOMERIS JANUS Cramer.

1. Paraiso, Canal Zone, May, 1911 (Busck).

AUTOMERIS CINCTISTRIGA Felder.

1. Cabima, May, 1911 (Busck).

AUTOMERIS JUNONIA Walker.

3. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck).

AUTOMERIS MERIDANA Schaus.

1. Cabima, May, 1911 (Busck).

GAMELIA NAUSICAA Cramer.

3. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

GAMELIA IRMINA Cramer.

3. Alhajuelo, April, 1911 (Busck); Trinidad River, March, 1912 (Busck).

HYLESIA SCHAUSI Dyar.

1. Cabima, May, 1911 (Busck).

HYLESIA INVIDIOSA, new species.

Soft gray; discal mark a dark cloud; lines pale, indistinct, converging toward inner margin; marginal space pale on lower half. Hind wing with a single pale band, nearly straight, situated just beyond the end of the cell. Abdomen with ochereous hair, especially dorsally. Expanse, 32-34 mm.

Cotypes.—Two males, No. 15764, U.S.N.M.; Taboga Island, February, 1912 (Busck).

Comes nearest to *athlia* Dyar, but smaller, the fore wing not rounded at apex; markings less distinct, the line on hind wing straighter and even nearer the cell.

HYLESIA CRESSIDA Dyar (?).

4. Taboga Island, February and June, 1912 (Busck).

The specimens are more rosy than *alinda* before me from Costa Rica and the fore wing less falcate, agreeing with *cressida*; but all the specimens are males, and without a female can not be placed with certainty.

HYLESIA sp. A.

11. Taboga Island, January, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (A. H. Jennings).

This form lies near *pollex* Dyar, *umbrata* Schaus, and *valvex* Dyar, without agreeing entirely with either. The specimens are all in poor condition, so that a positive identification is unsafe. Mr. Busck sent up two distinct species of *Hylesia* larvæ, but made no association of them with adults.¹

HYLESIA sp. B.

2. Cabima, May, 1911 (Busck).

Two females, close to *schausi* Dyar, but less coarse in appearance, less distinctly marked; the discal spots are more distinct than the bands. There are in the collection three other females of the same character, one from Chiriqui, one from Guapiles, Costa Rica, and one from Sixola River, Costa Rica. The Costa Rican females were ten-

¹ Since writing the above, I have received a bred female in good condition from Dr. S. T. Darling, together with preserved larvæ, the latter conspicuously different from either of the larvæ sent by Mr. Busck. Doctor Darling found the larvæ on a Cashew tree (*Anacardiaceæ*) and bred the adults. The form may be named *Hylesia darlingi*, new species.

Closest to *H. pollex* Dyar from Venezuela; markings less bright and contrasted in the male; both sexes with the costa concolorous with the paler part of the wing, not with a strong dark shade as in *pollex*; discal spots of both wings clouded and more obscure than in *pollex*; abdomen of female without the paler ochereous posterior lateral tufts, the hairs concolorous with the rest of the lateral ones.

Type.—Female, No. 16038, U.S.N.M.; Ancon, Canal Zone, April, 1913 (S. T. Darling).

Larva.—Head rounded, about as wide as high, smooth, cherry-red, the tips of the mandibles and a spot on each side of labrum black. Body robust, cylindrical, tapering a little anteriorly; whitish, with black angular marks and spots; dorsal line forming a series of dashes intersegmentally and little specks in the centers of the segments; two joined subdorsal and lateral blotches in segmental incisures, a ring around subdorsal horns, spot below laterals, and lateral dot and dash on posterior third of segment; spiracles brown with irregular black dashes between; below a broad straight pale substigmatal area, then a blackish broken and vacuolated subventral band, the venter itself pale. Thoracic feet reddish; abdominal ones pale with black claspers. Horns whitish with pale branches and hairs, subdorsal, lateral, and substigmatal rows and single dorsal one on joints 12 and 13, none on anal plate, which is light reddish with black area before it on joint 13. No cervical shield. Horns all about the same length, the anterior and posterior ones but slightly longer and slenderer, none as long as the diameter of the body.

tatively labeled by Mr. Schaus as females of his *rubrifrons* and *dalina*, respectively, but they do not possess the red feet of these forms. The present form must await the association of males for positive identification.

HYLESIA sp. C.

1. La Chorrera, May, 1912 (Busck).

One female similar to the above but much darker, the lines slender and distinct; apex very dark with light lilacine spot. It does not agree with anything before me, but description from the single female seems inadvisable.

LONOMIA CYNIRA Cramer.

3. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

THERINIA TRANSVERSARIA Druce.

1. Porto Bello, April, 1912 (Busck).

OXYTENIS HONESTA Cramer.

1. Trinidad River, March, 1912 (Busck).

DRACONIPTERIS MIRABILIS Cramer.

1. Cabima, May, 1911 (Busck).

DRACONIPTERIS GIGANTEA Druce.

1. Trinidad River, June, 1912 (Busck).

Druce described a very pale female from Ecuador as *Teratopteris gigantea*. The present specimen is probably conspecific, though small and very dark.

Family CITHERONIIDÆ.

CITHERONIA MEXICANA Grote and Robinson.

1. Porto Bello, April, 1912 (Busck).

CITHERONIA MARION, new species.

Thorax yellow with faint orange edgings to patagia and collar; below orange-brown; abdomen banded yellow and red. Fore wing yellow, a yellow patch at base, the rest of basal space filled in with purple; scattered purple clouds in mesial space with four angular dots surrounding discal cross-vein; subterminal space lightly powdered with purple; terminal space solidly purple filled. Hind wing with red discal dot and lightly curved outer line, touching tornus and apex at extremities, narrowly separated from discal dot; a slight red patch near inner margin below cell. Beneath yellow, costa and terminal space of fore wing only purple. Large red discal and basal dots on both wings. Expanse, 84 mm.

Type.—Male, No. 15836, U.S.N.M.; Trinidad River, June, 1912 (Busck).

This is probably a subspecies of *C. laocoon* Cramer.

EACLES MAGNIFICA Walker.

2. Paraiso, Canal Zone, April, 1911 (Busck).

SYSSPHINX MOLINA Cramer.

2. Cabima, May, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck).

ADELOCEPHALA ADOCIMA, new species.

Fore wing dark gray-brown; a white triangular patch at base; outer line faintly indicated, nearly parallel to outer margin, starting from costa at outer fifth, retreating a little below, relieved at costa by a triangular violaceous shade within. Abdomen ocher-brown. Expanse, 83 mm.

Type.—Female, No. 15766, U.S.N.M.; Cabima, May, 1911 (Busck).

Superfamily BOMBYCOIDEA.

Family SYNTOMIDÆ.

POMPILODES ALIENA Walker.

3. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck).

ISANTHRENE CRABRONIFORMIS Staudinger.

1. Alhajuelo, April, 1911 (Busck).

PHEIA ALIBISIGNA Walker.

1. Cabima, May, 1911 (Busck).

PHEIA UTICA Druce.

1. Trinidad River, March, 1912 (Busck).

PHEIA STRATIOTES, new species.

Black, with many yellow spots; front, vertex, tegulæ, streak on patagia, spot in center of thorax, two behind, all of constricted base of abdomen, band on posterior edge of each segment, interrupted dorsally, and venter yellow. Palpi and legs darker yellow, the latter streaked with black. Antennæ black, yellow in the middle, wings yellow hyaline, veins black; fore wing with orange spot at base, an apical black patch and very narrow outer and inner borders. Hind wing with narrow apical border. Expanse, 23–25 mm.

Cotypes.—Three males, No. 15771, U.S.N.M.; Trinidad River, March, 1912 (Busck); Cabima, June, 1911 (Busck).

The abdomen is distinctly constricted at the base, but the other characters agree with *Pheia*.

LOXOPHLEBIA LEUCOTHEMA, new species.

Above as in *L. imitata* Druce; abdomen beneath black, the ventral valve white. Expanse, 18–20 mm.

Cotypes.—Three males, No. 15767, U.S.N.M.; Trinidad River, June, 1911 (Busck); Caura Valley and Aroa, Venezuela (Schaus collection).

MESOTHEN PYRRHA Schaus.

1. Corozal, Canal Zone, March, 1911 (Busck).

PHENICOPROCTA RUBIVENTER Hampson.

1. Paraiso, Canal Zone, June, 1911 (Busck).

PHÆNICOPROCTA PAUCIPUNCTA, new species.

Black; patches of metallic blue on fore coxæ, front, vertex, tegulæ, base of wing, metathorax, and lateral row on abdomen, the central spots of latter small; an orange patch dorsally on fourth segment and small one on fifth; a band on fourth ventrally; anal tuft black. Wings hyaline, veins black; a black marginal band on fore wing expanded at apex and tornus; subcostal orange streak and orange patch at base of inner margin, cut by vein 1. Hind wing with marginal band widened at apex and tornus. Discocellulars of hind wing angled. Expanse, 35 mm.

Type.—Male, No. 15679, U.S.N.M.; La Chorrera, May, 1912 (Busck).

SAROSA MORA Schaus.

1. Porto Bello, April, 1912 (Busck).

Differs from *mora* in having a broad black apex to fore wing, but agrees otherwise.

HOMŒOCERA STICTOSOMA Druce.

1. Cabima, May, 1911 (Busck).

COSMOSOMA SEMIFULVA Druce.

4. Trinidad River, March, 1912, and June, 1911 (Busck); La Chorrera, May, 1912 (Busck).

COSMOSOMA REMOTA Walker.

1. Trinidad River, March, 1912 (Busck).

COSMOSOMA HERCYNACULA, new species.

Like *C. hercyna* Druce, but smaller, the apical black patch of fore wing with straight inner edge, not arcuate. Expanse, 20–22 mm.

Cotypes.—Two males, No. 15772, U.S.N.M.; Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

COSMOSOMA MELANOTELEA, new variety.

Abdomen with small black tip; else as in *hercynacula*.

Cotypes.—Two males, No. 15773, U.S.N.M.; Cabima, May, 1911 (Busck).

SAURITA TEMENUS Stoll.

1. Trinidad River, March, 1912 (Busck).

SAURITA PHÆNICOSTICTA Druce.

1. Cabima, May, 1911 (Busck).

SAURITA TIPULINA Hübner.

4. Alhajuelo, April, 1911 (Busck); Porto Bello, May, 1911 (Busck); Paraiso, Canal Zone, June, 1911 (Busck).

DINIA ÆAGRUS Cramer.

2. Taboga Island, February, 1912 (Busck); Porto Bello, March, 1911 (Busck).

ANDROCHARTA MEONES Stoll.

2. Trinidad River, March, 1912 (Busck).

DYCLADIA MAMHA, new species.

Head and thorax orange above with median dorsal black stripe. Abdomen black with large blue metallic lateral patches, orange at base; palpi orange, the joints tipped with black; legs black, fore femora pale orange, fore coxæ metallic blue. Wings hyaline, tinged with orange; veins, costa and margin orange; a large round black discal spot; apex and tornus black; a sordid orange patch at bases of veins 2-4. Hind wing hyaline with black terminal border, wider at apex and tornus. Expanse, 32 mm.

Type.—Male, No. 15770, U.S.N.M.; La Chorrera, May, 1912 (Busck).

HYPOCHARIS CLUSIA Druce.

1. La Chorrera, May, 1912 (Busck).

RHYNCHOPYGA FLAVICOLLIS Druce.

1. La Chorrera, May, 1912 (Busck).

PSOLOPTERA THORACICA Walker.

4. Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1912 (Busck).

MACROCNEME AURIPES Walker.

2. Cabima, May, 1911 (Busck).

MACROCNEME CHRYSOTARSIA Hampson.

7. Taboga Island, February, 1912, and June, 1911 (Busck); La Chorrera, May, 1912 (Busck).

MACROCNEME LADES Cramer.

1. Taboga Island, February, 1912.

MACROCNEME LADES CABIMENSIS, new subspecies.

Hind tibiæ with long fringe of hair above and short one below on inner side; antennæ of female with short branches; fringe of hind tarsi white on top of first and all succeeding joints. Fore wing with short blue streaks at base and a row of them across middle.

Cotypes.—Two females, No. 15768, U.S.N.M.; Cabima, May, 1911 (Busck).

Also a broken and worn specimen, apparently the same, Paraiso, Canal Zone, February, 1911.

MACROCNEME LACONIA Druce.

1. Taboga Island, February, 1912 (Busck).

MACROCNEME INDISTINCTA Butler.

2. La Chorrera, May, 1912 (Busck).

CALONOTOS TIBURTUS Cramer.

3. Porto Bello, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

NAPATA LEUCOTELUS Butler.

4. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck).

ACLYTIA HEBER Cramer.

1. Trinidad River, March, 1912 (Busck).

ACLYTIA PUNCTATA Butler.

1. Trinidad River, March, 1912 (Busck).

TEUCER ATEUCER, new species.

Fore wing straw-color, irrorate with brown; a brown shade at base; a faint curved inner line; small double discal dot preceded by a shade on costa; an oblique band from outer third of inner margin to apex; a round black spot on tornus; small terminal dots. Hind wing soiled whitish, with small fuscous discal spot and faint terminal shading; fringe dotted as on fore wing. Expanse, 24 mm.

Type.—Female, No. 15777, U.S.N.M.; La Chorrera, May, 1912 (Busck).

This species disagrees with *Teucer* in venation, having 6 of fore wing arising far below angle of cell, 6 and 7 of hind wing separate, 4 and 5 from a point; but two of these divergencies are shown in *Teucer brunnea* Hampson, which this species resembles.

EPISCEPSIS LENÆUS Cramer.

1. Alhajuelo, April, 1911 (Busck).

DELPHYRE ELACHIA, new species.

Head, thorax and fore wing brown. Hind wing and abdomen blackish gray. Legs brown; antennæ blackish. Expanse, 16 mm.

Hind wing with veins 6 and 7 separate; 5 fully developed from lower angle of cell; 3 and 4 coincident; 2 from long before angle of cell. Fore wing with 3 and 4 long-stalked; 5 from lower angle of cell; 9 absent. Abdomen not constricted at base.

Type.—Female, No. 15778, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Resembles *D. hebes* Walker, but smaller.

DELPHYRE HEBES Walker.

1. Tabernilla, Canal Zone, May, 1907 (Busck).

DELPHYRE CUMULOSA, new species.

Fore wing lilacine gray with large round brown spots in rows; spot at base, inner row curved, median row doubled at end of cell, a large blotch at lower corner of cell, single row below, outer row fused into a wedge-shaped band above, single and somewhat dislocated below vein 2; subterminal row close to margin; a row of dots in fringe. Hind wing soiled pale yellow. Head and thorax gray with narrow crimson ring in neck; abdomen pale ocher above, without spots. Expanse, 25 mm.

Cotypes.—Two males, No. 15774, U.S.N.M.; La Chorrera, May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

PTYCHOTRICHOS EPISCEPSIDIS, new species.

Black-brown; two spots on back of head and whole venter of thorax narrowly crimson; abdomen black, with large lateral metallic blue spots. Fore wing brown-black. Hind wing hyaline-white at base, veins and broad margin black; the cell black above, leaving

the white spots in lower part of cell, one large one beyond and two smaller ones between base of veins 2-5. Male with straw-colored hair pencil at base of hind tibia. Expanse, 38 mm.

Type.—Male, No. 15776, U.S.N.M.; Trinidad River, March, 1912 (Busck).

HELIURA BANOCA *new species*.

Black, mixed with olive fuscous; patagia and thorax striped; two large crimson dots at back of head; fore coxæ whitish. Abdomen black above, white below, except at tip. Fore wing olive-fuscous with white-hyaline patches, one in cell, a long one below, a row of four beyond, black spots in rows between the veins filling up most of the rest of wing, leaving only narrow lines between. Hind wing white-hyaline at base with broad black border. In the male the tornus of hind wing is produced a little and rounded, with erect fuscous scales and a broad border of the same beneath to vein 5. Expanse, 21 mm.

Type.—Male, No. 15775, U.S.N.M.; Trinidad River, March, 1912 (Busck).

EUCEREON HYALINUM *Kaye*.

1. Trinidad River, June, 1912 (Busck).

EUCEREON LATIFASCIATA *Walker*.

1. Trinidad River, March, 1912 (Busck).

EUCEREON ROGERSI *Druce*.

1. Alhajuelo, April, 1911 (Busck).

CORREBIA LYCOIDES *Walker*.

1. Alhajuelo, April, 1911 (Busck).

Family LITHOSTIDÆ.

HYPAREVA POGONODA *Hampson*.

1. Cabima, May, 1911 (Busck).

APTILOSIA CROCEA *Schaus*.

3. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck).

AGYLLA BIOPTERA, *new species*.

Male.—Palpi yellow with dark tips; front white; vertex, thorax, and abdomen gray, and tuft black. Fore wing silvery white, broadly dark gray along inner margin. Hind wing white. Beneath, fore wing gray, darker on inner margin; a broad ocherous area over cell and outwardly, staining veins 2, 3, and 4. Expanse, 20 mm.

Female.—Palpi, head, and thorax as in the male; abdomen gray above, without anal tuft. Fore wing as in the male above; below, white with gray about tornus only. Expanse, 22 mm.

Cotypes.—Four males, three females, No. 15781, U.S.N.M.; Trinidad River, March and August, 1912 (Busck); La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck).

AGYLLA SERICEA Druce.

23. Porto Bello, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

AGYLLA NIPHOSIBES, new species.

Palpi ocher, blackish at tip. Silvery white, fore wing shining, hind wing semitranslucent. Head dark gray in front, vertex white; antennæ ocher, shortly pectinated in the male. Thorax white. Abdomen white; anal tuft of male tinted with sordid ocher. Legs whitish, fore femora yellow, fore tibiæ and tarsi fuscous. Costa of male very narrowly and faintly ocher; of female, white. Expanse, 40-46 mm.

Cotypes.—Four males, one female, No. 15782, U.S.N.M.; Cabima, May, 1911 (Busck).

This falls in *Agylla nivea* Walker by Hampson's monograph;¹ but Walker says of *nivea*, "Head black above, luteous in front" and "abdomen testaceous above." Of the synonyms given by Hampson, *monoleuca* Walker has "palpi fawn color;" *argentea* Felder has the vertex of head yellow, collar shaded with purplish fuscous; *virginea* Schaus is a small form with pale ocher vertex and collar and abdomen gray dorsally; *plateada* Dognin is like *argentea* Felder, but with ochereous abdomen instead of white; *floreilla* Dognin has the vertex of the head as well as the whole front and collar gray. None of the described forms, therefore, agree with the one before me. I have two males and three females of *niphosibes* also from the Guianas, collected by Mr. Schaus.

APISTOSIA JUDAS Hübner.

5. La Chorrera, May, 1912 (Busck).

BALBURA DORSISIGNA Walker.

1. La Chorrera, May, 1912 (Busck).

DOLICHESIA FALSIMONIA Schaus.

3. Cabima, May, 1911 (Busck).

ACHROOSIA NUDA Hampson.

5. Alhajuelo, March, 1912 (Busck); Trinidad River, March, 1912, and May, 1911 (Busck).

THYONE SIMPLEX Walker.

37. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912, and June (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek and C. P. Crafts).

THYONE GRISESCENS Schaus.

13. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1912 (Busck); Trinidad River, March and June, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

¹ Cat. Lep. Phal. Brit. Mus., vol. 2, 1900, p. 195.

AFRIDA GYMNES, new species.

Fore wing grayish white, white irrorated with olive yellow; a sub-basal oblique half-line from costa, dark gray; a small square patch on middle of costa, connected by a slender, broken dentate outcurved line to a triangular patch on inner margin; a large diffused patch on termen forming a larger triangular patch above and a smaller one below, joined; terminal black dots. Hind wing soft grayish fuscous, with faint darker border and central line, the latter crossing the obscure discal dot. Fringe pale. Expanse, 12 mm.

Cotypes.—Seven specimens, No. 15793, U.S.N.M.; La Chorrera, May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

AFRIDA PNIXIS, new species.

Base of fore wing dark, heavily blackish irrorate, followed by a broad band of grayish white, limited by a zigzag black line, and running in toward base on inner margin; median space irrorated with gray, limited by a line similar to the inner one, running from apex inward, then downward to inner margin before tornus; the line is followed by white below, but above touches the blackish marginal marking, which becomes purplish toward apex; marginal dots not relieved. Hind wing uniformly dark grayish fuscous. Expanse, 11 mm.

Type.—Male, No. 15794, U.S.N.M.; Cabima, May, 1911 (Busck.)

GAUDEATOR, new genus.

Fore wing with vein 3 before angle of cell; 4 and 5 well separated, 6 below upper angle of cell; 7 to 9 stalked, 7 after 9; 10 and 11 free, 11 somewhat curved. Hind wing with 3 and 4 from angle of cell, 5 from middle of cross vein, 6 and 7 long-stalked, 8 from middle of cell. Hind tibiae with four spurs; palpi short, slender, upturned to middle of frons; tongue distinct.

Type of the genus.—*Gaudeator paidicus*, new species.

GAUDEATOR PAIDICUS, new species.

Yellow; abdomen more or less red dorsally. Fore wing yellow; a purple-black bar near base to vein 1; an oblique inner band joined by a longitudinal bar to a curved outer one to costa; outer band broken below this bar, its lower segment lying parallel upon inner margin next tornus. Hind wing pink with yellow fringe. Expanse, 13 mm.

Type.—Male, No. 15783, selected from 38 specimens, Cabima, May, 1911 (Busck). Other specimens from Porto Bello, April, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, March and June, 1912 (Busck).

Resembles *Nudur fractivittarum* Dyar.

LYCOMORPHODES SORDIDA Butler.

12. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Porto Bello, April and May, 1912 (Busck);

Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

MULONA PHELINA Druce.

18. Trinidad River, March, May, and June, 1912 (Busck); Porto Bello, April, 1912, and May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

PREPIELLA AUREA Butler.

14. Taboga Island, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

Hampson figures¹ the venation with veins 3 and 4 long-stalked in hind wings. They are in reality separate or connate, the cell making a long angle toward margin, wrongly shown in the figure. Vein 5 also is short and curved.

ODOZANA SIXOLA Schaus.

7. Trinidad River, March, 1912 (Busck); Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck).

All the specimens are males, the female being unknown.

PALÆOZANA, new genus.

Fore wing with veins 2 and 3 from well before angle of cell; 4 and 5 from a point; 6 from apex of cell; 7 to 9 stalked, 7 beyond 9; 10 and 11 free, oblique. Hind wing with 2 before angle of cell; 3 to 5 stalked, 4 and 5 coincident; 6 and 7 stalked; 8 near end of cell. Palpi slender, upturned; tongue strong; hind tibiæ with four spurs. Falls with *Pachycerosia* in the table, but the costa is not strongly arched at base.

Type of the genus.—*Palæozana mida*, new species.

PALÆOZANA MIDA, new species.

Dark slate gray; tegulæ crimson; palpi pale. Fore wing blackish slate. Hind wing crimson with outer even black border. Below this area covered with raised orange scales and a row of orange hairs subcostally. Abdomen crimson with very large anal and lateral tufts, crimson at the sides, orange in the center. Expanse, 15 mm.

Cotypes.—Three males, No. 15786, U.S.N.M.; La Chorrera, May, 1912 (Busck).

ILLICE LEUCONOTUM, new species.

Head and thorax white; abdomen crimson dorsally, not tufted. Fore wing gray, washed with white, the gray persisting as borders to creamy white spots, of which one, semicircular, is on outer third of costa and two elongate ones on inner margin, nearly joined centrally and together reaching from base to tornus. Hind wing crim-

¹ Cat. Lep. Phal. Brit. Mus., vol. 2, 1900, p. 358.

son with small gray tip at apex, no prolongation at tornus, Expanse, 10 mm.

Type.—Male, No. 15785, U.S.N.M.; La Chorrera, April, 1912 (Busck.)

ILLICE MINUTA Butler.

1. Cabima, May, 1911 (Busck).

Smaller than the unique female type (male, 11 mm.), but agreeing well otherwise with Hampson's description and figure.¹

ILLICE OPULENTA Walker.

4. Cabima, May, 1911 (Busck); Porto Bello, October and December, 1912 (G. F. Cleveland).

DIARHABDOSIA COROIDES Schaus.

15. Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

All the specimens are females.

PARAPREPIA FUSCILINGUA, new species.

Head and palpi blue-gray; tegulae crimson; tongue dark brown; thorax and abdomen dark blue-gray. Fore wing slaty gray-blue, shaded on inner third. Hind wing slaty black. Expanse, 15 mm.

Cotypes.—Male and female, No. 15784, U.S.N.M.; Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

NODOZANA THRICOPHORA Hampson.

9. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

NODOZANA PICTURATA Schaus.

1. La Chorrera, May, 1912 (Busck).

NODOZANA ALBULA, new species.

White; fore wing irrorated with luteous, with an indistinct patch of darker scales above vein 6 beyond cell and a diffuse elongate black patch in submedian space beyond middle. Hind wing pale gray. Abdomen pale gray, with large white terminal tuft. Expanse, 11 mm.

Type.—Female, No. 15803, U.S.N.M.; without label (Busck).

In appearance resembles *Saozana leucota* Hampson.

SERINCIA, new genus.

Fore wing with vein 2 from long before angle of cell; 3 to 5 well spaced; 7 to 9 stalked; 8 and 9 coincident; 10 and 11 free. Hind wing with 3 and 4 moderately stalked, 5 absent, 6 and 7 stalked, 8 from middle of cell. Hind tibiae with four spurs. Palpi obliquely porrect, exceeding the front; tongue well developed. Falls in *Cincia* in the table, but differs in the absence of vein 9.

Type of the genus.—*Serincia metallica*, new species.

¹Cat. Lep. Phal. Brit. Mus., vol. 2, 1900, p. 369, pl. 29, fig. 17.

SERINCIA METALLICA, new species.

Fore wing bright metallic green. Hind wing dull black. Body parts black, the head and thorax green. Expanse, 16 mm.

Type.—Female, No. 15787, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck).

LYCOMORPHODES GENIFICANS, new species.

Dark slate gray; abdomen dorsally crimson. The fore wing under a lens has numerous rough, white scales, tipped with black. The hind wing is nearly black without the slaty tint. Expanse, 13–14 mm.

Cotypes.—Seven females, No. 15789, U.S.N.M.; Trinidad River, March, May, and June, 1912 (Busck).

Like *Talara rugipennis* Schaus, but differing in the pronounced stalking of veins 4 and 5 of fore wing.

TALARA MELANOSTICTA, new species.

Slate gray; fore wing pale slate gray, showing under lens many whitish scales with black tips. Hind wing with veins 3 and 4 stalked, a little browner in tone than fore wing, with a large velvety black patch of androconia filling the cell and extending above and beyond it. Expanse, 15–16 mm.

Cotypes.—Two males, No. 15790, U.S.N.M.; Cabima, May, 1911 (Busck).

TALARA MINYNTHADIA, new species.

Brown, tinged with submetallic black; neck and basal joint of antennæ yellow; abdomen crimson above, anal tuft mixed crimson, orange, and black. Fore wing slaty brown with bluish black shade along costa and across middle, broadly so beneath, leaving only base and apex of slate. Hind wing crimson, apical half brown-black, narrowing to a point before tornus. Expanse, 15 mm.

Type.—Male, No. 15791, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Two females, tentatively associated with the male type, lack the dark shading of fore wing above and below, the wing being dark slaty blackish without marks on either surface. Crimson area of hind wing more restricted than in the male, occupying about the basal third.

La Chorrera, May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

TALARA VIOLESCENS, new species.

Dark slaty brown; fore wing with shining violet tint, uniform. Hind wing black, basal third crimson. Abdomen crimson, the large anal tuft blue-black. Expanse, 16 mm.

Type.—Male, No. 15792, U.S.N.M.; Cabima, May, 1911 (Busck).

TALARA PHÆELLA Hampson.

7. Trinidad River, March, 1912, and May, 1911 (Busck); Corozal, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TALARA MESOSPILA, new species.

Head and thorax white; abdomen crimson. Fore wing white; a brown patch at basal one-third of inner margin and another oblique one on tornus. Hind wing crimson. Expanse, 11 mm.

Type.—Male, No. 15797, U.S.N.M.; La Chorrera, May, 1912 (Busck).

TALARA MONA, new species.

Fore wing gray, variegated with whitish scales, especially on lower half; inner line pale, faint, forming three small pale spots; subterminal line dark, straight, bent at vein 6, followed by a light mark at tornus and fringe and two dots on costa, one before, one after. Hind wing crimson at base, apex broadly dark gray, running as narrow border to tornus. Body gray; abdomen crimson dorsally. Expanse, 11 mm.

Type.—Male, No. 15796, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Allied to *unimoda* Schaus and *diversa* Schaus, rather intermediate between them.

ABROCHOCIS, new genus.

Fore wing with veins 2 and 3 from before angle of cell, 4 and 5 long-stalked, 7 to 9 stalked, 7 before 9, 10 free, 11 anastomosing with 12. Hind wing with vein 2 from before angle of cell, 3 and 4 coincident, 5 from lower angle of cell, 6 and 7 coincident, 8 before middle of cell. It falls in the table with *Barsinella* Butler, differing in veins 3 and 4 of fore wing being stalked and 6 and 7 of hind wing coincident.

Type of the genus.—*Talara esperanza*¹ Schaus.

ABROCHOCIS ESPERANZA Schaus.

12. Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

BARSINELLA DESETTA, new species.

Fore wing orange, tinged with red; crimson discal bar and termen; three black dots beyond base followed by four digitate streaks, then the inner line, thrice dentate, central tooth largest; outer line with one long tooth, followed by eight streaks on the veins. Hind wing crimson with apical black spot; fringes orange tinted. Expanse, 9 mm.

Type.—Female, No. 15797, U.S.N.M.; La Chorrera, May, 1912 (Busck)

GERIDIXIS, new genus.

Generic characters of *Chrysochlorosia* Hampson, by the table, but vein 11 free, oblique, not anastomosing with 12, cell of hind wing moderate, etc.

Type of the genus.—*Geridixis minx*, new species.

¹ Ann. Mag. Nat. Hist. (8), vol. 7, 1911, p. 365.

GERIDIXIS MINX, new species.

White; abdomen tinged with sordid. Fore wing white with scattered ochereous shadings; a large oval black patch occupying a large part of the wing, leaving the costal third white and a narrow space along margin and around tornus. Hind wing pale fuscous, the fringes white. Expanse, 14 mm.

Type.—Male, No. 15788, U.S.N.M.; Trinidad River, June, 1912 (Busck).

Resembles in appearance *Paratalara inversa* Schaus.

CLEMENSIA QUINQUIFERANA Walker.

3. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck).

There appear to be several species mixed up under this name, but the material is not in good enough quality to enable a separation.

ANÆNE, new genus.

Palpi upturned, second joint densely fringed with scales in front, the third small, concealed by the scales, reaching nearly to vertex of head. Tongue moderately well developed. Hind tibiæ with very long spurs. Fore wing rather narrow, apex depressed, pointed or slightly falcate. Fore wing with veins 2 and 3 from well before angle of cell, 4 and 5 from a point, 6 shortly below upper angle of cell, 7 to 10 stalked, 7 before 10, 11 free, oblique. Hind wing with 2 long before angle of cell, 3 and 4 stalked, 5 above middle of discocellulars, 6 and 7 stalked, 8 from the middle of the cell.

Type of the genus.—*Anæne spurca*, new species.

ANÆNE SPURCA, new species.

Fore wing whitish, costa dark brown; costal third shaded with gray, cut by two rather broad white lines, of which the inner is oblique, the outer bent outwards a little above the middle; a triangular brown patch on inner margin between the lines; a yellowish stain about tornus, with a small dark patch and another before outer margin above middle. Hind wing whitish, stained with fuscous, especially at apex and inner angle. Expanse, 13 mm.

Cotypes.—Two males, No. 15798, U.S.N.M.; La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

ANÆNE SQUALIDA, new species.

As in *spurca*, but the gray shading is extensive, involving nearly the whole wing; a whitish space at base below a longitudinal basal dash; lines white, narrow, not attaining costa; dark marks on inner margin and before outer margin olivaceous, not as distinct as in *spurca*. Hind wing fuscous. Expanse, 13 mm.

Type.—Male, No. 15799, U.S.N.M.; Porto Bello, May, 1912, (Busck),

ANÆNE IMPROSPERA, new species.

Fore wing wood-brown, with numerous fine straight oblique dark brown lines subparallel to outer margin; a large elongate dark discal mark; costa coppery brown with fine white oblique streaks in reversed direction to the lines, and small patch before apex; margin narrowly dark brown, fringe lighter brown. Hind wing fuscous brown, fringe light brown. Expanse, 10 mm.

Cotypes.—Two males, No. 15800, U.S.N.M.; Tobago Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

ANÆNE DIAGRAMMA, new species.

Palpi with the third joint long; fore wing with outer margin square, a little incised below apex. Fore wing gray, the central veins lighter, yellowish scaled, the whole wing minutely transversely lined with alternating light and dark scales; two brown-black lines across the wing, the inner curved, the outer a little waved broadly below; three dots on costa before apex and a row of irregular subconfluent marginal ones. Hind wing dark fuscous. Expanse, 10 mm.

Cotypes.—Four males, one female, No. 15801, U.S.N.M.; Tobago Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

DIXANÆNE, new genus.

With the characters of *Anæne*, but veins 3 and 4 of fore wing stalked; the palpi have the third joint long; fore wing not subfalcate, apex roundedly pointed, outer margin oblique.

Type of the genus.—*Dixanæne lepidocæna*, new species.

DIXANÆNE LEPIDOCÆNA, new species.

Fore wing light gray, the scales arranged in minute transverse whitish and dark brown lines, some 50 of each color, the ground nearly pure white in patches at base above, on inner margin at basal third and in a wavy subterminal line; patches of long spatulate scales, black on white, in three areas, one subbasal, one medial, one subterminal, none attaining costa; inner line coppery brown, from costa to median vein; outer similar, crossing wing, gently excurved above and below; a row of terminal black dashes. Hind wing whitish, fuscous tinted outwardly, with dark terminal line. Expanse, 11 mm.

Cotypes.—Four males, two females, No. 15802, U.S.N.M., Tobago Island, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); La Chorrera, May 1912 (Busck).

SAOZANA, new genus.

Differs from *Odozana* Walker in having vein 11 of fore wing free, not anastomosing with 12 and veins 6 and 7 of hind wing coincident. The hind wings of the male are greatly expanded in the anal area, with a notch above vein 2.

Type of the genus.—*Odozana leucota* Hampson.

SAOZANA LEUCOTA Hampson.

1. Trinidad River, March, 1912.

White; fore wing irrorated with pale fuscous patches. The male has numerous secondary sexual characters: On fore wing a pencil of stiff black hairs on under side running along inner margin and an elliptical thick glandular fovea below the cell; on hind wing the remarkable expansion of anal area and a thick fovea at the end of the cell.

Family ARCTIIDÆ.

IDALUS HIPPIA Stoll.

1. Trinidad River, June, 1912 (Busck).

MELESE LAODAMIA Druce.

1. Trinidad River, March, 1912 (Busck).

MELESE INCERTA Walker.

4. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

MELESE ASANA Druce.

1. Trinidad River, March, 1912 (Busck).

OCHRODOTA PRONAPIDES Druce.

1. Porto Bello, March, 1911 (Busck).

AMMALO INSULATA Walker.

2. Corozal, Canal Zone, March, 1911 (Busck); Paraiso, Canal Zone, June, 1911 (Busck).

HALISIDOTA RHOMBOIDEA Sepp.

2. Porto Bello, February, 1911 (Busck); Trinidad River, March, 1912 (Busck).

HALISIDOTA CATENULATA Hübner.

1. Trinidad River, March, 1912 (Busck).

NEZULA GRISEA Schaus.

1. Porto Bello, February, 1911 (Busck).

PAREVIA PARNELLI Schaus.

1. Cabima, May, 1911.

A female differing from the male type in having the hind wing crimson at base and the terminal gray border broad.

AGORÆA MINUTA Schaus.

9. Trinidad River, March and June, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

VIRBIA ROSENBERGI Rothschild.

42. Porto Bello, March, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck); Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

VIRBIA OROLA, new species.

Fore wing brown-black above; below with a large yellow patch over two-thirds of wing from base, except costa. Hind wing black with yellow patch on upper half of wing except margin; a yellow

streak beneath at inner margin; neck with crimson ring; abdomen black above, gray below, without orange stripe. Expanse, 25 mm.

Type.—Male, No. 15810, U.S.N.M.; Porto Bello, April, 1912 (Busck).

NERITOS COTES Druce.

2. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

APANTESIS PROXIMA Guerin.

6. Porto Bello, March, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

ECPANTHERIA LAETA Walker.

1. Porto Bello, April, 1911 (Busck).

UTETHEISA VENUSTA Dalman.

5. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Paraiso, Canal Zone, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

Family **HYPSIDÆ**.

LAURON SORA Boisduval.

3. Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

HYALURGA SUBNORMALIS, new species.

White; head and thorax stained with gray; two white dots on vertex and two on tegulæ; patagia with orange spot at base; abdomen with a dorsal and a subdorsal dark line. Wings white; veins dark on both pair; fore wing with the costa gray, stained with orange at base and subapically; a clouded dark spot at end of cell joined to costa and another above tornus between veins 2 and 3. Expanse, 39 mm.

Type.—Female, No. 15811, U.S.N.M.; Paraiso, Canal Zone, January, 1911 (Busck).

PERICOPIS MARGINALIS Walker.

3. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

PERICOPIS ANGULOSA IRENIDES Butler.

2. Taboga Island, June, 1911 (Busck).

Mr. Busck took a pair, the male marked like normal *angulosa* Walker, except that the lower part of the central band is yellow, the female of a form like *ithomia* Felder. The species is not *ithomia*, which I identify in three specimens from Costa Rica agreeing with Felder's figure, but so much like it that five specimens in the collection are so named. The present form, *irenides*, has a tendency to obsolescence of the basal red markings of fore wings in both sexes; of 12 before me from Panama only four have the red well developed. In two others it is reduced and in the remaining six entirely absent.

Mr. Busck made the following note about the defensive secretion of this species: "On capture these butterflies, male and female, emit

through a slit in the thorax between the first and second thoracic segments a profuse, ochery yellow, staining foam, three to four inches of it at a time by a half inch in diameter. No smell perceptible."

I have noticed a similar habit in *Composia fidelissima* Herrich-Schäffer.¹

GARDINIA MAGNIFICA Walker.

4. Porto Bello, February, 1911 (Busck).

Family AGARISTIDÆ.

EUSCHIROPTERUS POEYI PULVEROSA, new subspecies.

Differs from *poeyi* Grote in the absence of a sharp line on submedian separating the white and dark areas; the line is present only on the part of the dark border beyond the origin of vein 2; white space of fore wing rather broader, the discal dot less elongated, not crossing the white space; the orbicular large, rounded and with a powdery light center like the reniform. Male without the dark marginal border to the hind wing, the subanal yellow spot edged by a few dark scales. Expanse, 33-36 mm.

Cotypes.—One male, six females, No. 15812 U.S.N.M.; La Chorrera, May, 1912 (Busck).

DIAMUNA FALCATA Druce.

1. Trinidad River, March, 1912 (Busck).

Family NOCTUIDÆ.

Subfamily AGROTINÆ.

AGROTIS REPLETA Walker.

1. Porto Bello, February, 1911 (Busck).

LYCOPHOTIA INFECTA Ochseneheimer.

8. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, March, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

LYCOPHOTIA RODEA Schaus.

2. Taboga Island, June, 1911 (Busck).

EUXOA AGRESTIS Grote.

1. La Chorrera, May, 1912 (Busck).

The specimen is typical, but I feel that confirmation of this occurrence should be had before being considered authentic, as the specimen may have been wrongly labeled by the preparator.

Subfamily HADENINÆ.

XANTHOPASTIS TIMAIS Cramer.

1. La Chorrera, May, 1912 (Busck).

CIRPHIS HUMIDICOLA Guenée.

4. Cabima, May, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek).

¹ Entomological News, vol. 2, 1891, p. 50.

CIRPHIS MULTILINEA Walker.

1. La Chorrera, May, 1912 (Busck).

CIRPHIS STRIGUSCULA Dyar.

1. Corozal, Canal Zone, March, 1911 (Busck).

CIRPHIS LATIUSCULA Herrich-Schäffer.

5. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck).

CIRPHIS INCONSPICUA Herrich-Schäffer.

1. La Chorrera, May, 1912 (Busck).

CIRPHIS UNIPUNCTA Haworth.

1. Porto Bello, February, 1911 (Busck).

CIRPHIS MICROSTICTA Hampson.

1. Corozal, Canal Zone, March, 1911 (Busck).

CIRPHIS SETECI, new species.

Near *cinereicollis* Walker, but the dark longitudinal shade paler gray, not black, the white mark at end of cell small and joined to base by narrow obscure whitish line along median vein; markings light and fine; outer row of dots faint; pale-colored throughout and not contrasted as in *cinereicollis*. Expanse, 28–31 mm.

Cotypes.—Two males, three females, No. 15834, U.S.N.M.; Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

Subfamily **ACRONYCTINÆ**.**CROPIA DIMORPHA**, new species.

Male.—Dark brown; a brown-black triangular patch on costa, touching the large full pale reniform, which is narrowly ringed with black and concentrically marked; a double black and brown line across apex to vein 5, where it runs to margin, the apex deeper purplish; ordinary lines indistinct, wavy; orbicular a minute black ring. Hind wing solidly dark brown. Expanse, 38–40 mm.

Female.—Lilacine gray, all the marks obliterate except the costal triangle and dark apex, which is contrastingly dark. Hind wing dark fuscous. Expanse, 35–38 mm.

Cotypes.—Two males, two females, No. 15837, U.S.N.M.; Colombia (W. E. Pratt); Cabima, Panama, May, 1911 (Busck).

Differs from *Cropia* in having no tufts on the abdomen, but the condition of the vestiture is poor in all the specimens, especially upon the thorax, so that they can not be more definitely placed.

SPEOCROPIA ÆNYRA Druce.

1. Cabima, May, 1911 (Busck).

SPEOCROPIA LEUCOSTICTA Hampson.

1. Taboga Island, June, 1911 (Busck).

SPEOCROPIA RANDA Schaus.

2. La Chorrera, May, 1912 (Busck).

PERIGEA MIMICA Hampson.

2. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, May, 1911 (Busck).

PERIGEA CUPENTIA Cramer.

2. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

PERIGEA ALBIDA Felder.

1. Cabima, May, 1911 (Busck).

PERIGEA SUTOR Guenée.

14. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck); Corozal Canal Zone, July, 1912 (J. Zetek).

PERIGEA ALBIGERA Guenée.

2. Cabima, May, 1911 (Busck).

PERIGEA LINEATA Druce.

2. Cabima, May, 1911 (Busck).

PHUPHENA TURA Druce.

1. Cabima, May, 1911 (Busck).

PRORACHIA DARIA Druce.

1. La Chorrera, May, 1912 (Busck).

ERIOPUS FLORIDENSIS Guenée.

1. Porto Bello, February, 1911 (Busck).

LAPHYGMA FRUGIPERDA Smith and Abbot.

37. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February and March, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, February, 1911 (Busck), July, 1912 (C. P. Crafts and J. Zetek).

Apparently more abundant than the number of specimens would indicate. Mr. Zetek labeled a specimen "166," presumably referring to notes. Mr. Crafts remarks: "Feeds on Guinea grass; in some localities it has stripped all the blades off of large areas. Picked 1,000 on 100 square feet (and left some) in an average spot on a ten-acre field."

STRAUOPIDES PERSIMILIS Hampson.

1. Taboga Island, February, 1912 (Busck).

ACRORIA DIMINUTA Guenée.

1. La Chorrera, May, 1912 (Busck).

XYLOMYGES SUNIA Guenée.

1. Trinidad River, June, 1912 (Busck).

XYLOMYGES ERIDANIA Cramer.

1. Trinidad River, May, 1912 (Busck).

GONODES CUNEATA, new species.

Near *G. liquida* Möschler, smaller, brown costal area confined to a small triangle not reaching below center of reniform and obliquely cut below; outer line strongly excurved, forming an obtuse angle, to which a broad streak runs from below apex, dislocated and continued to center of reniform. Expanse, 23 mm.

Type.—Female, No. 15852, U.S.N.M.; Cabima, May 1911 (Busck).

GONODES DENSISSIMA, new species.

Dark brown; fore wing with coppery tint, especially in terminal space and inner area; lines dark, obscure; a straight dark shade from apex to before tornus is most distinct; inner, medial and outer lines curved, slight, wavy; a waved and broken subterminal line near the margin, dark without, coppery within. Hind wing solidly black-brown. Expanse, 28 mm.

Type.—Female, No. 15838, U.S.N.M.; Trinidad River, March, 1912 (Busck).

The angulation on the outer margin is at vein 3 instead of 4 as usual in the genus; the palpi are obliquely ascending instead of sharply upturned; the eyes have long cilia from behind and below, none at all from the upper side or in front. The species does not fit well in *Gonodes*, or even in the subfamily Acronyctinæ, but vein 5 of hind wing is weak and arises from middle of discocellulars, so that it can not be placed in the Plusinæ.

MENOPSISIMUS CRAMBIFORMIS, new species.

Fore wing deep brown; inner line golden yellow, obscure, produced outward in an angle in cell; outer line far outward, with a sharp outer angle in upper third preceded in the angle by a patch of lilacine scales and followed by a broad band of these below; costa at apex white-streaked; termen pale, with two or three black streaks; a black line followed by dull golden before fringe; an oblique whitish mark for reniform, joining outer line. Hind wing fuscous, lighter at base. Expanse, 12 mm.

Type.—No. 15840, U.S.N.M., selected from a series of 32; Trinidad River, May, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Since preparing the above, I have examined the type of *Hypenodes dubia* Schaus and believe it to be the same species as *Menopsisimus crambiformis*. The type of *dubia*, a female, is in such poor condition, rubbed and without palpi or legs, that I decide to let my new name stand, preferring a synonym to a possible misidentification.

HYPENOPSIS MACULA Druce.

14. Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (C. P. Crafts and J. Zetek); Trinidad River, March, 1912, and May, 1911 (Busck); Paraiso, Canal Zone, April and May, 1911 (Busck); Cabima, May, 1911 (Busck).

MICRATHETIS TRIPLEX Walker.

8. La Chorrera, May, 1912 (Busck).

MICRATHETIS DACULA Dyar.

9. Taboga Island, February, 1912 (Busck); Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

The specimens agree with the types of *dacula* from French Guiana, except that the brown shading within the outer line is less extensive. This is apparently a distinct species and not a race of *M. dasarada* Druce.

MICRATHETIS TECNION, new species.

Somewhat smaller than *dacula* and more sharply marked; middle line not so strongly oblique, bent a little at the black punctiform reniform, preceded by a slight brown shade; subterminal line oblique from apex, where it is marked by a black dash; terminal series of minute points. Hind wing pale, with slight yellowish tint, paler than in *dacula*, not so white as in *dasarada*. Expanse, 13 mm.

Cotypes.—Six males, two females, Cat. No. 15841, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

Resembles *dasarada*, smaller, broader-winged, the marks more upright, discal dot minute, but distinct.

MONODES DEVARA Druce.

2. La Chorrera, May, 1912 (Busck).

MONODES BARBAROSSA Hampson.

1. La Chorrera, May, 1912 (Busck).

A male, apparently referable here.

MONODES AGYRA Druce.

1. Cabima, May, 1911 (Busck).

MONODES LANGIA Druce.

1. Trinidad River, March, 1912 (Busck).

The abdomen has no basal crest.

MONODES HYPOSCOTA Hampson.

1. La Chorrera, May, 1912 (Busck).

MONODES MICROMMA, new species.

Two very small females with dark hind wings, specifically separable from *costagna* (Schaus), of which I have the male type from Brazil. There is a difference of ornamentation. In *costagna* there is a long ocher streak on vein 3. In the present form there is an ocher spot between veins 2 and 3, no streak.

Cotype.—Two females, No. 15921, U.S.N.M.; Cabima, May, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck).

MONODES DELTOIDES M \ddot{u} schler.

1. Trinidad River, March, 1912 (Busck).

MONODES AGROTINA Guenée.

31. Porto Bello, March, 1912 (Busck); La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

MONODES NIVEIPLAGA Schaus.

2. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

MONODES EXESA TROLIA, new subspecies.

M. exesa exesa Guenée from Florida occurs also in Mexico, State of Vera Cruz [Misantla and Orizaba (Müller), Paso San Juan (Schaus)].

M. exesa trolia is a smaller, slighter form with narrower wings, the fore wing beneath clearer, without brown shades, the markings better relieved.

Cotypes.—One male, two females, No. 15842, Paraiso, Canal Zone, February, 1911 (Busck); La Chorrera, May, 1912 (Busck).

MONODES COMMACOSTA, new species.

Costa broadly pale clayey yellow from base of inner margin to apex, where it is obliquely cut; rest of wing reddish brown, shading to purple on margin; median space with black streaks; a small white dot above vein 1; reniform lunate, fused in the costal band; outer line pale, narrow, upright; fringe dark. Hind wing whitish, without terminal dark shade. Expanse, 18 mm.

Cotypes.—Two males, No. 15843, U.S.N.M.; La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

Similar to *M. monyoma* Druce, which is not before me, but apparently smaller and more distinctly marked.

MONODES PERIGEANA Schaus.

5. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Capima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

The specimens are all smaller than the male type from Costa Rica and the markings not quite so much obscured.

MONODES LITHOTELA, new species.

Fore wing blackish brown; lines formed by rows of white points; a long fusiform olive-ocher dash through the cell, separating two of the largest white dots of the outer line; an irregular broken olive subterminal shade. Hind wing black. Expanse, 17 mm.

Type.—Female, No. 15856, U.S.N.M.; Cabima, May, 1911 (Busck).

MONODES IPSIDOMO, new species.

Fore wing pale lilacine gray in ground; median area extending obliquely to apex brown-black, cut by a large pale whitish-washed patch on costa, in the lower part of which is the reniform, narrow, oblique, pale; basal area dark shaded, with a black dash below median vein; another dash in the dark area beyond reniform; subterminal line pale, excurved below. Hind wing dark fuscous to blackish. Expanse, 15–16 mm.

Cotypes.—Male and female, No. 15857, U.S.N.M., selected from a series of thirteen; Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, March, 1911, and June, 1912 (Busck), July, 1912 (J. Zetek).

PHOBOLOSIA GRANDIMACULA Schaus.

10. Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

PHOBOLOSIA MYDRONOTUM, new species.

Fore wing light gray, minutely squamose in darker; a terminal row of black dots; a violaceous metallic area at tornus; a trace of same color centrally near inner margin. Hind wing similar, but the violaceous color much diffused. Abdomen dorsally metallic black and blue, with golden bars at bases of the central segments. Expanse, 10 mm.

Type.—Female, No. 15844, U.S.N.M.; Porto Bello, May, 1912 (Busck). Allied to *P. aurilinea* Schaus.

OGDOCONTA PULVILINEA Schaus.

24. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts and J. Zetek).

LEUCOSIGMA RELETIVA, new species.

Violaceous gray, without red tint; patch at apex square, pale; V-shaped marking joining orbicular and reniform dull yellow, as is also the patch at base. Hind wing fuscous. Expanse, 28 mm.

Type.—Female, No. 15839, U.S.N.M.; Trinidad River, March, 1912 (Busck).

The specimen is in poor condition, but obviously distinct from *L. uncifera* Druce.

SACADODES PYRALIS Dyar.

3. Taboga Island, February, 1912 (Busck); Trinidad River, March and June, 1912 (Busck).

BAGISARA SUBUSTA Hübner.

2. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

BAGISARA AVANGAREZA Schaus.

1. La Chorrera, May, 1912 (Busck).

BAGISARA ANOTLIA, new species.

Buff-yellow, almost without markings; subterminal line most distinct, dark shaded, evenly curved; traces of outer line, which form a point beyond cell and of annular reniform; a slight darker shading near center of outer margin. Expanse, 27–29 mm.

Cotypes.—Male and female, No. 15846, U.S.N.M.; Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

This may be an immaculate form of *B. avangareza* Schaus.

CHALCOECIA EMESSA Druce.

1. Trinidad River, June, 1912 (Busck).

CHALCOECIA HEOCHROA, new species.

Allied to *C. emessa* Druce, but lighter colored and smaller. Hind wing pale straw color, shaded with reddish brown on margin. Fore wing paler than in *emessa*, the basal space rosy violet, the shading on inner half of median space olive brown; outer line excurved in the middle. Expanse, 27 mm.

Cotypes.—Two females, No. 15845, U.S.N.M.; Alhajuelo, April, 1911 (Busck). Also a male and two females from Aroa, Venezuela (Schaus collection).

CLOSTEROMORPHA RUFIFACTA, new species.

Similar to *C. reniplaga* Felder; the large costal patch is brown-red, ending in black outwardly; the ground color is suffused with reddish; the lines are faint, the outer bent at an obtuse angle; the discal marks small, faintly pale ringed. Expanse, 30 mm.

Cotypes.—Two females, No. 15858, U.S.N.M.; Trinidad River, March and June, 1912 (Busck).

A male of this form is before me from Omai, British Guiana (W. Schaus).

Since preparing this description, a female from St. Jean, French Guiana, has been sent to the Museum by Mr. Schaus, labeled "*C. cupreiplaga* Hamps.," a manuscript name at the time but lately published.¹

AMOLITA SENTALIS Kaye.

30. Porto Bello, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March and April, 1911 (Busck); La Chorrera, April, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

This is a very small species. The North American *A. obliqua* Smith is very similar in markings, but of twice the size and I believe a distinct species, not a synonym of *sentalis*. In *obliqua* a faint longitudinal band runs below the cell and joins the inner of the two lines. This is only slightly indicated in *sentalis*.

AMOLITA PEPITA, new species.²

A medium-sized species, marked as in *sentalis* Kaye. The inner of the two lines is distinct and broad, black next the apex, partly

¹ Ann. Mag. Nat. Hist. (8), vol. 13, 1914, p. 160.

² Three other forms in the collection have been confused, and may be characterized as follows:

AMOLITA SOLITARIA, new species.

Like *A. obliqua* Smith, but the inner line as it turns to run below the cell is bent at a rather sharp angle and becomes attenuated, not running broadly and evenly as in *obliqua*. The wings are less pointed at apex than in *obliqua*. Expanse, 21 mm.

Type.—Female, No. 15848, U.S.N.M.; Demerara, British Guiana (Schaus collection).

AMOLITA INTENSA, new species.

Lines traversing the wing, the inner broad, diffused, shaded with red; outer slender, sometimes obsolete. Wing somewhat longitudinally shaded; not irrorate; discal dots punctiform, single. Hind wing pale straw color. Expanse, 23-26 mm.

Cotypes.—One male, three females, No. 15849, U.S.N.M.; Castro, Parana, Brazil (Schaus collection).

AMOLITA PARANOMA, new species.

Pale straw color; fore wing heavily irrorated in the female, scarcely at all so in the male; lines slender, powdery, oblique, parallel, both crossing the wing; a brown line on median vein and its branches; discal dots small, distinct, black, the outer usually doubled. Hind wing whitish, with straw-color tint. Small terminal dots on both wings. Expanse, 24-30 mm.

Cotypes.—Two males, three females, No. 15850, U.S.N.M.; Castro, Parana, Brazil (Schaus collection).

reddish below, traversing the wing. No trace of longitudinal line. Outer discal dot enlarged or doubled, black. Expanse, 19–23 mm.

Cotypes.—Male and female, No. 15847, selected from a series of 38; Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck); Trinidad River, March and June, 1912 (Busck); Cabima, May, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); La Chorrera, May, 1912 (Busck).

ABLITA, new genus.

Proboscis aborted, small; palpi obliquely upturned, second joint fringed with hair below, third moderate, smooth; frons smooth, without hair-tuft; eyes large, round; thorax clothed chiefly with scales, without crests; tibiæ smoothly scaled; abdomen without crests; fore wing narrow, apex square, veins 7–10 stalked, or, abnormally, 10 anastomosing shortly with stalk of 7–9 to form a very small accessory cell. Hind wing with veins 3–4 shortly stalked, 5 obsolete from angle of discocellulars, 6–7 stalked; 8 anastomosing with cell near base.

Type of the genus.—*Neolita adin* Schaus.¹

ABLITA ADIN Schaus.

1. La Chorrera, May, 1912 (Busck).

The specimen does not agree very closely with the type of *adin*, but is in poor condition and I can not positively separate it.

ABLITA NYMPHICA, new species.

Vertex of head nearly white; palpi upturned, the second joint reaching vertex, brown scaled, white tipped, third joint slender, brown banded. Fore wing purplish ochraceous, irrorated with dark brown; costa dark at base; inceptions of inner and mesial lines on costa shown as short streaks; shorter streaks toward apex; a small black discal dot. Hind wing whitish, with dark terminal marks.

Cotypes.—Two females, No. 15853, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Also three males and a female with the discal dots fused into a round spot, tentatively placed here; La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); July, 1912 (C. P. Crafts).

ABLITA GRAMMALOGICA, new species.

Palpi obliquely porrect, second joint fringed with scales at summit, third smoothly scaled, without dark scales. Fore wing straw color, shaded obscurely with olive brown, forming streaks toward apex and outwardly; subbasal line slender, brown, dentate, reaching submedian fold; inner line oblique, to submedian, incurved thence to vein 1; median line shaded, obscure, excurved to reniform; outer line starting in an oblique dash on costa, excurved over cell; short black streaks on costa before apex; marginal spots brown, lunate,

¹ *Neolita adin* Schaus, Ann. Mag. Nat. Hist. (8), vol. 8, 1911, p. 107.

nearly touching; discal mark small, white, incompletely edged by black scales. Hind wing sordid whitish, tinged with brown; marginal brown marks nearly confluent. Expanse, 17 mm.

Type.—Female, No. 15854, U.S.N.M.; Porto Bello, April, 1912 (Busck).

DANTONA CORVES, new species.

Fore wing gray-brown, more or less heavily shaded with gray-black; outer line a row of black spots from before apex to outer third of inner margin, forming a line below; discal dot double, white, black-edged and joined to a black bar in cell; slight black bar also on submedian at base; terminal area somewhat streaked, the pale ground persisting in elongate patches between the veins; a row of terminal black dots. Hind wing soiled white in the male, densely fuscous powdered in the female. Expanse, 22 mm.

Cotypes.—Two males, one female, No. 15855, U.S.N.M.; Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

EUDRYAS SANCTÆ-JOHNANNIS Walker.

1. La Chorrera, May, 1912 (Busck).

AUCULA BUPRASIA Druce.

1. La Chorrera, May, 1912 (Busck).

AUCULA PARTICOLOR, new species.

Fore wing black, shading to deep red at apex, densely irrorated with blue; the irrorations define a median black line, angled outwardly in the middle, and an outer oblique line close to it, excurved over cell, the two inclosing above a large annular reniform; a subterminal macular band; all the markings entirely of the ground color and defined by the pale irrorations. Hind wing with a large elliptical orange patch at base. Beneath, fore wing with a large transverse orange spot outwardly. Expanse, 27–29 mm.

Cotypes.—Two males, one female, No. 15851, U.S.N.M.; La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

Allied to *A. sublata* Walker. The antennæ of the male are simple.

VESPOLA PLUMIPES Schaus.

1. Chiriquicito (W. Schaus).

Subfamily **ERASTRIINÆ**.

ARÆOPTERA BETIE, new species.

Palpi small, with the front black; tongue yellow. Fore wing with outer margin rounded, pointed at apex and middle; white, with scattered brown scales; discal dot and a half band before tornus dark brown. Hind wing with apical projection, white, with a mesial band and two more close to the margin of diffused chocolate-brown scales. Expanse, 10 mm.

Cotypes.—Two females, No. 15866, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck); Trinidad River, March, 1912 (Busck).

Allied to *A. elam* Schaus, described in *Acidaliodes*, but having vein 7 of fore wing stalked, and therefore an *Aræoptera*.

ACIDALIODES ENONA Druce.

7. Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

ACIDALIODES MELA, new species.

Palpi rather short and shaggy in front, with the front black; tongue yellow. Fore wing with veins 4 and 5 stalked, narrow, entire, apex pointed; gray, the costa black, with three interruptions; an elongate black discal mark and row of terminal dots; three red dots for inner line; four outer faint brownish transverse lines of scales, more or less complete. Hind wing with a subbasal black line; a brown line beyond the middle and two close to margin. Basal segment of abdomen black, the rest gray. Expanse, 9 mm.

Type.—Male, No. 15865, U.S.N.M.; Trinidad River, March, 1912 (Busck).

ACIDALIODES UMBER, new species.

Thorax light brown, the scales white-tipped. Fore wing excavate below apex, brown, the scales white-tipped except over disk; marks nearly obsolete; some dark central streaks and blackish dots, indistinctly connected by luteous in positions of the ordinary lines; a row of terminal black dashes, preceded by a white line; fringe with black scales at apex and center of margin. Hind wing with broken row of black scales beyond base, middle orange shaded band, two blackish lines in outer field where the scales are gray-tipped and terminal white line. Expanse, 10 mm.

Type.—Male, No. 15860, U.S.N.M.; Trinidad River, May, 1911 (Busck).

Allied to *A. truncata* Hampson.

ACIDALIODES FLAVIPARS, new species.

Body shaded with purple dorsally. Fore wing narrow, long, broadly purple gray on costal half, with undulating lower edge; inner area pale yellow, with orange scales next the purple. Hind wing small, pale yellow, narrowly purple at base, followed by red and orange irrorations outwardly. Anal tuft pale yellow, preceded by red. Expanse, 11 mm.

Type.—Male, No. 15861, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

Allied to *A. enona* Druce.

DYMBA, new genus.

Palpi upturned, second joint expanded with scales slightly at tip, third moderate, smooth; tongue moderate; front smooth, without prominence; vestiture without crests, scaly. Fore wing with vein 3 from angle of cell, 4-5 stalked, 6 below upper angle of cell, 7-10 stalked, 7 before 10, 11 free, oblique. Hind wing with 3-4 stalked,

5 from near center of cross vein, 6-7 stalked, 8 anastomosing with cell near base only.

Type of the genus.—*Dymba coryphata*, new species.

DYMBA CORYPHATA, new species.

Front dark brown, with a black point on each side: vertex lilac gray, with central black point, thorax lilac gray, brown-black behind; abdomen white, with dorsal row of black specks. Fore wing elongate, apex pointed, outer margin oblique; ground white, but showing only centrally and at apex; base dark purple, with subbasal half band and inner band of dark brown; median space irrorate with brown and black, leaving a white patch in cell with oblique black line beyond it and another on inner margin outwardly; outer line indicated by a black band from costa in dense irrorations, which cease outwardly, leaving the apex broadly white; a row of terminal black dots; fringe tipped with grayish. Hind wing white with scattered black scales, forming broken subbasal, mesial, outer and submarginal lines; some black scales on termen at apex; fringe grayish. Expanse, 11 mm.

Type.—Male, No. 15909, U.S.N.M.; Trinidad River, March, 1911 (Busck).

PSEUDOCRASPEDIA LEUCOZONA Hampson.

1. Porto Bello, April, 1912 (Busck).

PSEUDOCRASPEDIA SODIS, new species.

Palpi slender, small, somewhat shaggy in front, with the front black. Fore wing produced at apex and middle; grayish white with spots of black scales along the costa; an outer curved white band, a shade lighter than the ground; an oblique half band of brown scales before tornus. Hind wing pointed subapically and at middle; grayish white; base and two closely following bands to one-third of wing gray; margin broadly gray shaded, leaving a slender white line at outer fourth, pointed in the middle and forming two broad arcs; another line just before the narrow dark termen. Expanse, 11 mm.

Cotypes.—Three females, No. 15869, U.S.N.M.; Trinidad River, March and June, 1912 (Busck).

PSEUDOCRASPEDIA HOLOPOLIA, new species.

Dark gray; fore wing with straight oblique central line and more slender outer one, slightly divergent toward costa; a shaded submarginal line, slightly bent and thickened below. Hind wing with straight central brown line, fine wavy outer one, followed by a faint straight line and broad dark marginal one. Expanse, 10 mm.

Type.—Female, No. 15876, U.S.N.M.; Trinidad River, March, 1912 (Busck).

PSEUDOCRASPEDIA MATHETES, new species.

Light gray; fore wing with narrow straight oblique mesial line and dark brown blotches forming an irregular band close to margin.

Hind wing with a straight mesial line, the base only slightly darker than the central area; three dark outward lines close together, first narrow, other two broad, the last close to margin; outer margin straight, but not excavated as in *sodis*. Expanse, 10 mm.

Cotypes.—Two specimens, No. 15867, U.S.N.M.; Trinidad River, March, 1912 (Busck).

LYCAUGESIA FUSCICOSTA Hampson.

4. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

LYCAUGESIA MELASOMA Hampson.

1. La Chorrera, May, 1912 (Busck).

LYCAUGESIA HYPOZONATA Hampson.

10. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

LYCAUGESIA INFANTILIS Schaus.

2. Porto Bello, April, 1912 (Busck); Trinidad River, June, 1912 (Busck).

LYCAUGESIA SEMICLARA, new species.

Fore wing pointed at apex; straw color, irrorated with brownish on the costal half; discal mark round, purplish, joined to apex by a faint streak; a line of brownish shading before outer margin. Hind wing straw color at base, crossed by a line of red scales; outer two-thirds lilacine gray, shaded with dark irrorations in lines. Fore wing below with longitudinal dark shade in cell. Expanse, 12 mm.

Type.—Female, No. 15881, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Allied to *L. homogamma* Schaus.

LYCAUGESIA MICROZALE, new species.

Reddish brown; costal third of fore wing dark gray, irrorated with darker; discal dot black, distinct; some dark dots near base on edge of costal shade. Hind wing darker brown, with fine wavy lines of red scales; a black dot at apex and one on inner margin; a black streak on inner half of outer margin. Expanse, 10 mm.

Type.—Female, No. 15582, U.S.N.M.; La Chorrera, May, 1912 (Busck).

LYCAUGESIA CALOCHROIA, new species.

Fore wing yellow, irrorated with orange; a clouded rosy purple discal patch, with dark purple dot; a faint purplish patch at base of costa. Hind wing with a broad rosy purple curved central band, its edges marked by lines of blackish scales. Expanse, 11 mm.

Cotypes.—Four specimens, No. 15883, U.S.N.M.; Porto Bello, April, 1912 (Busck); Trinidad River, March, 1912 (Busck).

LYCAUGESIA EPISTIGMA, new species.

Fore wing caraneous gray, with red dots at base and for inner line; a large black discal spot; a row of minute terminal dots. Hind wing

with wavy lines of red scales, forming faint bands; terminal dots as on fore wing. Thorax with red dots and one on vertex of head. Expanse, 9 mm.

Type.—Female, No. 15884, U.S.N.M.; La Chorrera, May, 1912 (Busck).

LYCAUGESIA STIGMALEUCA, new species.

Pale gray, luteous over disk of fore wing; lines slender, faint, bent, oblique on costa; apex dark shaded and longitudinally streaked; discal spot distinct, white. Hind wing with two mesial rufous lines, filled with gray and followed by a white line; terminal line black. Below fore wing shaded gray broadly on costa. Expanse, 12 mm.

Type.—Male, No. 15877, U.S.N.M.; Trinidad River, June, 1912 (Busck).

LYCAUGESIA PSEUDURA, new species.

Fore wing light brown, markings purplish, light, not contrasted; a dark patch at base; inner line very faint; outer slender, dark, followed by a lighter area, strongly excurved in the middle; dark spotting at apex; a terminal row of small dots. Hind wing faintly lined with fulvous; a purplish half band on inner margin and patch on lower half of margin, forming a spot in the fringe centrally like a projection. Expanse, 12 mm.

Type.—Male, No. 15874, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Near *L. hypozonata* Hampson in shape and general color.

LYCAUGESIA GRATIFICULA, new species.

Fore wing long and narrow, pale yellow, shaded faintly with purplish along the costa and outer margin; a darker discal patch and faint angled white outer line. Hind wing with pale yellow band before middle; base and subterminal area pale purplish; terminal area pale red-brown. Expanse, 10 mm.

Cotypes.—Two females, No. 15875, U.S.N.M.; Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

Allied to *L. teneralis* Walker.

LYCAUGESIA POSTNIGRESCENS, new species.

Fore wing light violaceous brown, with a few dots and streaks representing the usual lines; a subapical black streak is most prominent. Hind wing heavily shaded with dark over ground color like that of fore wing, in irregular blotches, leaving the base, a patch on inner margin, and one on outer margin pale; terminal dots on both wings. Expanse, 15 mm.

Type.—Female, No. 15878, U.S.N.M.; Trinidad River, June, 1912 (Busck).

LYCAUGESIA PERPURPURA, new species.

Rich rosy purple; fringes of both wings ocher; fore wing with dark discal spot and zigzag white subterminal line; terminal row of dark

spots. Hind wing with two well-separated curved dark purple lines; terminal dots more distinct than on fore wing. Below, dark fuscous. Expanse, 13 mm.

Type.—Female, No. 15879, U.S.N.M.; Trinidad River, March, 1912 (Busck).

LYCAUGESIA HEMIPENNIS, new species.

Fore wing long and narrow; dark gray; inner line relieved by whitish on lower half; a narrow white upright discal dash with wavy white line below it to margin; subterminal zigzag white line; no terminal dots. Hind wing small, pale yellow. Fringes of both wings long, whitish. Below, fore wing gray, hind wing white. Expanse, 11 mm.

Type.—Female, No. 15880, U.S.N.M.; Trinidad River, March, 1912 (Busck).

LYCAUGESIA SEMIBLANDA, new species.

Close to *L. gratificula* Dyar, differing chiefly in the presence of a broad gray costal shade on fore wing, similar to the shade on outer margin, half inclosing the discal dot. Expanse, 12 mm.

Type.—Female, No. 16029, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts).

LYCAUGESIA MONOSTELLA, new species.

Grayish purple; fore wing with a yellow patch on basal third of inner margin, a large yellow discal mark and trace of a similar mark subterminally, all the yellow irrorated with red; indistinct black dots along costa and toward base of wing, representing the inner line. Hind wing with a small yellow and red discal dot, a fairly distinct blackish mesial line touching it, and scattered black specks beyond representing the outer line. Expanse, 11 mm.

Type.—Female No. 16030, U.S.N.M.; Trinidad River March, 1912 (Busck).

ORUZA LEUCOCRASPIS Hampson.

2. Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck).

ARÆOPTERELLA, new genus.

Venation of *Aræoptera* Hampson except that vein 11 arises from the cell; palpi upturned, the third joint reaching about to vertex of head, continuously scaled with the second joint; front smooth; eyes large; tongue well developed; thorax clothed with scales, without crests; abdomen without crests.

Type of the genus.—*Aræopterella miscidisce*, new species.

ARÆOPTERELLA MISCIDISCE, new species.

Front and palpi black; vertex, thorax, and abdomen and fore wing pale gray. Fore wing more whitish toward costa, shaded with olivaceous gray outwardly, relieving a white subterminal band and

white dots before the small black terminal ones; ordinary lines obsolete; a black dot at middle of costa; a white shade for outer line, regularly curved. Hind wing with light-brown shading beyond the middle, relieving a diffuse white discal patch; mesial and outer lines of white scales; termen as on fore wing, without the black dots; fringe concolorous. Expanse, 16 mm.

Type.—Female, No. 16031, U.S.N.M.; Trinidad River, June, 1913 (Busck).

EUBLEMMA CINNAMOMEA Herrich-Schäffer.

8. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

CHAROBLEMMA, new genus.

Fore wing with veins 8–10 stalked; frons without prominence; abdomen without crests; proboscis well developed; palpi oblique, the second joint fringed above with hair toward extremity; hind wing with vein 8 anastomosing with the cell near base, veins 3–4 stalked, 5 well below angle of discocellulars.

Type of the genus.—*Charoblemma unilinea*, new species.

CHAROBLEMMA UNILINEA, new species.

Fore wing straw-color; a broad, oblique brown-black band from apex to basal third of inner margin, the space beyond it carneous shaded; margin brown-black. Beneath the shade is repeated, and there is another in the cell, as described for *Eublemma flavia* by Hampson. Hind wing straw-color, carneous tinted toward the margin. Expanse, 12 mm.

Type.—Female, No. 15864, U.S.N.M.; La Chorrera, May, 1912 (Busck).

CHAROBLEMMA OPISTHOMELA, new species.

Straw color; fore wing with slight purplish tint and an oblique line of black dots nearly coincident with a dull olivaceous band from beyond middle of inner margin to costa before apex. Hind wing pale stramineous. A black patch on posterior part of thorax. Expanse, 11 mm.

Type.—Male, No. 15868, U.S.N.M.; Taboga Island, February, 1912 (Busck).

ANABLEMMA LEBANA Schaus.

3. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

ANABLEMMA ZIHA Schaus.

1. Cabima, May, 1911 (Busck).

ANABLEMMA PALLIOLA, new species.

Fore wing pointed subapically; brownish straw color, the costa and margin marked with a few dark scales and a small spot on inner margin at outer fifth; markings obsolete, represented by a few unde-

fined scales. Hind wing yellowish, with central dark discal spot. Expanse, 14 mm.

Type.—Male, No. 15870, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Allied to *A. ziba* Schaus.

PROROLEMMA PHILOGONIA, new species.

Fore wing pointed at apex, projecting at middle of outer margin and prominently angled at middle of inner margin, especially in males, which have also a tuft of yellow scales on inner margin of hind wing. Straw color in male, rosy in female, densely, finely irrorated with gray, leaving a white outer line prominently excurved below costa; two minute black dots in cell; fringe dark brown. Hind wing yellowish in the male, fuscous tinted in female, with minute terminal dots. Expanse, 15–16 mm.

Cotypes.—Five males, 2 females, No. 15871, U.S.N.M.; Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Allied to *P. rosea* Schaus.

PROROLEMMA CUPREISPILA, new species.

Fore wing broadly triangular, outer margin evenly convex; top of head white; fore wing purplish, shading to coppery red about tornus, finely irrorated; a curved faint dark outer line and minute discal mark. Hind wing fuscous shaded, with traces of mesial band and discal dot, more distinct below. Expanse, 14 mm.

Type.—Female, No. 15872, U.S.N.M.; La Chorrera, May, 1912 (Busck).

PROROLEMMA PORPHYREA, new species.

Fore wing brilliant purple, a darker brown clouding on costa about outer line; outer line dark, excurved below costa; discal dot round, dark; a row of terminal black dots; fringe brown. Hind wing fuscous with terminal dots. Expanse, 13 mm.

Type.—Female, No. 15873, U.S.N.M.; Cabima, May, 1911 (Busck).

MICROBLEMMA DISCIPUNCTA Hampson.

3. La Chorrera, May, 1912 (Busck).

The specimens are females, agreeing well with Hampson's description and figure.

MICROBLEMMA ULOPUS, new species.

Fore wing yellowish brown, irrorated with fuscous, more densely on margin; a large round brown discal spot; costa dark brown, as also terminal dots and traces of inner and curved outer bands; a brown mark at base of inner margin. Hind wing fuscous, lighter on disk. Hind legs with the tarsi shorter than the tibiae, with a long, dense fringe of scales on the upper side of tibia and all but last two tarsal joints, dark brown, crested with white on first two joints of tarsi. Expanse, 12 mm.

Cotypes.—Two males, No. 15904, U.S.N.M.; Cabima, May, 1911 (Busck).

This is possibly the male of *M. discipuncta* Hampson; fuller material will be needed to decide.

GELENIPSA, new genus.

Frons smooth; tongue obsolete; palpi slender, smooth, oblique, not reaching vertex; antennæ of male with long slender pectinations; fore wing short and broad, costa arched, cell long, veins 4-5 from a point, 7-10 stalked, 9 absent, 11 from cell; hind wing with 3, 4 separate, 5 from middle of discocellulars.

Type of the genus.—*Glenipsa psychodidarum*, new species.

GELENIPSA PSYCHODIDARUM, new species.

Vertex and collar nearly white; disk of thorax dark brown. Fore wing gray, irrorated with brown and black; a patch of coppery red scales on outer margin; lower median space broadly red-brown, defined by a dentate subterminal line, beyond which is an area of glaucous green with two black patches centrally next the coppery patch; toward base a patch of green on costa and on internal margin, followed by a black shade on costa, the base itself dark brown. Hind wing of the male fuscous shaded, darker on the margin; in the female all dark fuscous. Expanse, 10 mm.

Cotypes.—Five males, one female, No. 15905, U.S.N.M.; Trinidad River, March and June, 1912 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PARANGITIA SUBRUFESCENS Kaye.

1. La Chorrera, May, 1912.

PARANGITIA CIRCUMCINCTA, new species.

Hind wing of the male with modified discal and submedian folds as in *Angitia tiresias* Druce. Body ocher brown. Fore wing olivaceous brown, the inner line broad, black, curved, joining the outer along inner margin, which is curved, slightly denticulate and doubled outwardly by a narrow line; reniform, claviform, and orbicular similar, pale, gray-outlined, not contrasted; subterminal area narrowly gray with black shading. Hind wing black-brown, with a dash above tornus. Submedian fold whitish. Expanse, 28 mm.

Type.—Male, No. 15859, U.S.N.M.; Porto Bello, March, 1912 (Busck).

ANGITIA ATTINA Druce.

1. Taboga Island, June, 1911 (Busck).

ANGITIA TRISTIGMA, new species.

Fore wing with median and basal spaces black-shaded, irrorate with purplish scales; lines obscured; orbicular, claviform and reniform

rounded, similar, in a triangular group, dull olivaceous centered, whitish edged; outer line black, slender, dentate, excurved over cell, followed by a broad olivaceous shade to margin, which is obscured by blackish centrally and preceded by whitish at tornus. Hind wing black-brown, fringe paler. Expanse, 26–28 mm.

Cotypes.—One male, one female, No. 15893, U.S.N.M.; Cabima, May, 1911 (Busck).

CHALENATA USTATATA Druce.

10. Porto Bello, April, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

CHALENATA USTATINA, new species.

Very similar to *C. ustata* Druce; smaller, the hind wing clear straw-color with very little brown irroration; marginal area of fore wing with lighter ground, the bands better relieved, not diffused. Expanse, 15–16 mm.

Cotypes.—One male, one female, No. 15894, U.S.N.M.; selected from a series of eight; Paraiso, Canal Zone, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

Except for the fact that these were taken at the same places and times as *ustata*, I should consider them small individuals of that species, so slight are the differences.

CHALENEATA QUELLA, new species.

Male antennæ pectinate. Fore wing dark gray-brown, nearly unmarked; lines pale, dusky edged, subparallel, wavy, indistinct, the outer tinged with a reddish shade; discal dot minute, black; a row of terminal black dots. Hind wing blackish fuscous with terminal black dots and pale fringe. Expanse, 19 mm.

Cotypes.—Four males, one female, No. 15897, U.S.N.M.; La Chorrera, May, 1912 (Busck).

ORTHOLEUCA ALBILUNA Hampson.

23. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

VIA, new genus.

Frons with rounded conical prominence; thorax and abdomen without crests; proboscis moderately developed; palpi slender, upturned, reaching vertex, the second joint fringed with scales below, third smooth. Fore wing with veins 3 and 4 from near angle of cell, 5 somewhat above, 7 from apex of cell, 8–10 stalked, 11 oblique, free; hind wing with 3 and 4 connate, 5 slightly below middle of discocellulars, 6 and 7 from apex of cell, 8 anastomosing with cell near base.

Type of the genus.—*Via vindicia*, new species.

VIA VINDICIA, new species.

Head partly white-scaled on vertex; thorax and abdomen dark purple brown; fore wing of this color, glossy; inner line yellowish white, curved, slightly irregular, distinct; outer line similar, but faint, showing a dot on costa and line above inner margin, occluded centrally; three white specks on costa before apex. Hind wing bronzy black. Expanse, 10 mm.

Cotypes.—Eight specimens, No. 15908, U.S.N.M.; La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck).

ERASTRIODES EMARGINATA Hampson.

2. Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

AMYNA OCTO Guenee.

1. Corozal, Canal Zone, July, 1912 (J. Zetek).

PRODOSIA, new genus.

Fore wing with accessory cell, vein 10 arising from its upper side, 11 free; fore tibiae unarmed; front of head without prominence; abdomen with small dorsal crest at base and one on third segment; thorax without crests; palpi upturned, the third joint long and exceeding vertex.

Type of the genus.—*Prodosia mycha*, new species.

PRODOSIA MYCHA, new species.

Fore wing with the basal three-fifths yellow-brown, followed by a whitish line with two small teeth near costa; the rest of the wing purplish black; subterminal line more or less evident, gently excurved on its middle third. Hind wing blackish fuscous. Expanse, 13–14 mm.

Cotypes.—Six specimens, No. 15895, U.S.N.M.; Taboga Island, February, 1912 (Busck); Porto Bello, February, 1912 (Busck).

Possibly the wings are green when fresh. All the specimens are somewhat worn.

GRÆPERIA COSTALIS Walker.

1. La Chorrera, May, 1912 (Busck).

DIASTEMA TIGRIS Guenée.

20. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek and C. P. Crafts).

DIASTEMA ARGILLOPHORA, new species.

Fore wing squarely pointed at apex, outer margin a little concave just below apex; straw-color; a broad creamy white area at base sends out a finger-shaped process centrally to middle of wing, edged by a dark brown shaded line; outer line creamy white, edged within

by brown, slightly excurved in its central third, joined to apex by an oblique white shade, followed by a broad purple-brown shade; a row of small terminal dots; veins on a broad costal area finely lined with white. Hind wing shaded with purple-fuscous outwardly; terminal dots as on fore wing. Expanse, 21–23 mm.

Cotypes.—One male, seven females, No. 15907, U.S.N.M.; Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

Different in wing-shape and pattern from the other *Diastema* and with the front much more strongly prominent.

LITHACODIA MERTA Schaus.

4. Tabernilla, Canal Zone, May, 1907 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, May, 1912 (Busck).

MICROPHÆA NYCTICHRUA Hampson.

9. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TROGOTORNA PERSECTA Hampson.

1. Paraiso, Canal Zone, February, 1911 (Busck).

DROBETA BREPHUS, new species.

Fore wing dark brown, irrorate with lighter scales, the markings obliterate; beyond the outer line a light creamy shade, irregularly broken, extending to apex where it is cut by a dark spot; a small light spot in reniform; a black double streak on upper third of outer margin. Hind wing dark blackish brown. Expanse, 16 mm.

Cotypes.—Three males, No. 15892, U.S.N.M.; La Chorrera, May, 1912 (Busck).

EUSTROTIA PULMONA Dyar.

3. La Chorrera, May, 1912 (Busck).

OZARBA OPLORA, new species.

Fore wing deep brown on basal half, rosy brown outwardly; reniform rosy brown, included in a space limited by the double projection of the outer line on veins 6 and 7; outer line whitish, regularly incurved below vein 6; a black dash following the incisure; sub-terminal line dusky, slightly waved, followed by a light narrow space. Hind wing blackish fuscous. Expanse, 15 mm.

Cotypes.—One male, two females, No. 15898, U.S.N.M.; La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

Allied to *Ozarba tilora* Dyar (*Erastria tilora* Dyar,¹) but smaller, darker, the markings less relieved, the outer line less drawn in on costa. Also allied to *Ozarba catilina* Druce (*Eustrotia catilina* Druce²), but

¹ Proc. U. S. Nat. Mus., vol. 42, 1912, p. 75.

² Biol. Cent.-Amer., Lep. Het., vol. 2, 1889, p. 312; Hampson, Cat. Lep. Phal. Brit. Mus., vol. 10, 1910, p. 598.

this has a distinct black costal patch beyond the outer line. Also allied to *O. agraria* Schaus, but less closely.¹

COBUBATHA NUMA Druce.²

3. La Chorrera, May, 1912 (Busck); Trinidad River, March, 1912 (Busck).

COBUBATHA PAIDICA, new species.

Fore wing dark brown at base, followed by a broad, slightly oblique, pale lilacine band containing a reddish line; median area brown shaded, lighter terminally with long black subapical streaks. Hind wing dark fuscous with pale fringe. Expanse, 10 mm.

Type.—Male, No. 15888, U.S.N.M.; Taboga Island, February, 1912 (Busck).

The specimen is in poor condition, so the markings can not be seen in detail.³

COBUBATHA QUADRIFERA Zeller.

11. Porto Bello, April, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

The patch on inner margin is brown, not black. The specimens are all smaller than the usual size of North American ones.

COBUBATHA ICRIA, new species.

Fore wing dark brown at base, followed by a silvery lilaceous band; median space dark brown, curved within, straight without, indis-

¹ Modifications of the *oplor*a type occur to the southward. Of these, one is—

OZARBA HEMITECTA, new species.

Base of fore wing solidly dark brown, the lines nearly obscured; coarsely waved inner and median lines visible; lower half of terminal space, except on the margin, light ochereous; reniform yellowish with a black spot below it inclosed by the outer line, which is shortly angled on costa, excurved over cell, with two blunt teeth at veins 5 and 6; apex dark; subterminal line pale, irregular, illy defined. Hind wing dark fuscous. Expanse, 17 mm.

Type.—Male, No. 15899, U.S.N.M.; Aroa, Venezuela (Schaus collection).

Finally the teeth of the outer line are obliterated and it becomes simply excurved as in *Ozarba vicina* Schaus and —

OZARBA BASCURA, new species.

Photodes bascura Schaus, MS.

Fore wing dark purplish brown at base; basal line forming three scallops, the central one heavy; inner line faint; median more distinct, slender, black, forming an outward projection below cell and a slight angle on vein 1; shortly beyond it the dark color is replaced by pale ochereous, the limiting line forming a projection below cell; the outer pale area is crossed by about four finely wavy red lines, of which the subterminal is shaded with blackish; a truncate triangular costal dark patch; reniform reddish, in a large nearly circular area, with small dark points outwardly. Hind wing dark fuscous. Expanse, 19 mm.

Type.—Female, No. 10547, U.S.N.M.; São Paulo, Brazil (Schaus collection).

² This species is represented southward by a similar but specifically distinct form.

COBUBATHA PINAX, new species.

Fore wing gray-brown, without ochereous tint; patch on inner margin truncate-conical, with a small wedge-shaped mark on costa; a small black dot near base; marks distinctly edged with dull silvery lines; reniform large, pale silvery gray; outer line faint, dark, slender, sharply incurved at reniform and broadly so below; a broad subterminal silvery gray slightly flexuous line; termen narrowly black, toothed opposite cell and submedian. Hind wing blackish brown, fringe whitish. Expanse, 16 mm.

Type.—Female, No. 15885, U.S.N.M.; Loja, Ecuador (Coll. P. Dognin).

³**COBUBATHA PERUSIA**, new species.

Fore wing blackish on basal third, with a few lilacine scales, followed by a broad band of sordid ochery brown; bordering this a narrow curved band of deep brown; terminal half of wing blackish, washed with purple, a little mottled with lighter subterminally; a pale spot on costa at apex. Hind wing black-brown, the fringe dark. Expanse, 11 mm.

Type.—Female, No. 15889, U.S.N.M.; Tucuman, Argentina, December, 1905 (E. Dinelli).

tinctly cut below cell by an obliquely longitudinal pale ray, the costal segment triangular, followed by a slightly oblique band of silvery lilaceous; terminal area coppery brown with lilacine scales and a black patch near middle of margin; terminal edge coppery brown, fringe black and purple. Hind wing black, a little lighter on the disk, fringe whitish. Below, hind wing gray, rufous tinged outwardly, with discal dot, outer curved dark band and slender submarginal one. Expanse, 11 mm.

Type.—Female, No. 15887, U.S.N.M.; Trinidad River, March, 1912 (Busck).

COBUBATHA ORTHODOXICA, new species.

Fore wing light gray in ground, shining, overlaid with dark atoms and with dark markings; inner and outer lines wavy, curved, filled in with blackish in lower half; reniform pale, with dark spot preceding; base darkly marked; a black spot before center of outer margin; a row of silver streaks on costa outwardly. Hind wing brown-black. Expanse, 10–11 mm.

Cotypes.—Male and female, No. 15886, U.S.N.M.; Corozal, Canal Zone, July, 1912 (C. P. Crafts, J. Zetek).

COBUBATHA PAISTION, new species.

Basal half of fore wing pale creamy with reddish tint; outer half purple-brown; base shaded with purple scales, costa outwardly with pale dots; a median darker band edging the purple area within; a narrow pale line on terminal edge. Hind wing fuscous. Expanse, 10 mm.

Cotypes.—Five specimens, No. 15890, U.S.N.M.; Taboga Island, February, 1912 (Busck).

COBUBATHA SUBTERMINATA Hampson.

7. Taboga Island, February, 1912 (Busck).

COBUBATHA TORTRICOPSIS, new species.

Basal half of wing blackish, ending in a median angle; outer area pale grayish, with faint carneous tint; apex darkly shaded, with four small silvery white oblique costal streaks, the inner one the longest; terminal edge black. Hind wing fuscous. Expanse, 8–9 mm.

Cotypes.—Two males, No. 15891, U.S.N.M.; Taboga Island, February, 1912 (Busck).

TARACHIDIA CARMELITA, new species.

Male.—Fore wing sordid yellowish white; base olive gray; a median band of olive gray, oblique, touching a faint discal mark; a similar outer band crossed by the curved outer line, black and shaded above in its outcurve, fainter below; a black speck on fringe at upper third and one at tornus. Hind wing fuscous shaded on margin and veins; fringe pale. Expanse, 13 mm.

Female.—Fore wing less yellowish, sordid white; bands as in the male but broader, the outer one shading almost to margin; discal

dark patch joined to median band. Hind wing dark fuscous. Expanse, 15 mm.

Cotypes.—Three males, two females, No. 15900, Alhajuco, April, 1911 (Busck).

Resembles *Eublemma minima* Guenée (= *carmelita* Morrison) in general appearance.

HELIOCONTIA PERSTRUCTANA Walker.

3. Corozal, Canal Zone, July, 1912 (J. Zetek and C. P. Crafts).

HELIOCONTIA APICELLA Grote.

6. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

HELIOCONTIA MARGANA Fabricius.

15. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

HELIOCONTIA LEPUS CONCORDENS, new subspecies.

Fore wing with dark brown patch at base; beyond blackish brown, shading lighter to termen, where it is very narrowly yellow; a narrow yellow subcostal dash centrally; a black spot on termen. Hind wing black. Expanse, 16 mm.

Type.—Male, No. 15863, U.S.N.M.; Trinidad River, August, 1912 (Busck).

The female is exactly like the male, not dimorphic. I think this is really specifically distinct from *lepus* Guenée, but as Hampson includes under the synonymy *faragma* Schaus and *inversa* Schaus, equally distinct, I describe this as a subspecies only, for the time being.

SPRAGUEIA DAMA Guenée.

9. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts, J. Zetek).

XANTHOPTERA BOTYCIDES Guenée.

4. Corozal, Canal Zone, March, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Trinidad River, June, 1912 (Busck).

XANTHOPTERA AURIFERA Walker.

8. Corozal, Canal Zone, March, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

XANTHOPTERA INTENSIFICA, new species.

Fore wing deep orange yellow, the outer line distinct, curved, reddish; discal dots minute or absent; the dark gray terminal line in fringe narrow. Hind wing orange-fuscous. Expanse, 15–17 mm.

Cotypes.—Three males, one female, No. 15862, U.S.N.M.; La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

XANTHOPTERA NIGROFIMBRIA Guenée.

15. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

Subfamily EUTELIINÆ.

EUTELIA AURATRIX Walker.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

EUTELIA ABSCONDENS Walker.

1. La Chorrera, May, 1912 (Busck).

PÆCTES CIRCULARIS Herrich-Schäffer.

1. Trinidad River, March, 1912 (Busck).

PÆCTES FUSCESCENS Walker.

2. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck).

PÆCTES PHELOISMA, new species.

Fore wing gray; inner and outer lines shaded with green; basal space narrowly light gray, with blackish below and on costa, not sharply marked, the inner line indistinct; orbicular and reniform pale, black-ringed; mesial line slender, black, excurved over reniform, coarsely dentate below; outer line triple, excurved over cell, outer segment dentate and followed by a brown-stained streak below vein 6; apex light gray, preceded by a black shade; subterminal line faint, pale. Hind wing black, fringe spotted with whitish; a small pale mark above margin; inner margin streaked with black and white. Expanse, 25 mm.

Type.—No. 15910, U.S.N.M.; selected from a series of twelve; Cabima, May, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck).

Size and markings of *P. areusa* Walker, but without the red tint, the basal markings and lines diffused.

PÆCTES PANBALLA, new species.

Brownish gray; fore wings with the lines marked with somewhat metallic green; basal space dark, green without; inner line black, indented subcostally and on vein 1, followed by dull lilacine; median space nearly devoid of markings, the stigmata obsolescent; outer line excurved over cell, black, slender, preceded by lilacine and followed by green, indented on vein 1; a subapical dark patch, the apex itself pale; four black dashes subterminally. Hind wing largely blackish. Expanse, 29 mm.

Type.—Male, No. 15911, U.S.N.M.; Chiriqui (Schaus collection).

Allied to *P. canofusa* Hampson, but without the white mottlings, the lines distinct and not confused.

Subfamily STICTOPTERINÆ.

STICTOPTERA VITREA Guenée.

10. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, March, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

Five of the females may be referable to *C. fenestra* Guenée, but as there is no male of this species among the Panama collections, the reference can not be made positively.

STICTOPTERA CLARA Cramer.

19. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

STICTOPTERA HETEROGRAMMA Hampson.

1. Paraiso, Canal Zone, January, 1911 (Busck).

Subfamily SARROTHRIPINÆ.

CHARACOMA NILOTICA Rogenhofer.

15. Porto Bello, February and March, 1911 (Busck); La Chorrera, April, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck).

LOPHOSEMA PURPURASCENS Schaus.

1. Cabima, May, 1911 (Busck).

CASANDRIA METAPHAEA Hampson.

5. Cabima, May, 1911 (Busck).

CASANDRIA CHIRICA Schaus.

1. Taboga Island, February, 1912 (Busck).

CASANDRIA LEUCOPIS Schaus.

1. Cabima, May, 1911 (Busck).

The single specimen is a female and much rubbed, but I think referable to this species.

CASANDRIA INTERSTITIA, new species.

Similar to *leucopis*, more shaded with dark red; reniform mark larger; lines similar, mesial line forming a coarser zigzag below; subterminal spots distinct and separated, not shaded together, preceded rather than followed by whitish shading. Hind wing with broader fuscous border.

Type.—Female, No. 15912, U.S.N.M.; Cabima, May, 1911 (Busck).

A male from Guapiles, Costa Rica (W. Schaus), has more white shading, especially preceding the subterminal spots. Hind wing pure white to the margin without terminal line.

CASANDRIA ABSEUZALIS Walker.

1. La Chorrera, May, 1912 (Busck).

CASANDRIA FUGAX, new species.

Fore wing rather dark soiled gray, the veins indicated; lines slender, black, the inner curved, a little angled but not dislocated; median line visible below cell, coarsely toothed; reniform circular with central reddish dot; outer line indistinct; subterminal dots clouded. Hind wing pure white. Expanse, 26 mm.

Cotypes.—Two males, No. 15913, U.S.N.M.; Cabima, May, 1911 (Busck); Porto Bello, May, 1911 (Busck).

CASANDRIA ILLEGITIMA, new species.

Fore wing like *fugax*, rather darker and more sordid. Hind wing translucent, opalescent, entirely shaded with smoky black, the veins darker. Expanse, 25 mm.

Type.—Male, No. 15914, U.S.N.M.; Cabima, May, 1911 (Busck).

CASANDRIA MURORA, new species.

Dark gray; terminal space broadly lighter and containing the subterminal dashes, pointed, subsagittate; basal space a little darker, edged by a curved line, the other lines obsolete; discal venules dark; reniform indicated, pale, with central dot. Hind wing white, with gray border on termen and ends of veins, broader in the female than in the male. Expanse, 26 mm.

Cotypes.—Male and female, No. 15915, U.S.N.M.; Paraiso, Canal Zone, February, 1911 (Busck); Bocas del Toro, April, 1907 (W. Schaus).

CASANDRIA GRISELDA, new species.

Smooth dark gray with reddish tint; lines much as in *abscuzalis* but gray, faint, scarcely legible on the dark ground; subterminal dots sagittate and subconfluent, black, distinct, forming a dentate subterminal line; terminal dashes obscure. Hind wing fuscous, veins darker. Expanse, 24–26 mm.

Cotypes.—Three females, No. 15917, U.S.N.M.; La Chorrera, May, 1912 (Busck); Orizaba, Mexico (Schaus collection); Aroa, Venezuela (Schaus collection).

CASANDRIA ARÆA Schaus.

1. Trinidad River, March, 1912 (Busck).

A badly rubbed female, but I think certainly to be this species.

CASANDRIA FLOTSAMA, new species.

Gray; fore wing stained with reddish, all the marks obliterated, only a large irregular reniform ring in dull red, formed by a segment of the outer line distantly bordering the reniform spot, as this marking is modified in *steniptera* Schaus; dark streaks at base; a dark gray clouded subterminal shade, rising broadly on inner margin, narrowing above, edged outwardly by a little pale gray. Hind wing dark fuscous. Expanse, 20 mm.

Type.—Female, No. 15918, U.S.N.M.; Trinidad River, March, 1912 (Busck).

CASANDRIA SIOPERA, new species.

Costa gray in and beyond cell; subterminal line blurred, dentate; the rest of the wing carneous gray, the lines faintly indicated in dark red; reniform round, pale with red center. Hind wing pure white in the male, with broad blackish border in female, running up along the veins. Expanse, 26 mm.

Cotypes.—Two specimens, No. 15916, selected from a series of twelve; La Chorrera, May, 1912 (Busck); Cordoba, Mexico, May, 1906 (W. Schaus); Orizaba, Mexico (Schaus collection and R. Müller).

Sir G. F. Hampson examined one of the Mexican specimens and pronounced it to be his *C. hæmatopis*, described from Argentina. It appears to me to differ in the presence of the heavy gray costal shade

and in the course of the lines, to judge by Hampson's figure and description. His male specimen from San Salvador is probably the present species.

ISCADIA LEENA Druce.

Gadirtha (?) *leena* DRUCE, Biol. Cent.-Amer., Lep. Het., vol. 2, 1898, p. 508.

4. Porto Bello, March, 1912 (Busck); Cabima, May, 1911 (Busck).

The present species does not agree well with the characterization of the subfamily "retiaculum of male bar-shaped," the structure being a fold, twice as wide as long. But as *Casandria stroca* Schaus has an entirely similar structure and *Iscadia aperta* Walker has no retinaculum at all, the species may be included here among the other exceptions.

MEDAVA DIMINUTA, new species.

Fore wing whitish gray, shaded with purple at base and narrowly along costa; inner line slender, denticulate, broken into three black points in the cell; outer line denticulate, followed by whitish, starting from costa above the large annular reniform, making a broad half circle to below reniform, then to inner margin; subterminal line blackish, denticulate; terminal dots small, in a purplish shade. Hind wing black on the margin, pale over the disk; fringe whitish. Expanse, 18 mm.

Type.—Male, No. 15919, U.S.N.M.; Corozal, Canal Zone, June, 1912 (Busck).

Hampson's diagnosis of the genus *Medava* in his key¹ is in error in placing it in the section "Palpi with the third joint long and dilated at extremity." This joint is really short, as described on page 450.

EGCHIRETES, new genus.

Fore wing with veins 7-8 from end of accessory cell, 9 absent, 10 from top of accessory cell, 11 free. Hind wing with 4 absent, 3 and 5 from cell. Palpi with the second joint fringed above with hair toward extremity, third joint moderate, tapered. Fore wing convex at base as in *Sarrothripa*.

Type of the genus.—*Egchiretes nomimus*, new species.

EGCHIRETES NOMIMUS, new species.

Dark gray; fore wing with a white patch on inner margin at basal third; subbasal line double, slender, blackish, from costa to submedian; black dashes on subcostal and a spot on submedian; inner line blackish, waved, filled by whitish; two black discal points in a white spot, followed by a white streak toward apex; outer line black, fine, single, denticulate, gently curved, with an inward dentation at vein 2, followed by white; subterminal line whitish, preceded by fuscous, broken by a white spot below costa; minute terminal black

¹ Cat. Lep. Phal. Brit. Mus., vol. 11, 1912, p. 223.

dots joined by a slender line. Hind wing grayish black. Expanse, 18 mm.

Type.—Female, No. 15920, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

NOTE.—For the remaining subfamilies of the Noctuidæ, namely, the Catocalinæ, Plusiinæ, Noctuinaæ, and Hypeninæ, the indispensable volumes of Sir G. F. Hampson's Catalogue of the Lepidoptera Phalænæ were not available at the time of writing. Two are before me as proof is read, but to use them would require a complete resetting of the type. In the following the subfamilies and genera will be found mixed, the arrangement being provisional. Mr. William Schaus has worked over the Hypeninæ, but I am unable to incorporate his results in this paper.

Subfamily PLUSIINÆ.

PLUSIA VERRUCA Fabricius.

1. Porto Bello, February, 1911 (Busck).

PLUSIA ROGATIONIS Guenée.

2. Corozal, Canal Zone, July, 1912 (J. Zetek).

CONCANA HOSHEA Druce.

1. La Chorrera, May, 1912 (Busck).

CONCANA LECTA Schaus.

1. La Chorrera, May, 1912 (Busck).

ORÆSIA EXCITANS Walker.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

GONODONTA GINALDUS Guenée.

1. Cabima, May, 1911 (Busck).

GONODONTA IMMACULA Guenée.

1. Cabima, May, 1911.

GONODONTA PYRGO Cramer.

1. Corozal, Canal Zone, July, 1912 (J. Zetek).

Subfamily HYBLÆINÆ.

HYBLÆA PUERA Cramer.

2. La Chorrera, May, 1912 (Busck).

SOSXETRA GRATA Walker.

4. Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck).

Subfamily NOCTUINÆ.

EREBUS ORORA Linnaeus.

5. Paraiso, Canal Zone, May, 1911 (Busck); Ancon, Canal Zone (O. Celestino, B. G. Ireño).

LETIS MYCERINA Fabricius.

5. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck).

LETIS HERCYNIA Drury.

2. Cabima, May, 1911 (Busck).

LETIS TIASA Druce.

1. Cabima, May, 1911 (Busck).

LETIS HERCULIA Cramer.

7. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck).

LETIS MAGNA Snellen.

5. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February and March, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

LATEBRARIA AMPHIPYROIDES Walker.

1. Taboga Island, February, 1912 (Busck).

MAZAEZLA RELATA Walker.

1. Paraiso, Canal Zone, January, 1911 (Busck).

AZETA RHODOGASTER Guenée.

5. Taboga Island, June, 1911 (Busck).

OBROATIS OCELLATA Butler.

1. La Chorrera, May, 1912 (Busck).

PEOSINA NUMERIA Drury.

1. Taboga Island, June, 1911 (Busck).

BOLINA FASCIOLARIS Guenée.

2. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, June, 1911 (Busck).

MELIPOTIS JANUARIS Guenée.

8. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); La Chorrera, May, 1912 (Busck).

BENDIS FORMULARIS Hübner.

5. Corozal, Canal Zone, March, 1911 (Busck); Porto Bello, May, 1911 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

BENDIS SIAHA Schaus.

1. Taboga Island, February, 1911 (Busck).

HYPOCALA ANDREMONA Cramer.

3. Paraiso, Canal Zone, January, 1911 (Busck); La Chorrera, May, 1912 (Busck).

OPHISMA PRITANIS Cramer.

1. Cabima, May, 1911 (Busck).

OPHISMA ABLUNARIS Guenée.

1. Cabima, May, 1911 (Busck).

OPHISMA DIATONICA Möschler.

1. Paraiso, Canal Zone, June, 1911 (Busck).

CENIPETA LOBULIGERA Guenée.

2. Porto Bello, March, 1911 (Busck); Trinidad River, May, 1911 (Busck).

CÆNIPETA TANAIS Cramer.

2. Paraiso, Canal Zone, January and February, 1911 (Busck).

CÆNIPETA COMPETRIX Hübner.

26. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck).

CÆNIPETA LIBITRIX Hübner.

1. Corozal, Canal Zone, March, 1911 (Busck).

CÆNIPETA SERAPIS Cramer.

7. Paraiso, Canal Zone, January, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

NOROPSIS HIEROGLYPHICA Cramer.

6. Trinidad River, February, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, August and November, 1912 (C. P. Crafts).

MASSALA IMITANS Walker.

4. Corozal, Canal Zone, March, 1911 (Busck); Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck).

CEROMAERA TYMBER Cramer.

3. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

CEROMAERA ARDALUS Druce.

1. Corozal, Canal Zone, April, 1911 (Busck).

CAMPOMETRA LAURENA Schaus.

6. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck).

CAMPOMETRA PACIFICA Walker.

1. Paraiso, Canal Zone, February, 1911 (Busck).

This differs from *laurena* only in having a black shade in lower half of median space.

CAMPOMETRA SUBLUCIDA Walker.

1. Alhajuelo, April, 1911 (Busck).

CAMPOMETRA MERETRICIA Schaus.

1. Cabima, May, 1911 (Busck).

ITHONIA EXPONENS Walker.

2. Taboga Island, February, 1912, and June, 1911 (Busck).

LEPIDODES LIMBULATA Guenée.

1. La Chorrera, May, 1912 (Busck).

OLYSSA DARES Cramer.

1. Taboga Island, February, 1912 (Busck).

GALEPHA AZETA Druce.

1. Paraiso, Canal Zone, January, 1911 (Busck).

SELENIS GALLINAGO Felder and Rogenhofer.

2. La Chorrera, May, 1912 (Busck).

PARACHABORA ABYDAS Warren.

2. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck).

TETRATOCERA ERYCATA Cramer.

3. Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

CHAMINA HOMICHOLODES Hübner.

3. Cabima, May, 1911 (Busck).

FOCILLA GUERINI Guenée.

1. Panama City, April, 1913 (B. G. Ireneo).

ISOGONA ÆOLIA Druce.

1. La Chorrera, May, 1912 (Busck).

ISOGONA NATATRIX Guenée.

1. La Chorrera, May, 1912 (Busck).

FOCILLA INCONSTANS Schaus.

1. Paraiso, Canal Zone, January, 1911 (Busck).

CAPNODES LOTHOS Cramer.

2. La Chorrera, May, 1912 (Busck); Trinidad River, March, 1912 (Busck).

CAPNODES APICATA Schaus.

2. Cabima, May, 1911 (Busck).

CAPNODES CHICA Schaus.

1. Cabima, May, 1911 (Busck).

CAPNODES FLAGRANS Walker.

1. La Chorrera, May, 1912 (Busck).

CAPNODES DISTACTA Hübner.

1. Corozal, Canal Zone, April, 1912 (Busck).

CAPNODES RUFINANS Guenée.

3. Corozal, Canal Zone, March, 1911 (Busck).

CAPNODES DEOIS Schaus.

1. Trinidad River, March, 1912 (Busck).

CAPNODES MODESTA Butler.

5. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

CAPNODES BARINE Schaus.

3. Corozal, Canal Zone, June, August and November, 1912 (Busck).

CAPNODES SUFFICIENS Walker.

1. Trinidad River, June, 1912 (Busck).

CAPNODES MELIS Schaus.

1. Trinidad River, June, 1912 (Busck).

CAPNODES PHÆDRA Schaus.

1. Corozal, Canal Zone, November, 1912 (C. P. Crafts).

CAPNODES MUNDICOLA Walker.

2. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck).

CAPNODES TYROE Schaus.

1. Taboga Island, August, 1911 (Busck).

CAPNODES PALLIFASCIENS Walker.

1. Trinidad River, March, 1912 (Busck).

CAPNODES ANTHEA Schaus.

3. Trinidad River, March and June, 1912 (Busck); Taboga Island, June, 1911 (Busck).

CAPNODES ALCINOE Druce.

1. La Chorrera, May, 1912 (Busck).

DAGASSA MARGINATA Warren.

4. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

DAGASSA CURVILINEA Druce.

1. Porto Bello, February, 1911 (Busck).

DAGASSA CROCEICEPS Walker.

10. La Chorrera, May, 1912 (Busck); Trinidad River, March, 1912 (Busck).

SELENIS SUERO Cramer.

3. Cabima, May, 1911 (Busck).

SELENIS SUEROIDES Guenée.

1. Cabima, May, 1911 (Busck).

SELENIS HERMELINA Guenée.

4. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

EPHYRODES BIPUNCTATA Walker.

2. Porto Bello, April, 1912 (Busck); Taboga Island, June, 1911 (Busck).

HYPOGRAMMA DAMONA Cramer.

2. Paraiso, Canal Zone, January, 1911 (Busck).

BARYDIA JAPETA Cramer.

1. Trinidad River, June, 1912 (Busck).

SAFIA MINTA Schaus.

1. La Chorrera, May, 1912 (Busck).

AZATHA MARCELLINA Cramer.

1. Cabima, May, 1911 (Busck).

ORSA FLAVA Schaus.

2. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck).

ARGIDIA RUFA Schaus.

1. Porto Bello, March, 1911 (Busck).

PARANYMPHA TOXEA Cramer.

3. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

PLACONIA DEMERA Schaus.

1. Trinidad River, March, 1912 (Busck).

Schaus's type of this species is from Chiriqui, Panama.

YRIAS LINEATA Druce.

6. Trinidad River, March, 1912 (Busck).

COXINA HADENOIDES Guenée.

1. Corozal, Canal Zone, April, 1911 (Busck).

TRIOMMATODES PADRINA Schaus.

1. La Chorrera, May, 1912 (Busck).

BETUSA AMYNIA Cramer.

1. Alhajuelo, April, 1911 (Busck).

BRUGAS INFANS Guenée.

1. Trinidad River, March, 1912 (Busck).

PLUSIOIDES (?) LARONIA Druce.

1. La Chorrera, May, 1912 (Busck).

ARSACIODES RUFA Hampson.

4. Porto Bello, February, 1911 and April, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck).

OMMATOCHILA MUNDULA Zeller.

2. Paraiso, Canal Zone, February, 1911 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

CELIPTERA GAMOTI Guenée.

1. Alhajuelo, April, 1911 (Busck).

PHURYS FLEXA Guenée.

1. Trinidad River, March, 1912 (Busck).

PHURYS IMMUNIS Guenée.

6. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck) and July, 1912 (J. Zetek).

Typical *immunis* comes from the Antilles. The present form has the markings more distinct, less blurred, less brilliant, the sub-terminal dots well relieved on an uniform dark gray ground, reniform well marked. It extends northward into Mexico.

POAPHILA PAUCULA Walker.

9. Taboga Island, February, 1912 (Busck); Porto Bello, April, 1911 (Busck); Cabima, May, 1911 (Busck).

POAPHILA IMMANIS Guenée.

2. Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

Two females, probably referable here, but in poor condition.

REMIGIA LATIPES Guenée.

3. Porto Bello, March 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

REMIGIA MARCIDA Guenée.

2. Cabima, May, 1911 (Busck).

REMIGIA DISSEVERANS Walker.

7. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), and July, 1912 (J. Zetek); Cabima, May, 1911 (Busck).

The specimens are somewhat grayer, but appear to agree specifically with a series from Santo Domingo, Cuba, and Jamaica, which I consider to be Walker's *disseverans*. Apparently there are three distinct species here, *latipes* Guenée, ranging from Argentina to the United States, including the West Indies; *disseverans* Walker, from the Greater Antilles to Florida, Texas, Central America, and Panama; and *marcida* Guenée, from Texas, Mexico to Panama. These three species all occur in the United States and have been regarded as varieties of *repanda* Fabricius. This, however, comes from the Lesser Antilles and can be distinguished at once from *disseverans*, which it otherwise resembles, by the abundant dense yellow scaling on the underside of the hind wings of the male. The larvæ described by me as *latipes*¹ should be referred to *disseverans*.

GONITIS EDETRIX Guenée.

1. Corozal, Canal Zone, July, 1912 (C. P. Crafts).

ANOMIS EXACTA Hübner.

7. Trinidad River, March, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek and C. P. Crafts).

ANOMIS OEDEMA Guenée.

2. Trinidad River, March, 1912 (Busck).

ANOMIS INNOCUA Schaus.

2. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

Very small specimens, badly worn. If not referable here, it is a new species, but the specimens are unfit to describe.

EULEPIDOTIS METALLIGERA Butler.

7. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

EULEPIDOTIS HEMITHEA Druce.

2. Chiriqui (Schaus collection).

EULEPIDOTIS BOURGAULTI Bar.

5. Porto Bello, February, 1911 (Busck); La Chorrera, May, 1912 (Busck).

EULEPIDOTIS NORDUCA Schaus.

1. La Chorrera, April, 1912 (Busck).

EULEPIDOTIS JUNETTA, new species.

Bright brown, the apex of fore wing shading to ocher-brown; inner line straight, oblique, metallic leaden within, red-brown without;

¹ Proc. U. S. Nat. Mus., vol. 23, 1901, p. 276.

mesial line gray, flexuous, curved a little on costa and marked with a leaden bar; outer line straight, metallic leaden, edged with brown, touching outer margin above tornus; terminal line straight, leaden, placed before the margin. Hind wing with silvery blue curved patch outwardly, followed by violet shadings to margin; a narrow faint terminal line, placed as on fore wing. Expanse, 25 mm.

Cotypes.—Two specimens, No. 16438, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck).

EULEPIDOTIS JUNCIDA Guenée.

76. Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, July 1912 (C. P. Crafts, J. Zetek).

Both the light form *juncida* and the dark one *mabis* Guenée are present in the long series, with intergrades.

EULEPIDOTIS CÆRULEILINEA Walker.

8. Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck).

EULEPIDOTIS MUSTELA Druce.

1. Porto Bello, February, 1911 (Busck).

EULEPIDOTIS EZRA Druce.

1. Porto Bello, March, 1911 (Busck).

EULEPIDOTIS AFFINIS Schaus.

1. Cabima, May, 1911 (Busck).

EULEPIDOTIS RECTIMARGO Guenée.

10. Porto Bello, February, 1911 (Busck).

EULEPIDOTIS ELECTA, new species.

Similar to *rectimargo* Guenée, but with the white margin of fore wing very narrow or obsolete and with a large apical brown patch on hind wing. Hind wing largely or entirely shaded with ocher. The specimens average slightly larger than *rectimargo*. Expanse, 34 mm.

Type.—No. 16439, U.S.N.M.; selected from the 10 Porto Bello specimens, in all 25 in series; Cuernavaca, Mexico, July, 1906 (W. Schaus); Cordoba, Mexico (R. Müller); Orizaba, Mexico, September, 1908 (R. Müller); Mexico City, Mexico, June, 1906 (R. Müller); Juan Vinas, Costa Rica, May, 1906 (W. Schaus); San José, Costa Rica, October, 1906 (W. Schaus); Porto Bello, Panama, February, 1911 (A. Busck); Panama, May, 1907 (W. Schaus); Merida, Venezuela (S. E. Briceno); Aroa, Venezuela (Schaus collection).

EULEPIDOTIS GUTTATA Felder and Rogenhofer.

18. Cabima, May, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

EULEPIDOTIS PERLATA Guenée.

10. Paraiso, Canal Zone, February, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Trinidad River, March and June, 1912 (Busck).

EULEPIDOTIS TESTACEICEPS Felder and Rogenhofer.

1. Tabernilla, Canal Zone, May, 1907 (Busck).

EULEPIDOTIS ALABASTARIA Hübner.

6. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck).

EULEPIDOTIS CAUDATA Herrich-Schäffer.

1. Trinidad River, June 1912 (Busck).

DYOMYX EGISTA Bar.

2. Porto Bello, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

DYOMYX CONSEQUENS Dyar.

1. Chiriqui (Schaus collection).

DYOMYX INFERIOR Herrich-Schäffer.

1. Cabima, May, 1911 (Busck).

DYOMYX ORA Dyar.

1. Paraiso, Canal Zone, February, 1911 (Busck).

DYOPS? TELMELA Schaus.

1. La Chorrera, May, 1912 (Busck).

BOLETOBIA RUGOSA, new species.

Sooty black; terminal space lighter, but broadly tinted with pale brownish; lines obscure, the outer denticulate, excurved over cell, with white in the denticulations outwardly, similar on both wings. Expanse, 15 mm.

Type.—Male No. 15922, U.S.N.M.; selected from a series of six; Trinidad River, March, 1912 (Busck). Others from Cabima, May, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Taboga Island, February, 1912 (Busck).

Resembles *B. marginalta* Schaus, but is smaller, with much less of the pale color on margin, and mesial line less broadly excurved. *B. turpis* Schaus is larger and darker. *B. tenebrosa* Schaus is the nearest, but seems different, being more uniformly colored and without the distinct whitish sinuous line on the hind wing below shown in *rugosa*.

PLYNTERIA FLORENS Schaus.

2. Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

PLYNTERIA COSTATA Schaus.

2. Cabima, May, 1911 (Busck).

PLYNTERIA CENTRIPONENS, new species.

Brown, not very dark; discal dots on both wings large and black; lines slender, dark; inner curved; orbicular a point; outer line wavy, excurved over cell; subterminal line a trace; costa dotted; a terminal line broken at the veins. Hind wing with discal spot and outer line like fore wing. Expanse, 16 mm.

Type.—Female, No. 15923, U.S.N.M.; selected from a series of nine; La Chorrera, May, 1912 (Busck). Others from Taboga Island, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Trinidad River, June, 1912 (Busck).

PLYNTERIA MELANOPASA, new species.

Short and broad winged; black, scarcely irrorate, but enough so to show the lines faintly darker, rather broad; inner curved, outer excurved over cell; subterminal indicated by pale scales; costa with pale dots; discal spot faintly yellowish, oblique. Hind wing with dark discal dot and outer line, very faint. Expanse, 13 mm.

Type.—Male, No. 15924, U.S.N.M.; selected from a series of nine; La Chorrera, May, 1912 (Busck); others from Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck).

PLYNTERIA IRRESPONDENS, new species.

Dark brown, not black; costa touched with an ochreous tint to beyond the outer line, dotted thence to apex; lines obscure, dark, coarsely and slightly waved; discal marks reduced nearly to obliteration, a few white scales in reniform; a terminal dark line interrupted by ochre points at ends of veins. Hind wing with discal dot, obscure but marked by a few white scales; mesial line dark, angular. Expanse, 16 mm.

Type.—Male, No. 15925, U.S.N.M.; selected from a series of six; all males; Trinidad River, March, 1912 (Busck). One other from Corozal, Canal Zone, June, 1912 (Busck).

Ostha nomion Schaus resembles this, but is browner, narrower winged, and without the costal pale shading.

PLYNTERIA MAISES, new species.

Smooth dark brown; a broad bright ochre band on costa to beyond cell, where it widens; lines lost; a group of yellow scales for discal spot on hind wing. Palpi, vertex and anterior part of thorax mixed with yellow scales. Beneath, costa of fore wing washed with yellow; hind wing yellow, irrorated with brown; a broad terminal brown band. Expanse, 15 mm.

Type.—No. 15926, U.S.N.M.; Porto Bello, February, 1911 (Busck). The specimen is badly broken, but the markings visible.

PLYNTERIA CONTENTA, new species.

Bronzy brown, like *florens* Schaus. Discal mark dark, obscure; lines obliterated, visible only in oblique light; outer of fore wing blackish, denticulate, scarcely excurved, without white edgings. Line of hind wing bent at right angles in the middle; no terminal dots. Expanse, 15 mm.

Type.—Female No. 15927, U.S.N.M.; Trinidad River, June, 1912 (Busck).

Nearest to *florens*; smaller and without any white scales.

PLYNTERIA DILMIS, new species.

Wings trigonate, normal. Dark brown, lines pale, ochreous tinted; inner nearly straight; outer coarsely wavy and excurved somewhat over cell. Stigmata dark, the orbicular with a white point, reniform with two, of which the upper is minute; very minute ocher terminal dots. Hind wing similar; no discal dot, the mesial line pale, curved. Expanse, 16 mm.

Type.—Female, No. 15928, U.S.N.M.; Cabima, May, 1911 (Busck).

PLYNTERIA EXTIRPENS, new species.

Somewhat round-winged like *irrespondens* or *florens*. Brown-gray with a violaceous cast; markings reduced, but the terminal dots of both wings dark and heavy, narrowly cut by pale at the veins. Discal marks dark, somewhat lunate; outer line of fore wing running close in, narrowly excurved over discal mark; of hind wing similar. Nothing visible in terminal field. Expanse, 14 mm.

Type.—Female, No. 15929, U.S.N.M.; Trinidad River, June, 1912 (Busck).

PLYNTERIA CORYPHATA, new species.

Similar to *contriponens*, but the wings more pointed at apex, the discal dots inconspicuous; lines slender, blackish, the subterminal less distinct than in *contriponens*; orbicular a black dot; reniform on both wings dusky, marked by white scales. Expanse, 14 mm.

Type.—Male, No. 15930, U.S.N.M.; selected from a series of four; La Chorrera, May, 1912 (Busck). Others from Trinidad River, March, 1912, and Taboga Island, February, 1912 (Busck).

PLYNTERIA UNIFACTA, new species.

Large, bronzy blackish, like *costata*, but less brown and without the white subcostal line; lines dark as in *costata*, obscure. Hind wing with central line only shown; reniform with a few white scales; a pale dash on costa opposite and three before apex; minute white terminal points as in *costata*. Expanse, 25 mm.

Type.—Female, No. 15931, U.S.N.M.; Trinidad River, March, 1912 (Busck).

PLYNTERIA CONFORMENS, new species.

Dark brown with olive-yellow tint, especially through median area of both wings. Lines distinct, black; inner curved, irregular; outer denticulate, excurved over cell, followed by white specks in the incisures; reniform large, black, centered by white scales; terminal black line cut by pale dots. Hind wing with discal dot and outer line as on fore wing, the discal dot small. Expanse, 18 mm.

Type.—Female, No. 15932, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Quite distinct from any of the forms before me, though of the same general type.

Subfamily HYPENINÆ.

RHÆSENA NELIASALIS Walker.

2. Porto Bello, February, 1911 (Busck).

RHÆSENA ZOUM, new species.

Aspect of *nezula* Schaus, but the male without the fovea in the disk of hind wing. The outer line makes a smaller loop beyond the vertical shade; subterminal line without white, etc.

Type.—Male, No. 15944, U.S.N.M.; selected from a series of nine, Trinidad River, June, 1912 (Busck); La Chorrera, May, 1912 (Busck); also one from Zent District, Costa Rica, February, 1907 (W. Schaus), this latter labeled as *nezula*.

RHÆSENA DARCONIS Schaus.

2. Trinidad River, June, 1912 (Busck).

HOMOPYRALIS VIRIDIS Schaus.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HOMOPYRALIS ELONGATA Schaus.

1. Trinidad River, June, 1912 (Busck).

HOMOPYRALIS NIREUS Schaus.

1. Trinidad River, June, 1912 (Busck).

HOMOPYRALIS PRÆUSTALIS Hübner.

2. Trinidad River, March and June, 1912 (Busck).

METALECTRA PRÆCISALIS Hübner.

1. Cabima, May, 1911 (Busck)

METALECTRA PUNCTILINEA Walker.

2. Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

Two males in poor condition, apparently referable to this species.

METALECTRA CONTACTOIDES, new species.

Hind wing rounded, finely crenulate on the margin. Brown, rather light and a little purplish. Fore wing black at base, the inner line just beyond, fine, obscure; orbicular a dot; reniform a quadrate patch, crossed by the heavy mesial band, slightly incurved below; outer line slender, black; subterminal crenulate, near margin; terminal line crenulate and dotted. Hind wing with large discal patch, duplicated below by heavy mesial line; outer line straight, rather heavy, obsolete above cell; termen as on fore wing. Expanse, 24 mm. *

Type.—Male, No. 15937, U.S.N.M.; Trinidad River, June, 1912 (Busck).

Resembles the North American *M. contacta* Walker.

METALECTRA MONOPAIS, new species.

Small; black mixed with whitish to a dark gray; discal marks of both wings large, round, black; anal tuft of male ocher. Lines black, indistinct, with whitish borders more distinct than the lines; subterminal line white, sinuous; terminal black dots with white ones in the fringe. Hind wing with mesial line without white edge. Expanse, 15 mm.

Type.—Male, No. 15938, U.S.N.M., selected from a series of six; Trinidad River, March, 1912 (Busck). Others from Taboga Island, February, 1912 (Busck); Porto Bello, February, 1911 (Busck); La Chorrera, April, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

METALECTRA DIDYMA, new species.

Dark violaceous brown, somewhat irrorate, but on the whole smooth; lines fine black, denticulate, with white specks in the hollows on both wings. Fore wing blackish shaded at base; orbicular a point; reniform small, followed by a white patch; subterminal line obsolete. Hind wing with small black discal dot, crossed by a straight black shade to inner margin; a marginal crenulate black line on both wings. Expanse, 14 mm.

Type.—Male, No. 15937, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Palpi upturned, fringed with scales in front, the third joint round, small, almost spherical.

METALECTRA MOCHTHEROS, new species.

Like *didyma* in color and markings, but nearly twice the size; palpi oblique, smoothly scaled, the third joint long and pointed. White discal spot of fore wing smaller than in *didyma*. Hind wing with mesial black band slight. No dark shading at base of wings, the general tone rather lighter. Expanse, 22 mm.

Type.—Male, No. 15940, U.S.N.M.; La Chorrera, May, 1912 (Busck).

METALECTRA TRISTIGMA, new species.

Palpi oblique, second joint with hairs on upper side, third long, acute. Ground color of fore wing whitish, shaded with violaceous gray; inner line marked by a triangle on costa; a large, round black spot just above the inner margin; mesial violaceous shade twice waved, shaded outwardly; outer line obscure, in whitish; an apex violaceous gray; a black triangular spot near middle of margin and a small one above tornus; margin darker violaceous shaded with whitish subterminal line; terminal line fine, black, crenulate on both wings. Expanse, 20 mm.

Type.—Male, No. 15941, U.S.N.M.; Trinidad River, March, 1912 (Busck).

METALECTRA PARALAPPA, new species.

Resembles *Homopyralis lappa* Druce. Purplish ground of wings less dense, more irrorate with whitish; inner line with only a narrow black costal patch, not the lower markings; subapical patch truncate apically, not semicircular; discal mark black, narrow, nearly broken. Hind wing with large somewhat comma-shaped discal bar. No black patches on central line. Expanse, 26 mm.

Type.—Female, No. 15942, U.S.N.M.; Cabima, May, 1911 (Busck.)

METALECTRA DIVERSATA, new species.

Ground color light reddish gray, washed with dark purple shades. On the fore wing the shade covers the lower half of base and space from mesial to outer lines and runs out centrally to margin. On hind wing it covers all but the narrow base of wing. Lines slender, dark, wavy; inner line crossing the punctiform orbicular; mesial line across the narrow reniform; outer excurved above; subterminal line a dark even-shaded band. Hind wing with inner line at edge of the pale area; outer line denticulate, obscured in the dark color. Black terminal crenulate lines on both wings. Expanse, 19 mm.

Type.—Male, No. 15943, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck). Also a female from the same place, June, 1912 (Busck).

MULELOCHA BILUNULALIS Walker.

1. La Chorrera, May, 1912 (Busck).

MULELOCHA CELITA Schaus.

1. La Chorrera, May, 1912 (Busck).

MULELOCHA CALLIGRAMMA Hübner.

1. Corozal, Canal Zone, March, 1911 (Busck).

MULELOCHA AGNA Druce.

1. Corozal, Canal Zone, August, 1912 (C. P. Crafts).

MULELOCHA SUBNIGRA Schaus.

5. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

BANIANA VELUTA Schaus.

1. Trinidad River, March, 1912 (Busck).

BANIANA POHLI Felder.

1. Paraiso, Canal Zone, February, 1911 (Busck).

BANIANA PROJICIENS Butler.

3. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

BANIANA TINCTICOLLIS Walker.

1. Trinidad River, June, 1912 (Busck).

BANIANA PHRUXUS Schaus.

1. La Chorrera, May, 1912 (Busck).

PHARGA ANDACA Druce.

1. Cabima, May, 1911 (Busck).

PHARGA ABSORPTALIS Walker.

2. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

HERMINIODES CONCATENALIS Walker.

2. La Chorrera, May, 1912 (Busck).

HERMINIODES INSULSA Dognin.

1. Trinidad River, March, 1912 (Busck).

HERMINIODES ATRISIGNATA Walker.

1. La Chorrera, May, 1912 (Busck).

HERMINIODES LATRIS Schaus (?).

3. La Chorrera, May, 1912 (Busck).

The specimens (male and female) are near the female type of *latris*, but not identical.

HERMINIODES LONGISTRIATA Schaus.

3. La Chorrera, May, 1912 (Busck).

PTERHEMIA EXCISSA Schaus.

1. Cabima, May, 1911 (Busck).

ANOBA TRIGONOIDES Walker.

1. Taboga Island, June, 1912 (Busck).

POESULA TINCTICOLLIS Walker.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TRAUAXA LUA Druce.

4. Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck).

POGOPUS, new genus.

Proboscis well developed; palpi porrect, extending about the length of the head in the male, fringed with long hair beneath to the tip, in the female the second joint thickened with scales, the third long, smooth; front smooth; eyes large, round; antennæ of male with bristles and cilia, of female with the bristles somewhat smaller; abdomen with a small tuft at base; metathorax with small high posterior crest; tibiæ of male with abundant long hair, of female with slight hair without. Fore wing with apex slightly produced, square; areole present, vein 7 from its apex, 8-9 long-stalked, 10 from upper side of areole. Hind wing with vein 5 strong, from well below middle of discocellulars; 3-4 shortly stalked.

Type of the genus.—*Pogopus mictochroma*, new species.

POGOPUS MICTOCHROMA, new species.

Ocher-brown, mixed with mottlings of lighter ocher, shaded and lined with dark brown. A dot at base; inner line straight across wing, coarsely waved; outer line excurved over cell, wavy below; a brown shade in upper half of median space, often absent; orbicular a black dot; reniform a white speck; subterminal shade irregular, in bent opposite cell, edged without with ocherous; margin dark-shaded. Hind wing blackish fuscous. Expanse, male 29 mm., female 25 mm.

Type.—Male, selected from three males, 15 females, No. 16440, U.S.N.M.; Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

A rather large frail species, looking like *Poena*, but with squarer, broader wings.

POENA PORRECTALIS Guenée.

10. Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek and C. P. Crafts).

LEPTOCTENISTA DUBIA Warren.

7. Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Three males appear typical; the four others (2 males and 2 females) are darker, less distinctly marked, and may not be the same.

LEPTOCTENISTA sp.

4. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

Smaller and lighter than *L. dubia*, the female with much ocher at base of hind wing. Possibly another species, but it seems unsafe to name it.

GALANDA FUNEREA Warren.

3. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

All in poor condition, as is likewise my single named specimen (from Costa Rica, identified by Schaus). This seems extremely close to *Leptoctenista dubia*, and possibly is that species. The material is too poor for certainty.

REJECTARIA PHARUSALIS Walker.

1. Paraiso, Canal Zone, February, 1911 (Busck).

SCOPIFERA NIACISALIS Walker.

2. Porto Bello, March, 1911, and April, 1912 (Busck).

MELINA HIRTIPALPIS Walker.

3. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

PTEROPRISTA ALBIPUNCTALIS Druce.

5. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

MÆRODES COLOMBALIS Guenée.

1. Cabima, May, 1911 (Busck).

ATOPOMORPHA SINGULARIS Warren.

1. Porto Bello, May, 1912 (Busck).

MASTIGOPHORUS LYSIZONA Druce.

5. Trinidad River, March, 1912 (Busck); Porto Bello, February, 1911 and April, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

MEGACHYTA PRIASSALIS Walker.

24. Porto Bello, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

BLEPTINA CARADRINALIS Guenée.

37. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, June, 1912 (Busck), and July, 1912 (J. Zetek, C. P. Crafts).

The series runs smaller than one from the United States before me and has more tendency to have black points before the subterminal line, but seems inseparable specifically.

PALTHIS SUBMARGINATA Schaus.

2. Trinidad River, March and June, 1912 (Busck); La Chorrera, May, 1912 (Busck).

PALTHIS INCURIOSA, new species.

Similar to *P. submarginalis* Schaus, but smaller, browner, the middle line of fore wing strongly bent as well as the outer line. Hind wing stained with dark brown on middle of outer margin, the lines normal, not crowded toward the margin in the female. Male with the middle legs not modified, smooth, tibiae with one long and one short end spurs. Expanse, male, 15 mm.; female, 18–21 mm.

Cotypes.—One male, two females, No. 15945, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek), male; (C. P. Crafts) female; Trinidad River, March, 1912 (Busck), female.

HYPENA LEUCTRA Druce.

2. Cabima, May, 1911 (Busck); Trinidad River, March, 1912 (Busck).

HYPENA PACIFICA Walker.

6. Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

COLA, new genus.

Fore wings with veins 7–10 stalked, 11 from cell; hind wing with 3–4 shortly stalked, 5 very slightly depressed at base; frons without prominence; thorax and abdomen without crests; proboscis rather weak but distinct; palpi oblique, the second joint long, blade-like, compressed, fringed with scales above, the third long, pointed.

Type of the genus.—*Cola nabis*, new species.

COLA NABIS, new species.

Fore wing dark brown, densely powdered over an ochereous ground; outer margin centrally darker shaded; two minute black dots in cell; outer line slender, dark, with slight pale outer edge, straight, bent at right angles in its upper third. Hind wing blackish fuscous. Expanse, 12 mm.

Cotypes.—Two specimens, No. 15896, U.S.N.M., selected from a series of thirteen; Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HOPOTHIA, new genus.

Frons without prominence; tongue well developed; palpi upturned, second joint slightly thickened with scales in front, third smooth, rather long; vestiture scaly; abdomen without crests. Fore wing with veins 2–3 shortly stalked, running close together, 4–5 arising

close together and divergent near margin, veins 2-5 thickened on their basal three-fourths, 6 below angle of cell, 7-10 stalked, 7 arising before 9, 11 from cell, free, straight. Hind wing with 3-4 from angle of cell, 5 below middle of cross-vein, 6-7 from apex of cell, 8 anastomosing with cell nearly to middle.

Type of the genus.—*Hopothia histigma*, new species.

HOPOTHIA HISTIGMA, new species.

Fore wing light carneous brown, with a few scattered irrorations or groups of scales of dark brown; a small rounded dark brown spot on middle of costa. Hind wing pale fuscous, irrorated with scattered single dark brown scales. Expanse, 13 mm.

Cotypes.—Two males, No. 15906, U.S.N.M.; Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck).

CRAMBOPHILIA, new genus.

Fore wing with veins 7-10 stalked, 11 from the cell, free. Hind wing with 3-4 shortly stalked, 8 anastomosing with the cell near base only, 4 slightly depressed at base. Frons without prominence; thorax and abdomen without crests; proboscis moderately well developed; palpi upturned, the second joint reaching vertex with slight fringe of scales in front, third short, blunt, smooth.

Type of the genus.—*Crambophilia majorcula*, new species.

CRAMBOPHILIA MAJORCULA, new species.

Fore wing long, the margins subparallel, sordid brownish gray, becoming brown on the margin, the irrorations denser; base of costa dark brown; a row of terminal brown dots continued around apex; a group of brown scales for discal dot and scattered others representing the outer line, bent outward beyond cell. Hind wing dark fuscous. Expanse, 10-11 mm.

Cotypes.—Three specimens, No. 15902, U.S.N.M.; Porto Bello, February, 1911 (Busck); Alhajuero, April, 1911 (Busck); Cabima, May, 1911 (Busck).

CRAMBOPHILIA MINORCULA, new species.

Fore wing straw color; a broad ocher shade in center of wing, not reaching costa; terminal brown dots continued around apex and two more near middle of costa; scattered brown irrorations in and below cell and some scales representing the outer line. Hind wing faintly irrorated with brown, shaded with ocher in cell. Expanse, 9.5 mm.

Cotypes.—Four specimens, No. 15903 U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck); Alhajuero, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TINEOCEPHALA, new genus.

Fore wing with veins 7-10 stalked, 11 free; hind wing with 3-4 stalked, 8 anastomosing with the cell near base only; frons without

prominence; thorax and abdomen without crests; proboscis moderately well developed. Palpi upturned, the second joint long with fringe of scales on front side, third joint long, pointed, naked. Scales of head long and abundant, curving smoothly over to join those of thorax.

Type of the genus.—*Tineocephala judis*, new species.

TINEOCEPHALA JUDIS, new species.

Fore wing long, narrow, the margins subparallel; sordid ochreous, dusted with gray, the margin and fringe shaded with this color; a minute distinct black discal spot; costa black at base, with alternating dark and pale specks outwardly; outer line obsolescent, dark, powdery, forming a right angle in its upper third. Hind wing sordid whitish, darker on the margin. Expanse, 12 mm.

Cotypes.—Four specimens, No. 15901, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Family LASIOCAMPIDÆ.

PRORIFRONS CASTULLUX, new species.

Blackish brown; lines indistinct, straight, pale, four, slender, whitish, all converging slightly on inner margin and a little bent on costa; discal dot a minute white speck; subterminal line wavy, macular, pale, obsolescent; two small black specks above tornus. Hind wing with pale straight mesial shade and outer curved one. Expanse, 80 mm.

Cotypes.—Two males, No. 15946, U.S.N.M.; Cabima, May, 1911, (Busck); La Chorrera, May, 1912 (Busck).

Similar to *P. quadrilinetæ* Barnes and McDunnough, but darker, larger, the lines less convergent, the markings less distinct. Apparently a derivative of *P. peruviana* Druce, but the markings much less distinct.

PRORIFRONS ANTONIA Schaus.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TOLYPE NANA Druce.

6. Trinidad River, March and June, 1912 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TOLYPE MEXICANA Herrich-Schäffer.

1. La Chorrera, May, 1912 (Busck).

A female, the median lines strongly approximated.

TOLYPE TARUDA Schaus.

1. Porto Bello, February, 1911 (Busck).

TOLYPE SYNÆCURA Dyar.

2. Empire, Canal Zone (D. D. Gaillard).

Bred from a pod-shaped communal nest pendant from a branch.

ARTACE PUNCTISTRIGA Walker.

2. Porto Bello, March, 1911 (Busck); Cabima, May, 1911 (Busck).

CLAPHE MARIA Schaus.

1. Paraiso, Canal Zone, February, 1911 (Busck).

CLAPHE MELANCHOLICA Butler.

1. Trinidad River, March, 1912 (Busck).

CLAPHE CARAMINA Schaus.

1. Alhajuelo, April, 1911 (Busck).

CLAPHE SUBMARGINALIS Walker.

3. Trinidad River, March, 1912 (Busck).

CLAPHE SOBRINA Schaus.

1. Corozal, Canal Zone, April, 1912 (Busck).

CLAPHE CHARAX Druce.

1. Trinidad River, March, 1912 (Busck).

CLAPHE DISCORICA, new species.

Brown, the basal space suffused with black; median lines slender, black, approximate, wavy, parallel, inclosing a narrow whitish median space and large oval discal black spot; lines duplicated, the inner by a waved shaded line within, the outer by a narrow line without; subterminal line waved, faint, shaded, submacular; terminal pale dots preceded by a dusky line. Hind wing with costo-apical quadrate white patch and mesial straight dark line. Expanse, 25 mm.

Type.—Male No. 15947, U.S.N.M.; Taboga Island, February, 1912 (Busck).

Near *C. obtusa* Herrich-Schäffer, but the median space narrower and whiter, the lines more distinct and strongly duplicated.

CLAPHE VITTABUNDA, new species.

Thorax and inner margin of fore wing violet-brown; the rest of the wing clay-brown, irrorated with red-brown, forming four lines of strigæ on outer half; dark area along inner margin occupies the base, becomes narrow centrally and widens to a quadrate patch on tornus. Hind wing reddish brown suffused, showing only clay-colored inceptions of wavy lines on costa. Expanse, 36 mm.

Type.—Male No. 15948, U.S.N.M.; Cabima, May, 1911 (Busck).

Colors of *C. marna* Schaus from Brazil, but with pattern and size of *C. lankesteri* Schaus from Costa Rica. •

OCHA LIBNITES Druce.

1. Porto Bello, February, 1911 (Busck).

Family LIPARIDÆ.

CAVIRIA TIBIALIS Walker.

4. Corozal, Canal Zone, March, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

Provisionally listed under this name. The three from Corozal have the fore wing shaded with brown, especially over disk. The one from Alhajuelo is all white. There may be two species represented, both distinct from *tibialis*, but the condition of the material is too poor to make the specimens into types.

MANTRUDA CHIRONOMUS Dyar.

1. Trinidad River, March, 1912 (Busck).

Pale brown, rather than the chocolate brown of typical *chironomus* from the Guianas, but with the same markings.

MANTRUDA ERRATICA Schaus.

2. Trinidad River, March, 1912 (Busck).

TROCHUDA PURA Walker.

1. Porto Bello, April, 1912 (Busck).

PACHYPLASTIS APICALIS Felder.

1. Trinidad River, March, 1912 (Busck).

Family NOTODONTIDÆ.

CALLEDAMA MARMOREA Butler.

3. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

CALLEDAMA JOCASTA Schaus.

1. La Chorrera, May, 1912 (Busck).

MARTHULA RUFESCENS Schaus.

4. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, April, 1912 (Busck).

PHEDOSIA TURBIDA Möscher.

1. Paraiso, Canal Zone, February, 1911 (Busck).

Proclymiotis apicenotata Dognin¹ is a synonym of this.

NYSTALEA PLUMIPES Schaus.

6. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

NYSTALEA NYSEUS Cramer.

1. Trinidad River, March, 1912 (Busck).

NYSTALEA LOPHOCERA, new species.

Male antennæ with bristles and cilia, the apical third thickened, curved and bearing rufous hair, tips simple. Wings narrow, the costa expanded near base. Pattern of markings of *guttulana* Schaus, *plumipes* Schaus, and *forfex* Dognin, gray with blotches of green; basal area brown shaded on costa; a row of black dots in the cell and blackish blotches on inner margin; inner line distinct, double excurved in cell, slightly dentate; outer line obsolete, very faintly indicated in brown; a minute black discal dot and some blotches in submedian space; a blackish subapical band on costa; subterminal line black, slender, a little irregular only, sharply drawn in below vein 2. Hind wing grayish brown, paler just at base. Legs with long hairs. Abdomen without lateral tufts. Expanse, 44 mm.

Cotypes.—Two males, No. 15949, U.S.N.M.; Trinidad River, March, 1912 (Busck).

¹ Ann. Ent. Soc. Belg., vol. 53, 1909, p. 75.

LYSANA PLUSIANA Schaus.

1. Trinidad River, March, 1912 (Busck).

PENTOBOSA KYLINOIDES Walker.

3. Paraiso, Canal Zone, January, 1911 (Busck); Trinidad River, June, 1912 (Busck).

ELYMIOTIS PURPURASCENS Butler.

1. Trinidad River, June, 1912 (Busck).

ERAGISA GARLEPPI Druce.

2. Cabima, May, 1911 (Busck).
- E. sabulosa* Schaus is a synonym of this.

CRINODES STRIOLATA Schaus.

1. Cabima, May, 1911 (Busck).

CRINODES RITSEMÆ Butler.

1. Paraiso, Canal Zone, June, 1911 (Busck).

LIRIMIRIS TRUNCATA Herrich-Schaffer.

2. La Chorrera, May, 1912 (Busck).

LEPASTA MIXTA Möscher.

1. Cabima, May, 1911 (Busck).

DIDUGUA ARGENTILINEA Druce.

1. Corozal, Canal Zone, July, 1912 (J. Zetek).

BETOLA AROATA Schaus.

1. Cabima, May, 1911 (Busck).

The true *arolata* has the hind wings of the male narrowly nearly pure white.¹

DRUGERA MORONA Druce.

3. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CERURA RARATA Walker.

1. Trinidad River, May, 1911 (Busck).

CERURA LAQUEATA Schaus.

2. Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

CERURA LANCEA Schaus.

4. Cabima, May, 1911 (Busck).

CERURA DANDON Druce.

1. Trinidad River, May, 1911 (Busck).

¹ Two other species were confused with *arolata* in the collection. They may be designated as follows:

BETOLA DENSISSIMA, new species.

Male antennæ bipectinate on basal half. Fore wing with the markings finer and more densely crowded than in *arolata*, the costa not darkly shaded; pale subcostomedial area not contrasted, without a distinct, pale ray to apex; central ray at vein 5 divided by a double brown streak. Hind wing fuscous tinged, especially on the veins, inner margin, and terminally. Expanse, 43 mm.

Cotypes.—Four males, No. 15950, U.S.N.M.; St. Jean, Maroni River, French Guiana, May, 1904 (W. Schaus); Gelderland, Surinam River, Dutch Guiana (W. Schaus); Omai, British Guiana (W. Schaus).

BETOLA APOSTATICA, new species.

Male antennæ subserrate and fasciculate. Fore wing with the markings coarse, broad, and open; central clay-colored area running from base to apex as in *arolata*, washed with red-brown, not olive as in *arolata*; no pale ray at apex; ray at vein 5 reduced to a streak with an angled mark above. Hind wing fuscous tinged, especially on inner and outer margins; veins dark. Expanse, 45 mm.

Cotypes.—Four males, No. 15951, U.S.N.M.; Rio Potaro, British Guiana (W. J. Kaye); Omai, British Guiana (W. Schaus); St. Jean, Maroni River, French Guiana, July, 1904 (W. Schaus).

HETEROCAMPA NOTABILIS Schaus.

1. Paraiso, Canal Zone, January, 1911 (Busck).

HETEROCAMPA LÆCA Schaus.

1. La Chorrera, May, 1912 (Busck).

HETEROCAMPA PUNCTATA Druce.

2. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, June, 1912 (Busck).

HETEROCAMPA TUNA Schaus.

3. Paraiso, Canal Zone, January and February, 1911 (Busck); Porto Bello, April, 1912 (Busck).

The Porto Bello specimen is a male, agreeing with the type from Colombia, but small. The two females from Paraiso are darkly suffused, showing only a trace of the mesial light marking; but as the female of *tuna* was heretofore unknown, this may be the normal marking of that sex.

HETEROCAMPA VIRIDESCENS Walker.

1. Cabima, May, 1911 (Busck).

HETEROCAMPA LOPODITES, new species.

Blackish and brown, a little green tinted especially along costa. Inner line white, angular, showing a sharp zigzag next to inner margin, within which is a basal ocherous ray, edged with black below; discal mark brown with reddish field; outer line geminate, reddish filled, becoming white above inner margin; subterminal spots black. Hind wing with costal edge gray, crossed by a waved pale line; discal area more or less pale; fuscous shaded with linear terminal line. Expanse, 33–37 mm.

Cotypes. Three males, No. 15952, U.S.N.M.; Paraiso, Canal Zone, Panama, January, 1911 (A. Busck); Tuis, Costa Rica, June, 1907 (W. Schaus); Sixola River, Costa Rica, March, 1907 (W. Schaus).

Allied to *H. proba* Schaus, less green and with distinctive markings on inner margin. Mr. Schaus did not make a positive determination of this species. He evidently recognized it as distinct, but did not wish to describe it.

MASCHANE ERRATIPENNIS Walker.

1. Alhajuelo, April, 1911 (Busck).

RHUDA FOCULA Cramer.

1. Cabima, May, 1911 (Busck).

MALOCAMPA MATRALIS Schaus.

1. Corozal, Canal Zone, April, 1911 (Busck).

BLERA TENUIS Schaus.

1. Trinidad River, March, 1912 (Busck).

RIFARGIA DISTINGUENDA Walker.

22. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

RIFARGIA MYCONOS Schaus.

5. Paraiso, Canal Zone, January and February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Trinidad River, March, 1912 (Busck).

RIFARGIA PRESBYTICA, new species.

Light gray; at base of fore wing a curved black streak stained with brown from base to inner margin at inner line; inner line double, curved, dentate, cutting off a dark gray-filled blotch on costa; reniform constricted, with an inner appendage above; outer line double, stained with brown, lunulate, followed by a row of round black blotches, encircled by gray and clouded without the line from costa subapically and approximate to outer line below; subterminal linear, black, dislocated into segments above and projected on the veins below. Hind wing whitish at base, dark fuscous without; fringe white. Expanse, 42 mm.

Cotypes.—Three females, No. 15953, U.S.N.M.; Taboga Island, Panama, February, 1912 (A. Busck); Sixola River, Costa Rica, August, 1907 (W. Schaus).

Closely allied to *R. præruppta* Dognin from French Guiana, which, however, lacks the basal arc and has the hind wing less whitish at base. The Sixola River specimen is marked "*R. condita* Schs. fide B. M." but I can not associate it with the male type of *condita*, of which we have no female. The Tuis specimen is marked "*myconos* Schs. ♀" but the type of *myconos* from Peru is a female and clearly distinct.

NAVARCOSTES LIMNATIS Schaus.

1. Cabima, May, 1911 (Busck).

NAPREPA CYLLOTA Druce.

1. Cabima, May, 1911 (Busck).

NAPREPA FLEXIFERA Schaus.

2. La Chorrera, May, 1912 (Busck).

NAPREPA PULCHERIA Druce.

1. Cabima, May, 1911 (Busck).

HEMICERAS FLAVESCENS Schaus.

1. Porto Bello, February, 1911 (Busck).

HEMICERAS OLEAGINA Dognin.

1. Porto Bello, February, 1911 (Busck).

HEMICERAS PLANA Butler.

1. Cabima, May, 1911 (Busck).

HEMICERAS VECINA Schaus.

1. Porto Bello, March, 1911 (Busck).

HEMICERAS CLARKI Schaus.

1. Cabima, May, 1911 (Busck).

The type of *clarki* is a male with large black discal spots. The present specimen agrees, but the discal spots are smaller and more

approximate. Not so small, however, as in the female *clarki* labeled by Mr. Schaus.

HEMICERAS COREMA Schaus.

1. La Chorrera, May, 1912 (Busck).

HEMICERAS DEORNATA Walker.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HEMICERAS RUFESCENS Walker.

3. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HEMICERAS EVANESCENS Dyar.

1. Tabernilla, Canal Zone, May, 1907 (Busck), the female type.

HEMICERAS INDISTANS Guenée.

1. Trinidad River, March, 1912 (Busck).

APOLA DIVISA Walker.

1. Cabima, May, 1911 (Busck).

CHLARA MONETA Felder.

1. La Chorrera, May, 1912 (Busck).

ANTÆA LICORMAS Cramer.

1. La Chorrera, May, 1912 (Busck).

ANTÆA JUTURNA Cramer.

1. Trinidad River, March, 1912 (Busck).

APATELODES LAPITHA Druce.

2. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

OLCECLOSTERA AMORIA Druce.

1. Alhajuelo, April, 1911 (Busck).

ZANOLA VERAGO Cramer.

2. Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, June, 1912 (Busck).

TAMPHANA MARMOREA Schaus.

1. Trinidad River, March, 1912 (Busck).

CARTHARA SURYNORTA Schaus.

2. Porto Bello, March, 1911 (Busck); La Chorrera, May, 1912 (Busck).

ROSEMA DEOLIS Cramer.

1. Trinidad River, March, 1912 (Busck).

ROSEMA ACIRITES Druce.

2. La Chorrera, May, 1912 (Busck).

ROSEMA FULVIPENNIS Butler.

1. Cabima, May, 1911 (Busck).

Very close to *R. marona* Schaus, which has small discal spots, lacking here. *R. falcata* Schaus from Bolivia¹ is also allied but larger, with the wings more pointed. Druce has duplicated the name *Rosema falcata*,² and his species, if different, will have to be renamed.

¹ Proc. U. S. Nat. Mus., vol. 29, 1905, p. 294.

² Ann. Mag. Nat. Hist. (8), vol. 7, 1911, p. 292.

Family BOMBYCIDÆ.

COLLA CÆLESTIS Schaus.

1. Trinidad River, March, 1912.

Family GEOMETRIDÆ.

Subfamily HYDRIOMENINÆ.

HAMMAPTERA COLUMBARIA Dognin.

2. La Chorrera, May, 1912 (Busck); Trinidad River, March, 1912 (Busck).

HAMMAPTERA MINNIPENNA, new species.

Fore wing green (faded to ocher); costa narrowly black; subbasal line slender, arcuate, followed by a broad green (ocher) space; inner line a broad band of blackish; outer line slender, crenulate, with inward points on the veins, the median space partly divided with blackish; subterminal line faint, shaded over the subterminal space, sharp and denticulate without; terminal space narrow, clear. Hind wing dark fuscous gray, fringes whitish. Expanse, 17-19 mm.

Cotypes.—Two females, No. 16954, U.S.N.M.; Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

DYSPTERIS TRIFILARIA Walker.

1. Trinidad River, March, 1912 (Busck).

DYSPTERIS AMATA Cramer.

4. Trinidad River, March, 1912 (Busck); Taboga Island, February, 1912 (Busck).

LEPTIDULE ANTITHESIS, new species.

Entirely reddish ocher; the male with a large patch of raised ocher scales on underside of fore wing from lower part of cell and origin of vein 3 over vein 1; a similar patch on upper side of hind wing (covering the first when the wings are closed) from subcostal vein to lower edge of cell. Antennæ blackish. Expanse, male, 28 mm.; female, 22-30 mm.

Cotypes.—Male and female, No. 15955, U.S.N.M.; the female selected from a series of 19, La Chorrera, May, 1912 (Busck); others from Cabima, May, 1911 (Busck).

DOCEPHORA FUMOSA Warren.

2. Cabima, May, 1911 (Busck).

Subfamily HEMITHIINÆ.

TACHYPHYLE OLEASTER Schaus.

1. La Chorrera, May, 1912 (Busck).

TACHYPHYLE MALESTER, new species.

Fore wing rather strongly falcate; dark green, the apex red-brown, the extreme costa and tip black; some blackish freckles along costal half; discal dot rounded, purplish; outer line only present, broad, purplish over white, joining the costa near apex. Hind wing long

drawn out at anal angle, green, with a single line like that of fore wing, slightly beyond the minute discal dot. Expanse, 27 mm.

Type.—Male, No. 16054, U.S.N.M.; Porto Bello, April, 1912 (Busck).

TACHYPHYLE OUBRICA, new species.

Green, the markings faint; discal dots minute, black; outer line pale, dark within, much as in *bryata* Felder. Hind wing with a large square light purple patch at anal angle, reaching from outer line to margin. Expanse, 22 mm.

Type.—Male, No. 16055, U.S.N.M.; Trinidad River, March, 1912 (Busck).

PHRUDOCENTRA PUPILLATA Warren.

6. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

DICHORDA OBLIQUATA Warren.

3. Taboga Island, February, 1912 (Busck); Paraiso, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

RACHEOSPILA OCELLATA Stoll.

21. Taboga Island, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

RACHEOSPILA ATRAPES Druce.

1. Trinidad River, March, 1912 (Busck).

RACHEOSPILA INTENSA Warren=*EXPULSATA* Walker.

6. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

RACHEOSPILA ATURIA Druce.

1. Corozal, Canal Zone, March, 1911 (Busck).

RACHEOSPILA SIGILLARIA Guenée.

3. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1911 (Busck).

RACHEOSPILA CONCINNARIA Schaus.

1. Trinidad River, March, 1912 (Busck).

RACHEOSPILA DELICATESCENS, new species.

Translucent pale green; discal dot minute, black on fore wing, double and white on hind wing; each wing with a narrow marginal border of pale purple, blotched with white, widened at vein 5 and tornus. Abdomen purplish dorsally with purple crests, metallic at their sides. Expanse, 24 mm.

Type.—Female, No. 16056, U.S.N.M.; Porto Bello, March, 1911 (Busck).

RACHEOSPILA AGENORIA Schaus.

1. Trinidad River, March, 1912 (Busck).

RACHEOSPILA ALBOCILARIA Herrich-Schäffer.

3. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

PYROCHLORA RHANIS Cramer.

7. Trinidad River, March, 1912, and June (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CHLORINTHIS PULCHERRIMA Butler.

1. Cabima, May, 1911 (Busck).

SYNCHLORA FRONDARIA Guenée.

2. Cabima, May, 1911 (Busck).

MIANTONOTA CARBINA Druce.

1. Taboga Island, February, 1912 (Busck).

OÖSPILA ROSIPARA Warren.

1. La Chorrera, May, 1912 (Busck).

DRYADOPSIS ADJUNCTARIA, new species.

Similar to *D. pulveraria* Schaus, smaller, the discal mark closely approximated to the inner line; costa less broadly strigose in brown; submarginal row of dots punctiform on both wings. Expanse, 24 mm.

Type.—Male, No. 16057, U.S.N.M.; Trinidad River, March, 1912 (Busck).

TACHYCHLORA LEPIDARIA Möscher.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

NEGATHIA COMPTATA Felder.

1. Trinidad River, March, 1912 (Busck).

RACHEOLOPHA SARPTARIA Möscher.

1. Trinidad River, March, 1912 (Busck).

HYDATA CADUCATA Felder.

1. Trinidad River, June, 1912 (Busck).

Very close to a specimen from Costa Rica identified by Schaus, but small.

CHLOROPTERYX PRODUCTARIA Herrich-Schäffer.

2. Corozal, Canal Zone, April, 1912 (Busck); Cabima, May, 1911 (Busck).

CHLOROPTERYX HYPERYTHRARIA Guenée.

2. La Chorrera, May, 1912 (Busck).

CHLOROPTERYX SUBRUFESCARIA Warren.

3. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

CHLOROPTERYX ALBIDATA Warren.

7. Porto Bello, March, 1911 (Busck); Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Subfamily ACIDALIINÆ.

HETEREPHYRA SEMIBRUNNEA Warren.

1. Trinidad River, March, 1912 (Busck).

HETEREPHYRA ILLIMITATA Warren.

1. Taboga Island, February, 1912 (Busck).

HETEREPHYRA PUNCTATA Stoll.

5. Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

Also two large specimens, Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HETEREPHYRA CUNEIFERA Warren.

1. Trinidad River, March, 1912 (Busck).

HETEREPHYRA NALTONA Schaus.

1. Corozal, Canal Zone, July, 1912 (J. Zetek).

DICHROMATOPODIA CERVINA Warren.

2. Taboga Island, February, 1912, and June, 1911 (Busck).

ANISODES DISPERGARIA Möschler.

3. Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, April, 1911 (Busck).

ANISODES CANDARA Druce.

1. Cabima, May, 1911 (Busck).

ANISODES RUFICOSTA Warren.

1. Trinidad River, March, 1912 (Busck).

CNEMODES INDIGNARIA Guenée.

2. La Chorrera, May, 1912 (Busck).

CRASPEDIA UMBILICATA Guenée.

39. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (Busck, J. Zetek, C. P. Crafts); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

IDÆA OSSULARIA Hübner.

22. Porto Bello, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); La Chorrera, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (J. Zetek).

A small, depauperate form as compared with United States specimens. The three males from Taboga Island are better developed.

IDÆA SUBQUADRATA Guenée.

22. Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1912 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

IDÆA ASOPIATA Guenée.

6. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

IDEA IMPROPRIATA Walker.

45. Cabima, May, 1911 (Busck); Trinidad River, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

IDEA LANCEOLESCENS, new species.

Fore wing narrow, pointed, the outer margin oblique; creamy brown with narrow whitish lines, obscure, the submarginal coarsely waved. Lines still fainter on hind wing. Discal dots on both wings round, black, distinct, though small. Expanse, 8-10 mm.

Cotypes.—Three females, No. 16070, U.S.N.M.; Taboga Island, February, 1912 (Busck).

IDEA COSTIFERA, new species.

Creamy whitish; costa of fore wing distinctly brown on the basal half, fading outwardly; fore wing with three slender brown lines, irregularly and slightly wavy, the outer and submarginal both excurved a little on the discal venules, the submarginal also excurved on subcostal venules; slight brown irrorations in terminal space; a terminal brown line; discal dot small, brown. Hind wing with two lines, the inner running through the discal dot, the outer similar to that on fore wing. Expanse, male 16 mm., female 18 mm. The lines in the male are narrower than in the female and somewhat broken.

Cotypes.—Male and female, No. 16071, U.S.N.M.; Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck). Also six, with additional localities Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

"PYRINIA" DETRACTARIA Walker.

1. Alhajuelo, April, 1911 (Busck).

This species does not belong to *Pyrinia*, which genus falls in another subfamily.

LIGONIA EXQUISITATA Mäschler.

1. Cabima, May, 1911 (Busck).

ASELLODES LATERUARIA Guenée.

2. Taboga Island, February, 1912, and June, 1911 (Busck).

TRYGODES MERTA Druce.

1. Taboga Island, February, 1912 (Busck).

DITHADAMA ANGULATA Schaus.

2. Cabima, May, 1911 (Busck).

DITHADAMA DELILA Schaus.

3. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1911 (J. Zetek).

EUMACRODES (EUACIDALIA) ORBELIA Druce.

5. Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CAMBOGIA HELIDARIA Guenée.

1. Cabima, May, 1911 (Busck).

CAMBOGIA TEGULARIA Guenée.

1. Alhajuelo, April, 1911 (Busck).

CAMBOGIA HULAQUINA, new species.

Nearest to *undulosata* Warren; but without the black discal points and the central shade; yellow, with many wavy purple lines, the median one heavy and angled; no blackish shadings. Expanse, 19 mm.

Type.—Female, No. 16059, U.S.N.M.; Cabima, May, 1911 (Busck).

LIPOMELIA DIVARICATA Warren.

2. Cabima, May, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck).

EOIS RUSSEARIA Hübner.

1. Taboga Island, June, 1911 (Busck).

EOIS QUADRIRUBATA Warren.

1. Trinidad River, March, 1912 (Busck).

HYRIA GAVISATA Walker.

6. Trinidad River, March and June, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

HYRIA RADIARIA Schaus.

1. La Chorrera, May, 1912 (Busck).

HYRIA FLEXILINEA Warren.

2. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck).

HYRIA RUBIDENTATA Warren.

4. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

HYRIA HELLERIA Schaus.

11. Porto Bello, March, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

Schaus's type is a female. The male has the fore wing pointed; pale yellow with round black discal dot; a rounded purple patch on inner margin rising close to cell; slight powderings beyond the discal dot. Hind wing with the costal half rust-brown; a wide pale yellow vacuole below the discal dot; anal area broadly purple; a little yellow at apex.

HYRIA ROSINARIA Schaus.

2. Cabima, May, 1911 (Busck); Trinidad River, March, 1912 (Busck).

HYRIA GEMMA Schaus.

1. La Chorrera, May, 1912 (Busck).

Differs slightly from the types from Mexico, but scarcely to a specific degree.

HYRIA PAULESCA, new species.

Fore wing whitish-purple, frosted, margin yellow, broader sub-costally and at tornus, shaded, a little pinkish at the joining of the

colors. Hind wing purple, with even central curved yellow band and narrow yellow margin, shading to pinkish as on fore wing. Expanse, 9 mm.

Type.—No. 16060, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also nine others with additional localities Taboga Island, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

HYRIA CROCEIMARGINATA Schaus.

1. Trinidad River, May, 1912 (Busck).

More violaceous, less deep purple than Schaus's type from Costa Rica, but otherwise the same.

TRICENTRA COLLIGATA Warren.

7. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

The red is less uniform than in the type of Warren, the marginal markings being often more or less deep purple; but a separate name is possibly not necessary at present.

CALYPTOCOME IGNIFER Warren.

11. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts.)

CALYPTOCOME RIVULARIA Dyar.

11. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

CALYPTOCOME SUBRUBELLA Warren.

2. Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek).

CALYPTOCOME CONCOLORARIA Dognin.

1. La Chorrera, May, 1912 (Busck).

CALYPTOCOME PTYCTOGRAPHIA Dyar.

1. Taboga Island, June, 1911 (Busck).

CALYPTOCOME CATAGOMPHA Dyar.

1. Porto Bello, April, 1912 (Busck).

NEOSTERICHA THETIS Warren.

1. Cabima, May, 1911 (Busck).

DEPTALIA INSULARIA Guenée.

1. Corozal, Canal Zone, April, 1911 (Busck).

HEMIPTILOTA RUDIMENTARIA Guenée.

25. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

HAEMALEA PULLIDA Dognin.

1. Trinidad River, March, 1912 (Busck).

HAEMALEA TERMINATA Guenée.

13. Porto Bello, February, 1912 (Busck); Corozal, Canal Zone, July, August, and November, 1912 (C. P. Crafts).

HAEMALEA CRUORATA Warren (=OLMIA Druce).

24. Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

HAEMALEA STRAMINEA Warren.

1. Trinidad River, March, 1912 (Busck).

HAEMALEA MACOARIA Schaus.

2. Taboga Island, February, 1912 (Busck).

HAEMALEA MACOUMA Schaus.

4. Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PAMMERIS EURIOPIS, new species.

Fore wing yellow over the disk and margin, costa broadly pale purple, basal two-thirds of inner margin broadly dark purple. Hind wing with a large white discal patch, black edged, the disk salmon pink with fine dentate black line; submarginal area purple; margin rather broadly yellow. Expanse, 13 mm.

Type.—Male, No. 16064, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

Near *P. albigutta* Warren, but the white spot on hind wing much larger.

PTYCHOPODA ZOALMA, new species.

Purple, frosted with whitish; costa whitish; margin broadly orange brown, shaded to deeper before the purple; fore wing with a purple discal dot and two outer lines, close together and joining on inner margin. Hind wing with a wavy line across the disk and another farther out, the ground deep purple just before the red border. Expanse, 11 mm.

Type.—No. 16058, U.S.N.M.; Porto Bello, May, 1912 (Busck). Also a worn specimen from Jalapa, Mexico (Schaus collection).

Close to *P. flavicincta* Warren, but more washed with whitish.

PTYCHOPODA ADIPATA Schaus.

19. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912, and May, 1911 (Busck); Porto Bello, April, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PTYCHOPODA HORRIFICA Warren.

8. Porto Bello, April, 1912 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Paraiso, Canal Zone, June, 1911 (Busck).

PTYCHOPODA FINITA Warren.

2. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

Ptychopoda muscifasciata Warren is another name for the female.

PTYCHOPODA CEDRICA, new species.

Male.—Wings squarish; mid tibiæ without hair-pencil; fore wing with pencil of long hairs arising from a short lobe on middle of inner margin below and extending to anal angle, its tip covering an oval

fovea. Straw-color, the margin purplish to outer line, which is dark and irregular; discal dot minute; two shaded marks on costa; all the marks faint and not contrasted. Expanse, 9 mm.

Female.—Wings more pointed; markings the same but more distinct, discal dot and broad purple border, reaching almost to the edge, but little vacuolated with straw-color on the margin, limited within by the darker, more purplish line, which is slightly irregular; two faint marks on costa; no marginal dots. Expanse, 10 mm.

Cotypes.—Male and female, No. 16061, U.S.N.M.; Taboga Island, June, 1911 (Busck). Also 9 males and 25 females, all from Taboga Island except 1 male and 2 females, which are from Cabima, May, 1911 (Busck), and Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (J. Zetek).

PTYCHOPODA ONCA Druce.

1. Porto Bello, April, 1912 (Busck).

PTYCHOPODA SUBCRINITA Schaus.

7. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

PTYCHOPODA UMBRIMARGO, new species.

Male with a hair-tuft on the mid tibiæ, which are short and have one very long spur and one short one; fore wing simple. Brownish straw-color, irrorate with purple; discal dots black; outer line evenly curved, scarcely at all irregular, the marginal space filled in with purplish except along the apex and tornus, where it is pale; a row of terminal black dashes; fringe pale. Expanse, 11 mm.

Cotypes.—Male and female, No. 16062, U.S.N.M.; Cabima, May, 1911 (Busck). Also 1 male and 23 females, La Chorrera, May, 1912 (Busck); Paraiso, Canal Zone, January, 1911 (Busck); Trinidad River, June, 1912 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

Close to *P. onca* Druce, female, but the outer line is more parallel to the margin, making the marginal purple area more uniform and broader at tornus. Differs from *P. subcrinita* Schaus, female, in the even outer line.

PTYCHOPODA VAGATA Warren.

1. Trinidad River, March, 1912 (Busck).

PTYCHOPODA SINCERIO, new species.

Male with a hair-tuft at base of middle femur and large one on tibia; a tuft covering the base of the small hind leg. Hind wing small, oval, with but one anal vein close to the margin. Pale straw-color, the margin broadly purplish, limited by the irregular outer line, vacuolated on the termen; a row of terminal dashes. Hind wing with the outer half purplish, a little mottled. Expanse, 11 mm.

Type.—Male, No. 16065, U.S.N.M.; La Chorrera, May, 1912 (Busck)

Two females, which I have tentatively associated, closely resemble *P. cedrica* cited above, but are rather darker; Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

PTYCHOPODA CLOTHULA, new species.

Straw-color, irrorate with red-brown; inner line distinct, straight, the base more or less purple-shaded; discal dot minute; outer line rather near the margin, inbent on submedian; margin purple-shaded, broadly pale at apex. Hind wing similar, the margin less distinctly purple-shaded; a finely broken terminal line. Male without hair-tufts on the legs, the hind legs slender and complete, though small. Expanse, male, 10 mm.; female, 11 mm.

Cotypes.—Male and female, No. 16066, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck). Also 10 males and 3 females, Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Paraiso, Canal Zone, April, 1911 (Busck); Trinidad River, May, 1911 (Busck); Porto Bello, May, 1912 (Busck); La Chorrera, May, 1912 (Busck).

Allied to *rufarenaria* Warren.

GONIACIDALIA BALMATA, new species.

Uniformly purplish, evenly irrorated; discal dot large; outer line crenulate. Hind wing notched on the margin, the anal angle lobed and distorted; a groove in the center of the wing above containing orange hairs. Expanse, 12 mm.

Type.—Male, No. 16063, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also four other males, Corozal, Canal Zone, March, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Like *G. furciferata* Packard, but smaller and darker. Some of the females cited under *P. umbrimargo* above may appertain to this species. Accurate association of the sexes is difficult.

DEINOPYGIA FALCIPENNIS Warren.

1. Taboga Island, February, 1912 (Busck).

DEINOPYGIA CONIFER Warren.

20. Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); La Chorrera, April and May, 1912 (Busck); Cabima, May, 1911 (Busck).

DEINOPYGIA TRIANGULATA Warren.

2. Corozal, Canal Zone, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

DEINOPYGIA RECTIFACIENS, new species.

Pale straw-color, the margins faintly purple tinted; fore wing acute, with scattered irrorations; discal dot minute; an outer rather broad purplish band, bent out a little over the discal nervules; terminal dots around apex and to the middle of outer margin. Hind wing similar, but the band preceding the discal dot is straight, run-

ning to inner margin above tornus. Male with yellow hairs along inner area of hind wing below. Expanse, 11-12 mm.

Cotypes.—Two males, No. 16067, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Near *D. caudata* Warren, but the hind wing squarer, less pointed at tornus.

DEINOPYGIA GOSPERA, new species.

Similar to the preceding, the wings more rounded, less acute; hind wing rounded, outer margin scarcely excavate, anal angle not at all tailed; below in the male with yellow hairs along inner margin. Band of fore wing more upright, more bent, indistinctly attaining the costa; terminal dots all along the margin. Lines of hind wing slenderer, linear, less oblique. The female is similar, but the band on hind wing is broad. Expanse, male, 10 mm.; female, 11 mm.

Cotypes.—Male and female, No. 16068, U.S.N.M.; Taboga Island, February, 1912 (Busck), and Porto Bello, April, 1912 (Busck). Also 3 males and 2 females, Alhajuelo, April, 1911 (Busck); La Chorrera, April and May, 1912 (Busck).

Subfamily ENNOMINÆ.

OPISTHOXIA MOLPODIA Druce.

1. Cabima, May, 1911 (Busck).

OPISTHOXIA NITIDISQUAMA Warren.

2. Cabima, May, 1911 (Busck).

OPISTHOXIA FORMOSANTE Cramer.

5. Trinidad River, March, 1912 (Busck).

Agrees with *formosante* from Surinam above, but below washed with white. Cramer says of *formosante* that the underside is violet or bluish white. It is possible that the species varies in this respect, hence I do not propose a name for the present form.

OPHTHALMOPHORA PHRYNEARIA Schaus.

4. Porto Bello, March, 1911 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PHRYGIONIS PALLICOSTA Felder.

1. Porto Bello, April, 1912 (Busck).

APLOGOMPHA CHOTARIA Schaus.

7. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

APLOGOMPHA ANGUSTA, new species.

Close to *A. costimacula* Warren, the markings being essentially the same, but the fore wing of the male long and narrow, hind wing moderate, not broadly expanded, while the basal two-thirds of both wings below are washed with yellowish. Female pale brown above, but with the markings of the male on both sides. Expanse, male, 23 mm.; female, 21 mm.

Cotypes.—Male and female, No. 16072, U.S.N.M.; Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

For the determination of *A. costimacula* I depend upon a specimen from Costa Rica labeled by Mr. Schaus. The female from French Guiana before me labeled by Mr. Warren agrees perfectly with the male type of *A. argentilinea* Schaus. The female type of *argentilinea* has lost the pale spot of hind wing on both surfaces.

CHRYSOCESTIS FIMBRIARIA Cramer.

10. Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

BERBERODES CAMPYLOPHLEPS, new species.

Male.—Hind wing with the margin produced at veins 1-2, vein 1 bent and running along close to the margin of the lobe, the membrane full and distorted. White, translucent, fore wing brown shaded along costa and margin and with three bands of quadrate metallic yellowish spots. Hind wing with the margin brown, the expanded area purplish shaded; three rows of spots above vein 2 as on fore wing. Expanse, 27 mm.

Type.—Male, No. 16073, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck).

Nearest to *B. cassotius* Warren.

BERBERODES IMPURA, new species.

Male.—Wings without modification; white, the lines obscure; median space of both wings stained with metallic ocher, on fore wing not attaining the costa and defining a white discal streak; costa freckled with black; terminal area grayish, irrorate, with a black speck at vein 6 of fore wing; terminal dots small. Beneath, translucent white with rather broad brown-black border on both wings; fringe pale, tinged with brown. Expanse, 19 mm.

Type.—Male, No. 16074, U.S.N.M.; Cabima, May, 1911 (Busck).

SEMIOTHISA ACCUMULATA Guenée.

3. Porto Bello, February, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck).

SEMIOTHISA ORBONATA Guenée.

1. Cabima, May, 1911 (Busck).

SEMIOTHISA CARDINEA Druce.

2. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

SEMIOTHISA ENOTATA Guenée.

9. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

SEMIOTHISA CARPO Druce.

9. La Chorrera, May, 1912 (Busck).

SEMIOTHISA ARENISA Dognin.

3. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

SEMIOTHISA INFUSATA Guenée.

2. Corozal, Canal Zone, July, 1912 (J. Zetek).

SEMIOTHISA SANTAREMARIA Walker.

6. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

SEMIOTHISA NIGROPUNCTATA Warren.

5. Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

SEMIOTHISA DIFFUSATA Guenée.

2. Corozal, Canal Zone, July, 1912 (J. Zetek).

SEMIOTHISA PALLIDATA Warren.

5. Corozal, Canal Zone, July, 1912 (J. Zetek).

SEMIOTHISA ACHETATA Guenée.

1. Porto Bello, February, 1911 (Busck).

SEMIOTHISA JOSEFARIA Schaus.

4. La Chorrera, May, 1912 (Busck).

Differing in several respects, but so close that I do not like to separate it at present.

SEMIOTHISA BEJUCOARIA, new species.

Very close to *S. occultata* Warren, darker, more densely and uniformly irrorate; submarginal straight band broad, farther out; median band broader and more evident. Hind wing densely irrorate, the line preceding the discal dot broadened with shading. Expanse, 29-30 mm.

Cotypes.—Two females, No. 16076, U.S.N.M.; Bejuco River (W. Schaus).

SEMIOTHISA PERPENDICULATA Guenée.

1. Bugaba (W. Schaus).

UREPIONE QUADRILINEATA Walker.

2. La Chorrera, May, 1912 (Busck).

NEMATOCAMPA RETICULATA Butler.

1. Trinidad River, March, 1912 (Busck).

TETRACIS ATROPUNCTARIA Walker.

3. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, May, 1912 (Busck).

METANEMA ANOPSIARIA Guenée.

11. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

MYCHONIA EXCISA Warren.

1. Cabima, May, 1911 (Busck).

APICIA NYPARIA Walker.

1. La Chorrera, May, 1912 (Busck).

APICIA EXERARIA Guenée.

4. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

APICIA ALTERARIA Guenée.

18. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), November, 1912 (C. P. Crafts).

APICIA DISTYCHARIA Guenée.

4. Paraiso, Canal Zone, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

RHOMBOPTILA BRANTSIATA Schaus.

2. Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

PATALENE HAMULATA Guenée.

6. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

HALESA ÆNITUSALIS Walker.

3. Cabima, May, 1911 (Busck).

EUSARCA SUBFASCIATA Warren.

2. La Chorrera, May, 1912 (Busck).

CLETA MINUTA Druce.

1. Paraiso, Canal Zone, January, 1911 (Busck).

CLETA FARAGITA Schaus.

1. Alhajuelo, April, 1911 (Busck).

DREPANODES DREPANULA Hübner.

3. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck).

OXYDIA SIXOLA Schaus.

1. Trinidad River, March, 1912 (Busck).

OXYDIA TRANSCENDENS Walker.

1. Cabima, May, 1911 (Busck).

PARAGONIA TASMIA Cramer.

1. Cabima, May, 1911 (Busck).

AESCHROPTERYX TETRAGONATA Guenée.

1. Trinidad River, March, 1912 (Busck).

THYSANOPYGA APICITRUNCARIA Herrich-Schäffer.

13. Taboga Island, January, 1911 (Busck); Trinidad River, March and June, 1912 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, May, 1912 (Busck).

AZELINA RUMINA Druce.

1. Cabima, May, 1911 (Busck).

AZELINA LIGNATA Warren.

6. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 and May, 1911 (Busck); Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

AZELINA DORSIPUNCTATA Warren.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

AZELINA SOLITARIA Schaus.

1. La Chorrera, May, 1912 (Busck).

AZELINA STOLIDATA Guenée.

3. Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck).

PERGANA POLYGONARIA Herrich-Schäffer.

1. Porto Bello, March, 1912 (Busck).

CATOPYRRHA DECREPITARIA Hübner.

6. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, March and June, 1912 (Busck).

CASBIA OROANDA Druce.

2. Corozal, Canal Zone, July, 1912 (J. Zetek).

CASBIA NICETARIA Guenée.

2. Trinidad River, March, 1912 (Busck).

CASBIA PALLIDICOSTA Warren.

1. Tabago Island, February, 1912 (Busck).

CYCLOMIA STRIGIFERA Warren.

25. Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts); La Chorrera, May, 1912 (Busck); Paraiso, Canal Zone, June, 1911 (Busck).

CYCLOMIA FULVIMACULA Warren.

1. Trinidad River, June, 1912 (Busck).

CYCLOMIA OCELLATA Warren.

1. Tabago Island, June, 1911 (Busck).

ISCHNOPTERIS RASTELLARIA Felder.

2. Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

GENUSA VICINA Schaus.

1. Tabago Island, February, 1912 (Busck).

AMPHIDASYS ARNOBIA Cramer.

4. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, May, 1912 (Busck); Trinidad River, June, 1911 (Busck).

GAZENA CATAMELAS Kaye.

1. Cabima, May, 1911 (Busck).

PHYSOCLEORA NUBILATA Warren.

26. Tabago Island, February, 1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PHYSOCLEORA CAMERATA Warren.

1. Trinidad River, March, 1912 (Busck).

PHYSOCLEORA CAPRUMA Schaus.

2. Paraiso, Canal Zone, February, 1911 (Busck).

Not agreeing very well with the type from Brazil, but both specimens in bad condition, unfit to describe.

PHYSOCLEORA PUSILLA Warren.

6. Trinidad River, March, 1912, and May, 1911 (Busck); Cabima, May, 1911 (Busck).

CATORIA UNIPENNARIA Guenée.

2. Porto Bello, April, 1911 (Busck).

CATORIA THARPOIDES Thierry-Mieg.

3. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Cabima, May, 1911 (Busck).

ALCIS PANDROSOS Schaus.

4. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck).

ALCIS DELICATA Butler.

1. Trinidad River, June, 1912 (Busck).

ALCIS PLENARIA Walker.

2. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

ALCIS UMBELLULARIA Hübner.

1. Taboga Island, February, 1912 (Busck).

EPIMECIS FRATERNARIA Guenée.

2. Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck).

EPIMECIS SUBALBIDA Warren.

1. Porto Bello, April, 1912 (Busck).

TORNOS PENUMBROSA, new species.

Female.—Heavily shaded with black, especially over margin of fore wing and all of hind wing except costa; lines obscure, the outer traceable, denticulate; apex and center of wing brown; costa blackish shaded; discal spot large, raised; subterminal line white, pulverulent punctiform. A black discal dot on hind wing and traces of whitish subterminal line. Expanse, 23 mm.

Type.—Female, No. 16075, U.S.N.M.; La Chorrera, May, 1912 (Busck).

This is possibly a dark variety of *T. quadripunctata* Warren (= *punctata* Druce), but I think more likely distinct. Mr. Schaus obtained a similar specimen in Costa Rica (Sixola River, March, 1907).

ASTYCHIA FAULA Druce.

1. Cabima, May, 1911 (Busck).

Subfamily OENOCHROMINÆ.

HEDYLE HELICONARIA Guenée.

6. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Trinidad River, March 1912 (Busck); La Chorrera, May, 1912 (Busck).

ZANCLOPTERYX SUBSIMILIS Warren.

2. Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

ZANCLOPTERYX UNIFERATA Walker.

1. Trinidad River, March, 1912 (Busck).

ACHLORA CÆNOBIATA Felder.

1. Trinidad River, June, 1912 (Busck).

Family **DIOPTIDÆ**.**JOSIA FULVIA** Linnæus.

8. Tabernilla, Canal Zone, May, 1907 (Busck); Corozal, Canal Zone, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

ACTEA BRYCE Walker.

8. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

EPHIALTIAS PSEUDENA Boisduval.

6. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

SCOTURA LEUCOPHLEPS Warren.

5. Trinidad River, March and June, 1912 (Busck); La Chorerra, May, 1912 (Busck).

ZUNACETHA BIPARTITA Walker.

2. Trinidad River, June, 1912 (Busck).

PHÆOCHLÆNA TENDINOSA Hübner.

1. Trinidad River, March, 1912 (Busck).

TITHRAUSTES HÆMON Druce.

1. Trinidad River, March, 1912 (Busck).

Family **URANIIDÆ**.**URANIA FULGENS** Walker.

3. Ancon, Canal Zone (O. Celestine), "very numerous in April" (B. G. Ireneo).

MANIA EMPEDOCLES Cramer.

1. Trinidad River, March, 1912 (Busck).

MANIA LUNUS Linnæus.

1. Porto Bello, March, 1911 (Busck).

Family **EPIPLEMIDÆ**.**NEDUSIA PLACIDARIA** Walker.

1. Corozal, Canal Zone, July, 1912 (J. Zetek).

ANTIPECTA CINERASCENS Warren.

1. Alhajuelo, April, 1911 (Busck).

Superfamily **TINEOIDEA**.Family **NOLIDÆ**.**RÆSELIA BIFILIFERATA** Walker.

5. Trinidad River, March and June, 1912 (Busck).

RÆSELIA POLYODONTA Schaus.

3. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck).

RÆSELIA PERNITENS Schaus.

3. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Trinidad River, March, 1912 (Busck).

RÆSELIA MESOGRAPHIA Schaus.

3. La Chorrera, May, 1912 (Busck).

In these specimens the median band is nearly absent, leaving only a large costal spot. The species was described as a *Nola*, but I find vein 9 to be present, though very short.

RÆSELIA PEDANTA Dyar.

7. Trinidad River, March and June, 1912 (Busck).

RÆSELIA PECTA, new species.

Whitish gray, slightly irrorate; a rounded triangular black-brown spot in the middle of the costa; inner line brown, slightly curved; outer line wavy, gently excurved from vein 2 to vein 6, preceded below by some brown spots; subterminal line blackish, irregular; some brown shading on the margin on the lower half. Hind wing faintly fuscous tinged outwardly, with cloudy gray discal dot and marginal line. Expanse, 15 mm.

Cotypes.—Two males, No. 16077, U.S.N.M.; La Chorrera, May, 1912 (Busck).

RÆSELIA HYPOPECTA, new species.

Whitish gray; a square black blotch on the middle of costa reaching down to median vein; a wavy median line just beyond it and close to the outer line, which is slender, straight, running obliquely between veins 6 to 2; subterminal line wavy, shaded, blackish, followed by brown except at apex, the brown ending in dark terminal points. Hind wing pale fuscous. Expanse, 13 mm.

Type.—Female, No. 16078, U.S.N.M.; La Chorrera, May, 1912 (Busck).

RÆSELIA MICROPECTA, new species.

Pale gray; fore wing with a triangular dark gray blotch on costa at middle; lines slender, blackish, the outer excurved over cell; termen gray shaded, the subterminal line wavy, a little darker than the shading; costa finely speckled with gray and white. Hind wing pale fuscous, uniform, discal dot darker. Expanse, 10 mm.

Cotypes.—One male, two females, No. 16079, U.S.N.M.; La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

RÆSELIA MELLETTES, new species.

Fore wing whitish, the margin broadly shaded with gray irrorations, not compact nor defined; inner line angled outwardly subcostally, irregular, broken; outer line smooth, black, regularly excurved opposite cell, doubled below; subterminal line black, dentate, mixed in the terminal shading; a row of terminal black dots alternating with spots in the fringe. Hind wing fuscous outwardly, pale at base; discal dot darker. Expanse, 16–18 mm.

Cotypes.—One male, three females, No. 16080, U.S.N.M.; Cabima, May, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Trinidad River, June, 1912 (Busck).

RÆSELIA ATYPICA, new species.

Whitish, rather coarsely irrorate with blackish; a dark spot on base of costa; inner line shaded, curved; outer line oblique to costa, bordering a dark oblique patch, then curved around parallel to margin; subterminal line regular and even, parallel to margin, finely denticulate; the gray irrorations denser on the margin. Hind wing pale, fuscous tinged along veins and margin. Expanse, 15 mm.

Type.—Male, No. 16081, U.S.N.M.; Cabima, May, 1911 (Busck).

NOLA ÆSCHYNTELA, new species.

Pale gray with black irrorations in clusters; inner line slender, curved, irregular; outer line dotted, excurved over cell and less so below, preceded by a black shade throughout, but most distinct below with red-brown shading on margin and tornus; subterminal line spotted and diffused, blackish; margin darkly irrorate. Hind wing fuscous, pale at base; discal dot darker. Expanse, 14 mm.

Cotypes.—Two females, No. 16083, U.S.N.M.; Trinidad River, March and June, 1912 (Busck). Also one male and six females with additional localities, La Chorrera, May, 1912 (Busck); Paraiso, Canal Zone, January, 1911 (Busck).

NOLA BRUNNEIFERA, new species.

Similar to the preceding, but the lines lost in a black irrorate shade that replaces the outer line and its duplication and runs along costa to base, forming streaks on the veins; brown marking on inner margin to tornus distinct; terminal markings reduced to irrorations. Hind wing pale, with more fuscous margin. Expanse, 12 mm.

Cotypes.—Two males, No. 16084, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Possibly this is the male of *æschyntela*, of which the single male cited as paratype is badly rubbed.

NOLA NEPHELEPASA, new species.

Pale gray, the markings nearly obliterated; an aggregation of dark scales near middle of costa entering the cell; a few specks for outer line; subterminal line a waved cloud. Hind wing gray, pale at base; no trace of discal dot. Expanse, 15 mm.

Type.—Female, No. 16085, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck).

NOLA CHAUNA, new species.

Whitish, broadly gray on the margin, cut by the whitish sinuate subterminal line and narrowly separated below from the slender, powdery, blackish outer line, which forms two smooth arcs; costa shaded with brown, broadening out beyond base and forming a larger patch beyond middle; a few dots toward apex. Hind wing fuscous

tinged, most strongly so outwardly, the veins darker. Veins 7-10 stalked, 9 absent, 11 straight. Expanse, 9 mm.

Cotypes.—Three males, No. 16086, U.S.N.M.; Cabima, May, 1911 (Busck); Alhajuelo, April, 1911 (Busck).

Near *N. artata* Schaus from Costa Rica, but the costal patch is longer and more outwardly oblique.

NOLA NIMBIMARGO, new species.

Similar to *chauna*, the marginal clouding blacker; subterminal line obscure; outer line powdery, denticulate, not smooth; costal band distinct on basal two-thirds, enlarged into a small patch at the end. Hind wing translucent fuscous. Expanse, 12 mm.

Type.—Female, No. 16093, U.S.N.M.; Cabima, May, 1911 (Busck).

More like *artata* in costal marking than *chauna* is, but the outer line does not form a prominent coarse tooth on submedian as in *artata*.

I have also placed here two females in poor condition from La Chorrera, May, 1912 (Busck), and Trinidad River, March, 1912 (Busck).

NOLA PROTHYMA, new species.

Whitish, the margin gray and with a roundedly irregular, clouded submarginal line; a spot at base of costa; inner line coarse and dentate, obsolete below; a triangular costal, median, brown mark, from which a straight line runs across the wing; outer line slender, powdery, and a little broken, forming an arc above and a small one below. Hind wing pale fuscous, darker outwardly and on fringe. Expanse, 10 mm.

Cotypes.—Male and female, No. 16087, U.S.N.M.; La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

NOLA QUINTESSA, new species.

Pale gray, irrorate, the irrorations a little denser at the margin; subterminal shade rather remote, clouded, undulate on its outer margin; outer line nearly straight, oblique, shaded, and powdery, outbent a little in the middle; inner line broad, shaded, subparallel to the outer and likewise oblique. Hind wing pale gray; no discal dot. Expanse, 13 mm.

Type.—Female, No. 16091, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck).

Allied to *N. apera* Druce, but the outer line not forming points on the veins.

NOLA ZETECI, new species.

Blackish gray, dark, the fore wing narrow, its margins subparallel; a dark blotch at base and a large one near middle of costa, clouded and diffused across the wing; outer line oblique, dotted on the veins; subterminal somewhat dotted, obscure; a row of terminal black dots. Hind wing pale with fuscous margin and discal dot. Expanse, 14 mm.

Type.—Male, No. 16090, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek).

NOLA CONTORTA, new species.

Pale gray; costa pale brown, forming two spots close together, one between the raised stigmal scales, the other just beyond; lines faint, blackish, broken; inner line waved and with duplicating patches within; outer broadly excurved above, with parallel browner shadings; subterminal line brownish, shaded, forming an arc above and a broader one over discal venules. Hind wing uniformly pale fuscous with darker discal dot. Expanse, 16 mm.

On fore wing the stalk of veins 7-10 (9 absent) is bent downward and vein 11 bent in the opposite direction at base.

Type.—Female, No. 16094, U.S.N.M.; Trinidad River, June, 1912 (Busck).

NOLA FLAVESCENS, new species.

Fore wing washed with pale yellow from base to outer line, with black irrorations and a central shade in place of inner line; costa pale brownish with two inconspicuous expansions; outer line blackish, distinct, smooth, evenly excurved above; terminal area pale gray, clouded with darker gray next the outer line and termen; subterminal line sinuate, denticulate, narrow, dark. Hind wing fuscous, paler at base; no discal dot. Expanse, 16 mm.

Type.—Female, No. 16095, U.S.N.M.; Trinidad River, March, 1912 (Busck).

NOLA HABROPHYES, new species.

Head and thorax pure white. Base of fore wing white, with dark brown basal costal spot; terminal two-thirds of wing black-brown, bounded by an upright, straight edge; black area with scattered dark and silvery blue scales; a faint pale, smooth outer line visible, excurved over cell; some pale scales before the apex. Hind wing blackish gray; discal dot darker. Expanse, 13 mm.

Type.—Female, No. 16082, U.S.N.M.; Trinidad River, March, 1912 (Busck).

CELAMA SORGHIELLA Riley.

10. Corozal, Canal Zone, July, 1912 (J. Zetek), August, 1912 (C. P. Crafts).

CELAMA SYLPHA, new species.

Whitish, rather sparsely irrorate, the general tone soft pale gray; costa with small brown-gray spot at base, a shaded one at inception of inner line and large slightly oblique one beyond middle; lines slender, brown-gray; inner line irregular; mesial also irregular and arising from the outer costal patch; outer line slender, gently excurved above; subterminal line clouded, forming three arcs; some dark scales on margin. Hind wing pale grayish, darker on the margin; no discal dot. Expanse, 11-13 mm.

Cotypes.—Male and female, No. 16096, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also 14 others with additional localities Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, February, 1912 (Busck).

Three out of the sixteen specimens retain vein 8 in the fore wing and would therefore be referable to *Nola*, if this were not evidently a case of variation.

Family COCHLIDIIDÆ.

EUCLEA NORBA Druce.

10. Porto Bello, March, 1912 (Busck); Trinidad River, March, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, June, 1912 (Busck); Bejuco River (W. Schaus).

EUCLEA BUSCKI Dyar.

7. Cabima, May, 1911 (Busck); Trinidad River, May, 1911 (Busck).

EUCLEA BARANDA Schaus.

1. Bejuco River (W. Schaus).

EUCLEA TRICHATHDOTA Dyar.

1. Bejuco River (W. Schaus).

METRAGA PERPLEXA Walker.

5. Tabernilla, Canal Zone, May, 1907 (Busck); Corozal, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

METRAGA COLLE Dyar.

8. La Chorrera, May, 1912 (Busck).

This is, perhaps, only a variety of the preceding species.

METRAGA EMILIA Dyar.

2. Tabernilla, Canal Zone, May, 1907 (Busck); Bejuco River (W. Schaus).

METRAGA RUBICOLOR Dyar.

6. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck); Bejuco River (W. Schaus).

SEMYRA BELLA Herrich-Schäffer.

1. Porto Bello, May, 1912 (Busck).

SEMYRA GLADYS, new species.

Size and markings of *S. distincta* Möschler, but a shaded red patch below the cell subbasally, the silvery line and dark spot of *distincta* wholly lacking. Expanse, 28 mm.

Type.—Male, No. 16088, U.S.N.M.; Porto Bello, February, 1911 (Busck).

TALIMA STRAMINEA Schaus.

1. Bejuco River (W. Schaus).

SISYROSEA DIANA Druce.

2. Cabima, May, 1911 (Busck).

SISYROSEA (?) PARVA Dyar.

1. Alhajuelo, April, 1911 (Busck).

SISYROSEA (?) APHASIA, new species.

Close to *S.* (?) *phara* Druce, but the outer line more curved above, meeting the costa obliquely, and the hind wing lighter brown, about the color of the terminal space of fore wing.

Type.—Female, No. 16089, U.S.N.M.; Bejuco River (W. Schaus).

EUPROSTERNA ELÆASA Dyar.

7. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck); Taboga Island, June, 1911 (Busck); Bejuco River (W. Schaus).

NATADA SALTA Druce. (=FUSCA Druce).

13. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Bejuco River (W. Schaus).

NATADA NINDLA Dyar.

2. Cabima, May, 1911 (Busck); Trinidad River, May, 1911 (Busck).

EPIPEROLA ALBIMARGINATA Kaye.

4. Trinidad River, March and June, 1912 (Busck); La Chorrera, May, 1912 (Busck).

EPIPEROLA PAIDA Dyar.

1. Trinidad River, May, 1911 (Busck).

EPIPEROLA VAFERA Druce.

1. Cabima, May, 1911 (Busck).

EPIPEROLA MONOCHROMA Dyar.

5. Paraiso, Canal Zone, January, 1911 (Busck); Chiriquicito, April, 1906 (W. Schaus); Bocas del Toro, April, 1906 (W. Schaus).

Busck's specimen is darker than the others, being almost brown in color, but of the same size and without markings.

PEROLA VILLOSIPES Walker.

1. Cabima, May, 1911 (Busck).

VIPSOPHOETRON MARONA Dyar.

2. Trinidad River, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

Family MEGALOPYGIDÆ.

MICRORAPE MINUTA Druce.

12. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

NORAPE PURA Butler.

24. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

NORAPE XANTHOLOPHA, new species.

White; fore wing without appressed lines, costa white below; front and vertex yellow; pectus and fore femora black; basal tuft of abdomen yellow. Expanse, 35 mm.

Type.—Male, No. 16092, U.S.N.M.; La Chorrera, May, 1912 (Busck).

TROSIA FALLAX Felder.

1. La Chorrera, May, 1912 (Busck).

TROSIA TRICOLORA Fabricius.

6. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

TROSIA ARGENTEA Druce.

1. Cabima, May, 1911 (Busck).

I have the name from Mr. Schaus, but have been unable to find the original description.

TROSIA ACCA RIBBEI Druce.

2. Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck).

The type of *acca* Schaus is from Mexico. Specimens from Costa Rica and Panama have the hind wing less orange, the fore wing grayer, and may perhaps hold the name *ribbei* Druce as a varietal one.

TROSIA TYMPANIA Druce.

1. Arajan, March, 1911 (Busck).

I placed this species in *Malmis*,¹ but find the venation of hind wing varies, veins 3 and 4 being either shortly stalked or separate.

ARCHYLUS GUTTIFASCIA Walker.

1. Corozal, Canal Zone, November, 1912 (C. P. Crafts).

MESOSCIA ERIOPHORA Sepp.

1. Porto Bello, April, 1912 (Busck).

MEGALOPYGE COSTARICENSIS Schaus.

6. Trinidad River, March, 1912, and May, 1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

MEGALOPYGE LANATA Stoll.

Panama City, April, 1911, larvæ on shade trees (Busck); larvæ on "Cashew tree" Ancon, Canal Zone, June, 1913 (E. M. Keyser).

No adults were captured, but the larvæ apparently commonly observed. The larva is well figured by Sepp,² under the name *Phælæna citri*.

MEGALOPYGE ALBICOLLIS Walker.

4. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1912 (Busck).

MEGALOPYGE MULTICOLLIS Schaus.

3. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

¹ Proc. Ent. Soc. Wash., vol. 12, 1910, p. 168.

² Surin. Vlind., vol. 1, 1830, p. 31, pl. 12.

UNDUZIA, new genus.

Fore wing with veins 2-5 well separated, 6 arising below the angle of the cell 7-8 stalked, 9, 10, 11 on the cell, 12 free. Hind wing with 2 to 5 well separated, 6, 7 separate, 8 from subcostal near end of cell; frenulum absent. Antennæ short and slight. Head small, retracted.

Type of the genus.—*Unduzia gistinda*, new species.

UNDUZIA GISTINDA, new species.¹

Brown; wings thinly scaled, translucent; a subterminal row of faint yellowish spots between the veins of fore wing, appearing raised. Expanse, 36 mm.

Cotypes.—Two females, No. 16097, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Family DALCERIDÆ.

ACRAGA CARETTA Dyar.

1. Porto Bello, April, 1912 (Busck).

ACRAGA CONDA Dyar.

2. Trinidad River, March, 1912 (Busck).

ACRAGA COA Schaus.

5. Corozal, Canal Zone, November, 1912 (C. P. Crafts); Bugaba (W. Schaus).

ANACRAGA PHILETEREA Schaus.

3. La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

ANACRAGA DULCIOLA, new species.

Fore wing brown; a yellow patch at base running out to middle of inner margin. Hind wing orange, shading to brown on the fringe. Expanse, 11 mm.

Type.—Male, No. 16099, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another larger and darker specimen, Porto Bello, December, 1912 (G. F. Cleveland).

CA, new genus.

Fore wing with veins 8 and 10 wanting, 9-11 long-stalked or coincident; no accessory cell. Hind wing with 3-4 shortly stalked, 5-7 well spaced, 8 broadly joined to cell.

Type of the genus.—*Ca anastigma*, new species.

CA ANASTIGMA, new species.

Fore wing light yellow; a wavy dirty olivaceous shade across inner third of wing; a similar submarginal shade, irregular, illy defined,

¹ Another species of this genus is before me from Venezuela. It may be described as—

UNDUZIA PHAULE, new species.

Lighter brown, the submarginal spots scarcely relieved. Veins 4-5 of fore wing are closer together, 9 is shortly stalked with 7-8; on hind wing 6-7 are connate. Expanse, 30 mm.

Type.—Female, No. 16098, U.S.N.M.; Merida, Venezuela (S. E. Briceno).

touching the margin in places; discal dot small, round, black, placed up toward the costa; two minute black dots at apex. Hind wing whitish with faint yellow tint. Expanse, 11 mm.

Cotypes.—Four males, No. 16100, U.S.N.M.; Trinidad River, March, 1912 (Busck).

PARACRAGA CYCLOPHERA, new species.

Creamy white; fore wing shaded with brown faintly; lines joined to each other and detached from costa and inner margin, forming an elliptical ring, more pointed below than above, slender, brown; some groups of scales in its upper part; a dot on vein 1 near middle and terminal row of dots on the veins. Hind wing immaculate. Expanse, 20 mm.

Cotypes.—Two males, No. 16101, U.S.N.M.; Cabima, May, 1911 (Busck).

Family LACOSOMIDÆ.

MIMALLO AMILIA Stoll.

1. Trinidad River, May, 1912 (Busck).

PAMEA RUMINA Druce.

1. Taboga Island, June, 1911 (Busck).

CICINNUS LANTONA Schaus.

3. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CICINNUS SOLVENS, new species.

Male.—Fore wing with the apex falcate; dark purple gray; lines blackish, the inner nearly straight across the wing, a little wavy; outer line angled between veins 7 and 8, crenulate on the veins; discal spot round, blackish; an orange shade from outer line to below pointed apex; margin a little blackish shaded. Hind wing irrorate with dark scales, especially outwardly; a single mesial line, bluntly bent at upper third, followed below by a clouded duplication. Expanse, 43 mm.

Female.—Wood brown; wings irrorated with purplish; lines as in the male, the outer followed below by a duplication in olive brown; duplication of line on hind wing olive-brown shaded. Expanse, 48 mm.

Cotypes.—Two males, one female, No. 16102, U.S.N.M.; Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CICINNUS BETA Schaus.

1. Trinidad River, March, 1912 (Busck).

Family PSYCHIDÆ.

PLATÆCETICUS APHAIDROPA, new species.

Fore wing trigonate, hind wing rounded; brown, thinly scaled, with slight bronzy tint; veins of fore wing darker, the apex and margin a little more bronzy. Expanse, 19 mm.

Type.—No. 16110, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Venation as in *P. costaricensis* Schaus, except that vein 10 is stalked.

PLATÆCETICUS SYMMICTA, new species.

Fore wing broad with rounded apex; hind wing rounded trigonate; brown, unicolorous; hind wing a little lighter. Expanse, 12 mm.

Type.—No. 16111, U.S.N.M.; Ancon, Canal Zone (A. H. Jennings).

Veins 8-9 of fore wing stalked, 10 from cell; 4, 5 from a point in both wings.

OIKETICUS KIRBYI Guilding.

2. La Chorrera, April, 1912 (Busck).

Family THYRIDIDÆ.

DRACONIA RUSINA Druce.

1. La Chorrera, May, 1912 (Busck).

DYSODEA ANGULISOLA, new species.

Fore wing dark purple-brown, nearly solidly from base to outer two-thirds, where it ends in a straight, oblique line; terminal area light yellow, finely irrorate with dark, apex shaded across to vein 7; a narrow band of dark brown from costa before apex, stopping at outer margin at middle; a small erect mark from tornus; basal dark area washed with light purplish in bands. Hind wing dark on costa fourth, the rest yellow, thickly reticulate with dark brown; a narrow transverse band near base; two small white-hyaline discal spots, the lower triangular; traces of two outer patches of dark, confused in the reticulations. Expanse, 26 mm.

Type.—No. 15535, U.S.N.M.; Cabima, May, 1911 (Busck).

Near *D. thyridina* Felder and Rogenhofer, possibly the same, in case their figure is in error in the details of the apical marking of fore wing.

DYSODIA REMIE, new species.

Brick red with broken, subreticulate dark lines; a round dark spot at outer third of costa, from which a straight narrow line runs to inner margin; a subterminal broken line, lost in reticulations; a faint clouding at apex and tornus. Hind wing with straight mesial line following two minute, white-hyaline discal dots; all of outer space faintly lilacine shaded over the reticular lines except a ray outward from cell. Expanse, 22 mm.

Type.—No. 15539, U.S.N.M.; La Chorrera, May, 1912 (Busck).

RHODONEURA THIASTORALIS Walker.

1. Porto Bello, April, 1912 (Busck).

Agrees with a specimen from Ecuador so labeled in Mr. Schaus's writing. Specimens from Jamaica and Cuba labeled "*Pharambara thiastoralis* Walk. (= *violalis* Poey)" by Mr. Warren are larger, browner, and with the outer margin more prominent centrally, but perhaps not more than a race of the same species. Walker described *Pyralis thiastoralis* from Brazil.¹ Hampson gives it a

¹ Cat. Brit. Mus., Lep. Het., vol. 19, 1859, p. 893.

very wide range, including the Neotropical region and Malayan subregion.¹ Specimens from Costa Rica collected by Mr. Schaus are all very much larger, but with the wing-shape of the Panama specimen.

RHODONEURA PAULLULA Pagenstecher.

1. Tabernilla, Canal Zone, May, 1907 (Busck).

RHODONEURA MESCEMEMNA, new species.

Fore wing pointed at apex, a projection below middle of outer margin; hind wing with strong emargination below tip. Lilaceous with coarse black strigose dots in lines; apex minutely white with black dot; a square red discal mark with black dots at the corners; a broad outer red band, widening on costal half; terminal area reddish shaded; a dark subterminal line with blackish shade across it at the projection of the margin. Hind wing with the inner third shaded with black and red, cut across before middle by a reddish band, which runs sharply to margin below the emargination as a white ray. Expanse, 19 mm.

Cotypes.—Two specimens, No. 16105, U.S.N.M.; selected from a series of seven; La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

RHODONEURA PAMMICRA, new species.

Bronzy brown, reticulated with dark brown; two lines forming an outer band widening on costa, one distinct and straight; a similar subterminal line. Hind wing with heavier lines broadly reticulating over fine strigæ, inclosing a pale elliptical patch touching costa and one on tornus. Expanse, 14 mm.

Type.—No. 16106, U.S.N.M.; Taboga Island, June, 1911 (Busck).

SICULODES POSTPONENS, new species.

Ground color whitish; terminal half of fore wing overlaid with smoky violaceous; numerous strigose transverse bands of blackish gray, the five inner ones broken, the four outer ones more continuous and curved; a red shade beyond end of cell with black patch below it; a white speck at apex, containing a black dot. Hind wing broadly washed with whitish on inner area, the apex violaceous gray; a mesial gray band, heavily stained with purple-black centrally, resembling a discal spot. Expanse, 23–27 mm.

Cotypes.—Two specimens, No. 16107, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck); La Chorrera, May, 1912 (Busck).

BRIXIA MOLECULA, new species.

Creamy white; head brown; fore wing with fine gray strigæ; a rounded gray patch at inner third centrally and a band at outer third, irregular, widening to costa; a red-brown band from costa before apex to vein 5, forked below; a short band a tornus. Hind wing with an inner gray narrow band; a broad mesial one, rounded off at

¹ Proc. Zool. Soc. Lond., 1887, p. 620.

vein 7 and narrowed at inner margin; a narrow uniform submarginal band stained with red-brown near the costa; fringes of both wings stained with red-brown. Expanse, 20 mm.

Type.—No. 16108, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

HERDONIA BRIXIFACIES, new species.

Fore wing olive grayish with darker gray bands and irrorations; subbasal mark on costa; inner curved band incised centrally; outer band a spot on costa and band below, shaded and outbent over discal venules; subterminal band broken centrally, its costal segment shaded with red-brown, furcate below against a longitudinal row of black dots. Hind wing creamy white with brown bands; an inner spot; mesial band straight, furcate toward costa, its lower limb black; submarginal band broken at its upper third, with a black dot inward from the dislocation. Expanse, 17–22 mm.

Cotypes.—Two specimens, No. 16109, U.S.N.M.; La Chorrera, May, 1912 (Busck).

Family PYRALIDÆ.

Subfamily PYRAUSTINÆ.

HOMOPHYSA INVISALIS Guenée.

5. Corozal, Canal Zone, March and April, 1911 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HOMOPHYSA CALLA Kaye.

3. Porto Bello, April, 1912 (Busck); Trinidad River, May, 1911, and June, 1912 (Busck).

HOMOPHYSA CYMALIS, new species.

Fore wing white; yellow linear shadings over base and apex; median space white; lines soft purplish, clouded, the inner broadly double, the outer excurved, denticulate below, followed by a broad shade to the subterminal; a white terminal patch at end of veins 2–3, in which black terminal dots are seen, obsolete above and below. Hind wing whitish, a little clouded outwardly, the peculiar terminal marking faintly reproduced. Expanse, 15 mm.

Type.—Female, No. 16114, U.S.N.M.; Trinidad River, June, 1912 (Busck). Two others with additional data, Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

Allied to *H. polycyma* Hampson.

HOMOPHYSA ORIOLA, new species.

Brownish straw-color over white, the white showing in patches, which are especially large in the median space; lines white, edged by the dark color; inner line with outward angle on discal and submedian folds; outer line roundly excurved on upper two-thirds, bent on submedian; a fine terminal black line, forming a dot subcostally and on submedian, preceded narrowly by white. Hind wing whitish costally, shaded with brownish outwardly; a white line with dark

inner edge, obsolete above and below; terminal line with black point on submedian. Expanse, 13 mm.

Type.—Female, No. 16113, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also 7 others with additional localities: Porto Bello, April, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Trinidad River, March and August, 1912 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

Near *H. sequistrialis* Hübner, the lines softer with edges concolorous with the wing-shades, the terminal line not uniform, etc.

HOMOPHYSA MORIBUNDALIS, new species.

Similar to *H. cymalis*, smaller, veins 10 and 11 of fore wing coincident. Base and termen shaded with olive yellow; inner line rigid, slightly curved; median space purplish, pale on the costa; a black shade on termen above the middle with a white patch below. Hind wing soiled whitish, with faint gray outer line. Expanse, 11 mm.

Type.—Female, No. 16214, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek). Also one female, Porto Bello, May, 1912 (Busck).

MASSEPHA LUPA Druce.

9. Trinidad River, March and June, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

NEUROPHYSETA MELLOGRAPTA, new species.

White; discal mark blackish, quadrate, notched above and below; a wood-brown longitudinal shade on costa and one below; subbasal line black-brown; inner line far out, dentate on subcostal and median; a stripe along costa almost to inner line; a wood-brown half band below; outer line nearly straight above, bent in at right angles at vein 2, then again bent to inner margin; terminal space nearly filled by a black-brown band, parallel to the outer line, notched outwardly by white at discal and submedian folds; a terminal black line; fringe white, patched with black at apex and middle of outer margin. Hind wing with a band near the base, then clear white; median space filled with black-brown, except for a white ray out from the discal dot, straightly limited inwardly, outwardly by the bent outer line, which resembles that of fore wing, but is less sharply bent; termen as on fore wing. Expanse, 15 mm.

Type.—Female, No. 16116, U.S.N.M.; Trinidad River, June, 1912 (Busck). Another specimen from Alhajuelo, April, 1911 (Busck).

Close to *Musotima narcissusalis* Walker, as identified by Mr. Schaus in a specimen from Aroa, Venezuela, which, if correct, proves that *narcissusalis* should be removed from *Musotima*.

PSEPHIS MINISTRALIS, new species.

Soft brown over whitish, the lines showing white, their dark edges scarcely contrasted; subbasal line straight, a little oblique; inner

line arcuate; outer line with a sharp central outcurve, almost angled; discal mark oblique, dark; a row of terminal black dots. Hind wing with single outer line, dark within, white without. Expanse, 10 mm.

Type.—Male, No. 16112, U.S.N.M.; Porto Bello, April, 1912 (Busck). Also 4 others with additional localities, Cabima, May, 1911 (Busck); Trinidad River, May, 1911 (Busck).

Allied to *P. myrmidonalis* Guenée, but the lines appear pale on a darker ground instead of the reverse.

LIPOCOSMA PARCIPUNCTALIS, new species.

Whitish; inner line far out, fulvous-gray, bent; outer line excurved above and angled outward on submedian; a brown shade at apex. Hind wing with a patch of dark scales representing the inner half of mesial band; a slender brown line curved over a patch of brown-gray on inner half of margin, containing four little black dots. Expanse, 11 mm.

Type.—Female, No. 16170, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck).

LIPOCOSMA PUNCTISSIMALIS, new species.

Fore wing with veins 4-5 stalked; heavily irrorate with black, leaving a triangular white patch at basal third of inner margin, extending up to cell; two black streaks on costa; a black discal mark; a heavy semicircular black and brown shade on costa outwardly, followed by the slender, curved outer line, which runs out near the margin, then in along vein 3 and is dentate on submedian; this is followed narrowly by black; tornus filled in with black; apex white with dotted terminal line. Hind wing with the margin twice incised; white at base and in the indentations of the outer line, else powdered with black; a black raised tuft below cell, followed by a dark area; a row of seven minute black dots with coppery scales on lower half of margin. Expanse, 10 mm.

Type.—Male, No. 16171, U.S.N.M.; Taboga Island, June, 1911 (Busck). Also four males and one female from the same place, February, 1912 (Busck).

Allied to *Ambia argyralis* Schaus (which is not an *Ambia*), but much smaller and more diversified in markings. Also differing in venation, having veins 4 and 5 of fore wing stalked, while they are apart in *argyralis*.

LIPOCOSMA TELIFERALIS, new species.

Similar to *L. punctissimalis* and with the same venation; fore wing whiter, the markings more open; a white area on costa; white triangle narrower and followed by fulvous brown. Hind wing without any conspicuous dark area below the cell-tuft which has long thick hairs nearly reaching the margin; incision of outer line sharp. Expanse, 10 mm.

Type.—Male, No. 16172, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also a female from Porto Bello, April, 1912 (Busck).

LIPOCOSMA CONSORTALIS, new species.

Fore wing creamy whitish at base with purple atoms, followed by a black half band on inner margin, then a broad brown band; median area purple filled, with an arc-shaped white discal line, running out along veins 4-5, slightly furcate at the end; a brown patch at costa; outer line excurved over cell, whitish, shaded with black in the curve and followed by a black patch; tornus brownish. Hind wing gray, whitish at base; some erect long black hairs on inner margin; outer line black, excurved, doubled on its inner half, followed by white below; margin faintly fulvous with an inner line; four minute black points with metallic coppery scales on inner half of the margin, which is excised at discal and submedian folds. Expanse, 13 mm.

Type.—Female, No. 16169, U.S.N.M.; Alhajuelo, April, 1911 (Busck). Also another female from the same place.

Very close to *Ambia metalophota* Hampson from Jamaica (which is not an *Ambia*), perhaps the same species, but the present form is darker in tone and rather widely separated geographically.

SUFETULA DIMINUTALIS Walker.

14. Tabogilla Island, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

SUFETULA HYPOCHIRALIS, new species.

Much like *S. diminutalis*, but whereas that has a broad outer dark border to the hind wing with erect outer line, this has a narrow border, the outer line oblique and joining the costa further out toward apex. The black shade across the disk on hind wing is linear. Expanse, 10 mm.

Type.—Female, No. 16117, U.S.N.M.; Trinidad River, May, 1911 (Busck).

SUFETULA HYPOCHAROPA, new species.

Similar to the preceding, but smaller; fore wing with a narrow but distinct pale orange-brown margin, lined on both sides with black, the terminal line being double and filled with this color, whereas it is single in *diminutalis* and *hypochiralis*. A patch of orange-brown at apex. Hind wing with narrow outer border, the discal shade broad and diffused, undifferentiated from the discal spot. Expanse, 9.5 mm.

Type.—Male, No. 16118, U.S.N.M.; Porto Bello, May 1912 (Busck). Also 15 others with additional localities, Paraiso, Canal Zone, January, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, April, 1912 (Busck), November, 1912 (C. P. Crafts); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

SCYBALISTA SEMIFERREALIS Hampson.

29. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek), August and November,

1912 (C. P. Crafts); Alhajuelo, April, 1911 (Busck); La Chorrera, April and May, 1912 (Busck); Paraiso, Canal Zone, May, 1911 (Busck).

SCYBALISTA POTENTIALIS, new species.

Fore wing white with dense longitudinal shades of ocher-brown; subbasal line oblique, faint, ocher-brown; inner line white with dark brown outer edge, oblique across cell, incurved to submedian, then oblique below; discal mark dark brown, lunate; outer line white, edged by dark brown within, excurved above, dentate at vein 3, a long inward tooth at vein 2, running in along 1, then parallel to inner line to margin; a row of uniform terminal dashes, preceded by white. Hind wing whitish along costa, ocher-brown shaded outwardly; outer line curved, white, brown within, obsolete at both ends; four central rounded black terminal dots, faintly duplicated within. Expanse, 14 mm.

Type.—Female, No. 16115, U.S.N.M.; Taboga Island, February, 1912 (Busck).

SYMPHYSA AMENALIS Walker.

1. Corozal, Canal Zone, July, 1912 (C. P. Crafts).

ZINCKENIA FASCIALIS Cramer.

4. Porto Bello, March, 1911 (Busck) Corozal, Canal Zone, July and November, 1912 (C. P. Crafts).

ZINCKENIA PERSPECTALIS Hübner.

14. Porto Bello, February, 1911, and April, 1912 (Busck); Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck); July, August, and November, 1912 (C. P. Crafts); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

DESMIA TAGES Cramer.

5. Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, June and August, 1912 (C. P. Crafts).

DESMIA BAJULALIS Guenée.

2. Trinidad River, March, 1912 (Busck).

DESMIA NOTALIS Felder.

3. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

DESMIA GEMINALIS Snellen.

2. Chiriqui, May, 1907 (W. Schaus); Cabima, May, 1911 (Busck).

The male antennæ are thickened on basal two-fifths, then bent, with minute tuft only. The specimen from Chiriqui is apparently the female.

DESMIA TETRATOCERA, new species.

Thickened basal part of antenna not over the basal fourth, then a tuft and curved region. Markings such as in *geminalis*, but the hind

wing washed with white on costa to below vein 6; fringe blackish outwardly, not white. Expanse, 27 mm.

Type.—Male, No. 16124, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck).

DESMIA PARASTIGMA, new species.

Male antennæ unmodified, with bristles and cilia. Black; abdomen with posterior segmental white lines, anal segment white-lined. Fore wing with two white-hyaline spots, the inner oblique, notched on median vein, followed by a band below, defined only by a little whitish shade beyond; outer spot from vein 4 to the subcostal, narrower above. Hind wing with costa washed with sordid whitish to below vein 6; a little white dash across cell; a long white streak from subcostal to near tornus, widened a little at veins 3–5, tapering below; fringes pale with fuscous interline. Expanse, 29 mm.

Type.—Male, No. 16121, U.S.N.M.; Cabima, May, 1911 (Busck). Also a male from Guapiles, Costa Rica (W. Schaus).

DESMIA PHAIORRHŒA, new species.

Black; fore wing with two oval white spots as in *funeralis* Guenée. Hind wing with an inner spot below cell running nearly to inner margin and duplicated without by a narrow white line; outer spot beyond cell, from subcostal to vein 3, rounded; a long double brown anal tuft in the male; antennæ unmodified. Expanse, 25 mm.

Type.—Male, No. 16122, U.S.N.M.; Porto Bello, May, 1912 (Busck).

DESMIA ACLISTALIS, new species.

Black, replaced by bronzy brown, the black remaining only around the spots and at base of fringe; spots with wavy outline, the inner from the subcostal to vein 1, followed by a white speck below; the outer from the subcostal to vein 3, narrow above. Hind wing with a very wide spot, covering half of the wing in the center, crenulate without; fringe whitish outwardly. Expanse, 16 mm.

Type.—Male, No. 16123, U.S.N.M.; La Chorrera, April, 1912 (Busck).

EURRHYPARODES SPLENDENS Druce.

10. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, July and August, 1912 (C. P. Crafts).

EURRHYPARODES LYDANUS Druce.

15. Taboga Island, February, 1912 (Busck); Tabogilla Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July and August, 1912 (C. P. Crafts); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

EURRHYPARODES SCULDUS, new species.

Thorax and fore wing dark brown, lustrous, a little purplish; inner line straight, dark, unrelieved and obscure; outer line outbent at veins 3–5 with two teeth, relieved by narrow straw-colored patches

before the teeth and following most of the line outwardly; fringe dark, with pale luster in oblique light. Hind wing with the base pale whitish, tinted with straw-color; a black dot in cell; outer area purplish brown; mesial line detached from the dark area above, broken, showing two dots beyond the cell as remains of teeth. Expanse, 12 mm.

Cotypes.—Five specimens, No. 16125, U.S.N.M.; Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

ENTREPHIA LEVINIA Cramer.

4. Trinidad River, March and June, 1912 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

PAGYDA TRADUCALIS Zeller.

6. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck).

La Chorrera, May, 1912 (Busck).

ERCTA ORNATALIS Duponchel.

1. Porto Bello, March, 1911 (Busck).

ERCTA VITTATA Fabricius.

9. Taboga Island, February, 1912 (Busck); Porto Bello, March, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), August, 1912 (C. P. Crafts).

LEUCOCHROMA COROPE Cramer.

13. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); July, 1912 (J. Zetek, C. P. Crafts); August, 1912 (C. P. Crafts); Cabima, May, 1911 (Busck).

LEUCOCHROMA COLUMBIENSIS Hampson.

3. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck).

LEUCOCHROMA EUPHTHINYLLA, new species.

White; markings ocher-brown, arranged as in *bicoloralis* Dyar; color of the markings browner, less orange; a gray-brown point on margin below apex and stain on costa at inception of outer line; markings closely as in *bicoloralis*, rather fuller, the white areas more restricted, showing especially in the submarginal patch, which is large, well filled out close to margin. Expanse, 19 mm.

Type.—Male, No. 16126, U.S.N.M.; from a series of 20, Taboga Island, February, 1912 (Busck). Other localities are Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, June, 1912 (Busck).

In this and the following species the fore wings have the outer margin a little more oblique and the apex more pointed than usual in *Leucochroma*. The palpi have the tuft in front of the third joint square rather than triangular. They agree with *L. bicoloralis* Dyar.¹

¹ *Ischnurges bicoloralis* Dyar, Zoologica, vol. 1, 1910, p. 134.

Possibly these should form a new genus, but as they do not differ markedly from *Leucochroma*, and are led up to in markings by other species,¹ I leave them in this genus. They can not be placed in *Ischnurges*, in which genus I originally described *bicoloralis*.

LEUCOCHROMA EUPHARAMACIS, new species.

Close to *bicoloralis* Dyar, the colors the same, the markings fuller throughout, the white spaces reduced. Trace only of the brown specks below the apex and at inception of the outer line; basal markings of fore wing confluent, marginal marks continuous. Expanse, 17 mm.

Type.—Female, No. 16128 U.S.N.M., selected from a series of 17, Trinidad River, March, 1912 (Busck). Other localities are Corozal, Canal Zone, June, 1912 (Busck), July, 1912 (C. P. Crafts).

Very close to *bicoloralis* Dyar, possibly a race of it.

MARASMIA COCHRUSALIS Walker.

40. Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, March, 1911, and May, 1912 (Busck), July, 1912 (J. Zetek, C. P. Crafts); La Chorrera, April, 1912 (Busck); Trinidad River, June, 1912 (Busck).

SYNGAMIA ABNORMALIS Snellen.

9. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

The specimens agree with a female from Costa Rica labeled by Mr. Schaus. In the male, there is a slight swelling on the costa between end of first line and discal dot.

SYNGAMIA SCIAGRAPHALIS, new species.

Differs from *abnormalis* (Snellen) Schaus in being tinged with ocher, especially along inner margin, the costa of the male straight, without swelling; lines of hind wing not quite as coarse and rigid as in *abnormalis*, the whitish bordering shades less contrasting. Expanse, 15 mm.

Type.—Male, No. 16119, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also eight others, La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts), November, 1912 (C. P. Crafts).

¹ *Leucochroma meliusalis* Walker has the pattern of coloration of these forms, which is still more nearly approximated in—

LEUCOCHROMA ANALYTICA, new species.

Similar to *L. meliusalis*, with which it was confused in the collection, but with the blackish scales almost wholly removed. In *meliusalis* there are indistinct dark edgings to the stigmata and a dark terminal line, which breaks into three distant dots below apex, derived from the *corope* type. In *analytica*, all the marks are orange-yellow on a white ground, broadened, diffused, the terminal line also orange, except the three minute dark dots below apex. Terminal line on hind wing a little darker than the other markings, but not dark as in *meliusalis*. Expanse, 19 mm.

Cotypes.—Four specimens, No. 16127, U.S.N.M.; Trinidad, British West Indies (Schaus collection).

SYNGAMIA MELANOBATHRUM, new species.

A smaller species with straight costa in the male, resembling *S. cognatalis* (identified by Schaus); more uniformly straw-yellow, without the general dark shading of *cognatalis*, the lines of hind wing not so flexuous and irregular, though much less rigid than in *abnormalis* or *sciagraphalis*, but easily distinguished from all by a patch of long black scales at base of costa of hind wing of male on both surfaces of the wing. Expanse, 13 mm.

Type.—Male, No. 16120, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also 14 males and 9 females, Cabima, May, 1911 (Busck); Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts), November, 1912 (C. P. Crafts).

SYNGAMIA RUBRICINCTALIS Guenée.

3. Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck).

SYNGAMIA PEPITALIS Guenée.

1. Tabernilla, Canal Zone, May, 1907 (Busck).

SYNGAMIA FLORELLA Cramer.

22. Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts); Gatun, Canal Zone, August, 1909 (A. H. Jennings).

SYNGAMIA AQUATICALIS Guenée.

4. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July and November, 1912 (C. P. Crafts).

SYNGAMIA HÆMORRHOIDALIS Guenée.

2. Corozal, Canal Zone, July, 1912 (C. P. Crafts).

SYNGAMIA INFLAMMATALIS Hampson.

1. Trinidad River, March, 1912 (Busck).

SYNGAMIA FLABELLALIS Guenée.

5. Corozal Canal Zone, August and November, 1912 (C. P. Crafts).

SYNGAMIA TYTIUSALIS Walker.

1. Trinidad River, March 1912 (Busck).

SAMEA ECCLESIALIS Guenée.

71. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

SAMEA MICTALIS Hampson.

2. Paraiso, Canal Zone, February, 1911 (Busck).

SAMEA CHLORISTALIS Hampson.

28. Porto Bello, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts).

SAMEA MULTIPLICALIS Guenée.

71. Trinidad River, March 1912 (Busek); La Chorrera, April and May, 1911 (Busek); Cabima, May, 1911 (Busek); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

TRITHYRIS SCYLLALIS Walker.

3. Trinidad River, March, 1912 (Busek).

TRITHYRIS SUNIALIS Snellen.

4. Porto Bello, February and March, 1911 (Busek); Trinidad River, March, 1912 (Busek).

TRITHYRIS PRETIOSALIS Schaus.

1. Cabima, May, 1911 (Busek).

TRITHYRIS APICOLOR Druce.

2. La Chorrera, May, 1912 (Busek).

HILEITHIA DECOSTALIS Guenée.

1. Trinidad River, May, 1911 (Busek).

MARASMIA FLORIDALIS Fernald.

1. Taboga Island, February, 1912 (Busek).

BOCCHORIS APYGALIS Guenée.

11. Taboga Island, February, 1912 (Busek); Trinidad River, March and June, 1912 (Busek); Corozal, Canal Zone, March, 1911 (Busek), July, 1912 (J. Zetek, C. P. Crafts), November, 1912 (C. P. Crafts).

There appear to be six species among this material, but there are too few of a kind for satisfactory treatment. In the collection are three specimens labeled *apygalis*, two from Mexico (not alike), both females, and one from Costa Rica, a male, with prominence on basal joint of antenna, but it does not agree with either of the Mexican specimens. Two other species are before me from Costa Rica, but unnamed, one with prominence on basal joint of male antenna, the other without this structure. I name herewith all of the Panama forms, as I do not think that any of them are Guenée's *apygalis*, described from Colombia from a single female with the costal dots opened into rings. My *nacobora* is the only one showing this marking, and it does not appear to agree otherwise with *apygalis*.

No. 1. HOHAËLIS, new species.

Small, nearly white, the male without modification at base of antenna; costal dots of fore wing confused, at base reaching to subcostal vein; lines slender; ground color not much shaded with dark; space between outer and subterminal lines moderately wide, narrowly reaching costa but cut off from inner margin; discal dots of both wings with the centers nearly occluded. Expanse, 11 mm.

Cotypes.—Two males, No. 16129, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busek); Taboga Island, February, 1912 (Busek).

No. 2. SPARSALIS, new species.

Medium sized, faintly straw-yellow tinged; costal dots of fore wing small and sparse, on costa only, separated by twice their own diameters or more; lines moderate; ground color shaded with dark along the margins of both wings; space between outer and subterminal lines moderately wide, narrowly reaching costa and indistinctly so the inner margin; discal dot of fore wing of two lines joined by a bar, of hind wing solid. Expanse, 12 mm.

Type.—Female, No. 16130, U.S.N.M.; Trinidad River, March, 1912 (Busck).

No. 3. APPROPRIALIS, new species.

Medium sized, pale straw yellow; costal dots of fore wing numerous and rather dense, those near base reaching subcostal vein; lines moderate, distinct; ground color strongly shaded with brown along the margins of both wings, not elsewhere; space between outer and subterminal lines moderately wide, narrowly reaching the costa and indistinctly so the inner margin; discal dot of fore wing closed above and crossed by a central bar, of hind wing small, solid, forming part of the mesial line. Expanse, 13–14 mm.

Cotypes.—Two females, No. 16131, U.S.N.M.; Trinidad River, March, 1912 (Busck).

I associate with these the unidentified male from Costa Rica (Banana River, March, 1907, W. Schaus) without modification at the base of the antennæ.

No. 4. DIFFERENTIALIS, new species.

Medium sized; pale straw yellow; costal dots small, but rather numerous and dense; lines very fine and open, the marginal shade slight, giving a general pale, unshaded appearance; space between outer and subterminal lines wide, reaching costa and margin; orbicular annular, semidetached from the inner line; discal dot closed above and with central bar, of hind wing not quite occluded and detached from the inner line. Expanse, 13–14 mm.

Cotypes.—Four females, No. 16132, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts), November, 1912 (C. P. Crafts).

No. 5. DENSALIS, new species.

Small, pale straw yellow, shaded with ocher-brown beyond the discal mark; costal dots dense, regular, reaching subcosta, where there is a longitudinal shade; ground color slightly irrorated and with patches of dark brown shading at origins of discal venules of both wings, the marginal shading broken up into patches; space between outer and subterminal lines moderately wide, reaching costa; discal dot of fore wing lunate, annular, of hind wing solid. Expanse, 11 mm.

Type.—Female, No. 16133, U.S.N.M.; Taboga Island, February, 1912 (Busck).

No. 6. NACOBORA, new species.

Rather larger than the others and with broader, squarer wings; white, tinged with sordid creamy; costal dots small, sparse, the basal three distinctly annular; lines slender, blackish, the inner running within the orbicular instead of joining it above; reniform widely annular; marginal shade represented by a few dots only, the subterminal line faint and running close to the outer line above. Hind wing with discal dot narrowly annular; a dusky shade between the inner and outer lines; termen as on fore wing. Expanse, 14 mm.

Type.—Female, No. 16134, U.S.N.M.; Trinidad River, June, 1912 (Busck).

BOCCHORIS EDAPHODREPTA, new species.

Rather small, the wings narrow and acute at apex; antennæ of male without basal modification; white with irrorations and shades of pale creamy brown; thorax and base of fore wing heavily and densely dotted with black; lines slender, dark, the inner straight, upright, outer oblique, running in along vein 2 to a sinus, then to inner margin; discal mark solid; a faint subterminal brownish shade; two black dots on the costa subapically. Hind wing with solid discal dot, with black shade thence to inner margin; two outer lines joining near costa, roundedly and widely separated mesially, then close and parallel on inner third; a brown subterminal shade, especially toward apex. Expanse, 11.5 mm.

Type.—Male, No. 16135, U.S.N.M.; Porto Bello, May, 1911 (Busck).

BOCCHORIS INVIDIOSA, new species.

A larger species than the preceding, the wings rather narrow and square at tip; whitish, lightly tinted with straw color, the brown marginal shade dark and continuous on fore wing, paler and scattered on hind wing; lines slender, the outer finely denticulate, both on its outcurve below costa and before the retreat along vein 2; similar on hind wing, straight only from vein 2 to tornus; costal dots small, annular, well spaced, less than twice their own diameters apart; reniform open above and below, without cross-bar; on hind wing widely annular with a slightly curved line running to above tornus. Expanse, 18 mm.

Type.—Female, No. 16136, U.S.N.M.; Trinidad River, May, 1911 (Busck).

Nearest to Guenée's characterization of *apygalis* of any before me. The specimens in the collection allied to this (one species of two females from French Guiana, one species of three males and four females from Aroa, Venezuela) were all placed under *Hileithia decostalis* Guenée, on general appearance, evidently, as they differ in venation, while none bear identification labels. There are evidently a considerable number of allied species in this group, and *apygalis* can only be positively identified from Colombian material.

BOCCHORIS RHEHABALIS, new species.

Closely allied to *B. rhealis* Druce; smaller, whiter, the subterminal line on both wings straighter, not forming two arcs as in that species; the inner line of fore wing is very slender and faint whereas it is as distinct as the others in *rhealis*. Expanse, 13 mm.

Type.—Female, No. 16137, U.S.N.M.; Cabima, May, 1911 (Busck).

I have placed *rhealis* and *magnalis* Guenée in *Bocchoris* instead of *Nacoleia* as done by Hampson, because I think the front of the head might as properly be described "flat and oblique" as "rounded," it being of an ambiguous shape, and by so doing I associate these species with the others which they resemble in markings.

PILOCROCIS INFUSCALIS Guenée.

1. Tabernilla, Canal Zone, May, 1907 (Busck).

PILOCROCIS INGUINALIS Guenée.

1. La Chorrera, May, 1912 (Busck).

PILOCROCIS ANORMALIS Guenée.

5. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), August, 1912 (C. P. Crafts).

PILOCROCIS COLLUSTRALIS Mäschler.

1. Cabima, May, 1911 (Busck).

PILOCROCIS RAMENTALIS Lederer.

4. Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), November, 1912 (C. P. Crafts).

PILOCROCIS CYCLOSTIGMA, new species.

Palpi with the scaling moderate and separate on the joints, the third joint rather long, tufted in front, the tuft even, not triangular; scaling of first joint white, the others brown. Wings blackish brown; lines dark, the inner curved, rather oblique; reniform annular, orbicular a dot; outer line excurved over discal nervules, retracted by vein 2 to below reniform. Hind wing with mesial line resembling outer of fore wing but less retracted; discal mark only a trace. Expanse, 24 mm.

Type.—Female, No. 16144, U.S.N.M.; Trinidad River, June, 1912 (Busck).

PILOCROCIS RUNATALIS, new species.

Palpi broadly scaled, the scales of second joint projecting triangularly at tip; third joint minute with a little triangular tuft. Blackish brown, a little bronzy; lines dark, the inner obscure; outer line rather broad, incurved along vein 2; reniform solid, black, distinct. Hind wing with mesial line nearly regularly curved, but slightly, if at all disturbed at vein 2. Lower half of abdomen and legs white, the front tibiae dark at tips. Expanse, 20 mm.

Cotypes.—Two females, No. 16145, U.S.N.M.; Corozal, Canal Zone, May, 1912 (Busck), August, 1912 (C. P. Crafts).

PILOCROCIS MODESTALIS Schaus.

2. La Chorrera, May, 1912 (Busck).

PILOCROCIS CRYPTALIS Druce.

1. Trinidad River, March, 1912 (Busck).

PILOCROCIS TERMINALIS Dognin.

1. Alhajuelo, April, 1911 (Busck).

PILOCROCIS DECORA, new species.

Palpi shortly and closely scaled, the third joint distinct, its frontal tuft very short; first joint white below and a little white only on second. Fore wing of male without modification of costa. Lines as in *P. cora* Dyar, without any white edges; orbicular present, nearly as distinct as reniform. Wings broad, as in *cora*. Expanse, 30 mm.

Type.—Male, No. 16143, U.S.N.M.; Cabima, May, 1911 (Busck). Also a male from Guapiles, Costa Rica, November, 1907 (W. Schaus), and a female from Peru, the former labeled *infuscalis* Guenée, but differing in the palpi as well as the larger size.

PILOCROCIS CHLORISALIS Walker.

3. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), and November, 1912 (C. P. Crafts).

SPILOMELA FIMBRIAURALIS Guenée.

7. La Chorrera, May, 1912 (Busck); Trinidad River, March and June, 1912 (Busck); Corozal, Canal Zone, August, 1912 (C. P. Crafts).

SPILOMELA PÆONIALIS Druce.

1. Cabima, May, 1911 (Busck).

SPILOMELA PERSPICATA Fabricius.

13. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, March, 1911, and May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, April and May, 1912 (Busck); Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck).

SPILOMELA DISCORDENS, new species.

White, marked with brown as in *S. perspicata* Fabricius with the following differences: Two inner lines instead of three, the outer one obsoletely furcate on costa; outer line forming a regular zigzag, not divided by vein 2, its upper limb outwardly oblique; terminal brown space with a pale ray from tornus to near middle. Hind wing with submarginal line not fused to the middle one, but broken off. Expanse, 21 mm.

Cotypes.—Two males, two females, No. 16146, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek), November, 1912 (C. P. Crafts); Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck). Also a male and two females from the Guianas (W. Schaus).

MESOCONDYLA CONCORDALIS Hübner.

25. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February and March, 1911 (Busck); Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, May, 1912 (Busck).

MESOCONDYLA TARSIBARBALIS Hampson.

1. La Chorrera, May, 1912 (Busck).

CONCHYLODES SALAMISALIS Druce.

3. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CONCHYLODES PLATINALIS Guenée.

6. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

CONCHYLODES OVULALIS Guenée.

20. Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts), November, 1912 (C. P. Crafts); Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

PHRYGANODES VARIALIS Walker.

5. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, June, 1912 (Busck).

PHRYGANODES ALBIRENALIS Hampson.

2. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck).

PHRYGANODES MILVALIS Druce.

1. Trinidad River, June, 1912 (Busck).

PHRYGANODES INSOLUTALIS Möschler.

2. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, June, 1912 (Busck).

PHRYGANODES HUMERALIS Guenée.

3. Trinidad River, March, 1912 (Busck).

PHRYGANODES PROLONGALIS Guenée.

9. Paraiso, Canal Zone, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

PHRYGANODES ORIGINALIS Lederer.

2. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1911 (Busck).

PHRYGANODES SIMIALIS Guenée.

2. Corozal, Canal Zone, June, 1912 (C. P. Crafts), July, 1912 (J. Zetek).

PHRYGANODES MARTYRALIS Lederer.

1. Trinidad River, March, 1912 (Busck).

PHRYGANODES CLEMENTALIS Schaus.

1. Cabima, May, 1911 (Busck).

DICHOGAMA SMITHII Möschler.

1. Taboga Island, February, 1912 (Busck).

DICHOGAMA BERGII Möschler.

2. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck).

NACOLEIA ACUTANGULALIS Snellen.

3. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

NACOLEIA CRAFTSIALIS, new species.

Pattern and color of *N. acutangulalis*, but differs in detail: Inner line straighter, nearer the base; orbicular round, detached from costa; reniform attached to outer line below, closed at both ends; outer line upright above, flexuous, not arcuate; submarginal incurved at subcostal and submedian; no subapical dot. Hind wing with the lower segments of the lines arcuate, not looped, no yellow filling; outer line incised subcostally. Expanse, 12–14 mm.

Cotypes.—Three specimens, No. 16138, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

Near *Nacoleia (Bocchoris) minima* von Hedemann from Jamaica.

NACOLEIA MARGINALIS, new species.

Pattern of *craftsialis*, but the lines and margin suffused with ocher gray, leaving the ground color as white patches; subterminal line of both wings further from the margin than in *craftsialis*, forming a broad ocher-gray border, reaching almost to termen. Expanse, 14 mm.

Type.—Male, No. 16139, U.S.N.M.; Corozal, Canal Zone, July, 1912 (J. Zetek).

NACOLEIA CANACEALIS Walker.

3. Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck); Trinidad River, June, 1912 (Busck).

NACOLEIA LUNULALIS Hübner.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

NACOLEIA DORISALIS Walker.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

NACOLEIA BRUNNESESCENS, new species.

More distinctly brown than *lunulalis* or *dorisalis* Walker. Lines the same, but the outer line white only at costa; no white line before the marginal line. Expanse, 28 mm.

Type.—Female, No. 16140, U.S.N.M.; Trinidad River, June, 1912 (Busck).

Judging by males from Costa Rica, which, though labeled *dorisalis* Walker, are apparently this species, the male has the anal angle of hind wing abbreviated and hairy, the hind tibiæ curved, with a projecting point of scales at tip; ventral valve at base of abdomen with tuft of hairs at tip.

NACOLEIA NANNALIS, new species.

Blackish; fore wing more brownish centrally; lines slender, white, the inner curved; outer line broader on costa, a little outcurved

beyond cell, oblique below; discal mark narrow, oblique, white; a dotted white line before the double black marginal line. Hind wing with the inner line curved, white, at about the inner third, followed distantly by a bluish duplicating shade; subterminal white line more continuous than on fore wing; fringes whitish. Expanse, 14 mm.

Type.—Female, No. 16141, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another, apparently the same, but worn, Corozal, Canal Zone, March, 1911 (Busck).

No male is at hand. The species may be recognized by its very small size and the unusually basal position of the line on hind wing.

NACOLEIA INDICATA Fabricius.

14. Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), August and November, 1912 (C. P. Crafts).

NACOLEIA XANTHODYSANA, new species.

Fore wing reddish brown, the lines as in *indicata* Fabricius, but faint, the outer denticulate. Hind wing fuscous shaded, the lines faint. Outer margin of fore wing straight from apex to vein 3, then roundedly prominent; fringe yellow, blackish at the prominence; a faint double terminal line. Hind wing with the fringe yellow, interlined with brown, interrupted at submedian fold. Expanse, 19 mm.

Type.—Female, No. 16142, U.S.N.M.; Trinidad River, June, 1912 (Busck).

Mr. Schaus sent two females from Costa Rica labeled "*N. indicata* Fab. ♀", but I have numerous females of that species agreeing entirely with the males.

NACOLEIA PERSINUALIS Walker.

1. Corozal, Canal Zone, August, 1912 (C. P. Crafts).

NACOLEIA STYGIALIS Hampson.

4. Taboga Island, February, 1912 (Busck) La Chorrera, May, 1912 (Busck).

NACOLEIA PELEALIS Walker.

4. Taboga Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck).

NACOLEIA XANTHIALIS Guenée.

3. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, August, 1912 (C. P. Crafts).

NACOLEIA VERITALIS, new species.

White, with slight bronzy brown tint; lines slender, blackish, the inner gently curved; outer line wavy from costa tornus, then recurved to below reniform and again to inner margin; orbicular and reniform annular. Hind wing with median segment of outer line projected, touching the margin beyond tornus; a terminal row of close dots on both wings. Expanse, 15 mm.

Cotypes.—Two specimens, selected from a series of 11, No. 16149, U.S.N.M.; Trinidad River, March, 1912 (Busck); Alhajuelo, April,

1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Allied to *N. lacertalis* Guenée, *L. colubralis* Guenée and *L. batrachialis* Guenée, in markings, but those three species are properly referable to the genus *Stenia* in the Nymphulinae, whereas the present species as a true *Nacoleia*.

NACOLEIA STENIALIS Guenée.

40. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, April, 1912 (Busck); Trinidad River, May, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July and August, 1912 (C. P. Crafts).

NACOLEIA SCHISTESEMALIS Hampson.

7. Porto Bello, March, 1911, and May, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck); Cabima, May, 1911 (Busck).

DICHOCROCIS SABATALIS Druce.

3. Cabima, May, 1911 (Busck).

SYLEPTA GORDIALIS Guenée.

4. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, March, 1912 (Busck).

SYLEPTA DIOPTALIS Walker.

1. Trinidad River, March, 1912 (Busck).

SYLEPTA STRIGICINCTA Hampson.

6. Cabima, May, 1911 (Busck).

One specimen is a male and has the brown border broader than in the females.

SYLEPTA AMANDO Cramer.

2. Alhajuco, April, 1911 (Busck); Cabima, May, 1911 (Busck).

SYLEPTA ELEVATA Fabricius.

7. Alhajuco, April, 1911 (Busck); Porto Bello, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, March and June, 1912 (Busck).

SYLEPTA SILICALIS Guenée.

5. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, August and November, 1912 (C. P. Crafts).

This species occurs also in the United States, and had been recorded under the (erroneous) name *S. fluctuosalis* Lederer.¹ The larvæ have been found on nettle in Florida.

SYLEPTA IMBROGLIALIS, new specie

Straw-yellow, suffused with brown; costa brown-shaded, as also margins of both wings; lines single, moderate, the inner curved, the outer denticulate, concave or nearly straight above, exerted over

¹ Bull. 52, U.S.N.M., No. 4308.1, 1903.

veins 2-5, running in along vein 2 faintly, forming a sinus, and below it a tooth on submedian; orbicular punctiform, reniform lunate. Hind wing with a spot at end of cell; mesial line similar to the outer of fore wing. Expanse, 24-26 mm.

Cotypes.—Three females, No. 16150, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck). Also 13 specimens from French and Dutch Guianas and three from Aroa, Venezuela (Schaus collection). One of the latter is labeled "*?Pachyzancla ægrotalis* Zell. ♀" by Sir G. F. Hampson, but the palpi do not seem to me to agree with those of *Pachyzancla*. The specimen examined by Sir George has the palpi broken, but anyway the specimen is very much too large for the female of *ægrotalis*, of which I have many of the same size as males. The present species is near *S. silicalis* Guenée, but the markings darker and more clearly written, the costa also dark.

SYLEPTA LATICALIS Lederer.

1. La Chorrera, May, 1912 (Busck).

SYLEPTA CALANTICALIS Druce.

2. Taoga Island, February, 1912 (Busck); Alhajuelo, April 1911 (Busck).

SYLEPTA EXCELSALIS Schaus.

1. Trinidad River, March, 1912 (Busck).

PILETOSOMA NOVALIS Walker.

2. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

Two entirely different insects have been under this name in the collection, one from Ecuador, identified by Schaus, the other from French Guiana, identified by Hampson. The Panama specimens agree with the one from French Guiana, and I have accordingly accepted Hampson's identification of the species.

PILETOSOMA THIALIS, new species.

A little larger and broader-winged than *novalis*, the male antennæ with a thickening bearing short hairs near the middle, the anal tuft very small and brush-like, inconspicuous; outer margin of fore wing quite straight, with a small notch at end of submedian fold. Color as in *novalis* and equally without markings, the darker patch at anal angle of hind wing somewhat larger and a little less contrasted. Expanse, 32 mm.

Type.—Male, No. 16147, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck).

PILETOSOMA ARGOPONALIS, new species.

Wings broad, the outer margin rounded below, without notch; male antennæ minutely ciliate, unmodified; anal tuft large and rather long, but nothing like the enormous development of this structure in *novalis*. Brown-black with slight bronzy reflection;

lines showing only in traces; reniform small, annular; inner and outer lines faintly pale, the outer looped under reniform, thence oblique and irregular to inner margin. Expanse, 27 mm.

Cotypes.—Male and female, No. 16148, U.S.N.M.; Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

The lateral tufts at the base of the abdomen are very slight in this species, but I think enough to admit it to the genus.

LYGROPIA FUSCICOSTALIS Hampson.

5. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

LYGROPIA LELEX Cramer.

9. Paraiso, Canal Zone, January and February, 1911 (Busck); Trinidad River, March and June, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Porto Bello, April, 1911 (Busck).

LYGROPIA UNICOLORALIS Guenée.

2. Trinidad River, March, 1912 (Busck); Porto Bello, June, 1912 (Busck).

LYGROPIA OBRINUSALIS Walker.

1. Corozal, Canal Zone, November, 1912 (C. P. Crafts).

LYGROPIA ALITEMERALIS, new species.

Fore wing pointed at apex; yellow; a double marginal line, the inner segment dotted on fore wing; fringe brownish; a dot on costa and inner margin near base; inner line straight, forming a dot on costa; reniform annular; outer line wavy above, bent in along interspace 2-3, slightly wavy again to inner margin. Hind wing with a similar line. Palpi with black rings at the ends of the first and second joints, the latter broadly broken on the outer side. Fore tarsi white, a black band at apex of tibia and first tarsal, tip of third and all of fourth black. Expanse, 21 mm.

Type.—No. 16155, U.S.N.M., selected from a series of 6, Cabima, May, 1911 (Busck). Also one male, Geldersland, Surinam River, Dutch Guiana, labeled *cernalis* Guenée.

Allied to *cernalis* Guenée and *bipunctalis* Hampson; differing from both in the coloration of palpi, from the former also in wing shape and from the latter also in size and annular reniform.

LYGROPIA CHROMALIS Guenée.

2. Trinidad River, March, 1912 (Busck).

LYGROPIA LEIALIS Dognin.

3. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

LYGROPIA COSMIA, new species.

Bronzy brown-black; fore wing with a costal yellow half-bar on outer fourth; a double spot in cell, conjoined below and touching an oblique broad half-band near base of inner margin. Hind wing

yellow at base, the edge of the color cleft by a small discal mark fused to the outer dark area. Expanse, 15 mm.

Cotypes.—Two specimens, selected from a series of 17, No. 16151, U.S.N.M.; Porto Bello, March, 1912 (Busck).

Allied to *L. imparalis* Walker from Jamaica.¹

LYGROPIA ERYTHROBATHRUM, new species.

Bronzy brown-black, a little grayish; fore wing with white costal two-thirds bar on outer third and white one at inner third, not attaining costal edge; base stained with dark red on lower portion. Hind wing whitish at base, stained with dark red, the whitish area not quite including a discal mark of the ground color. Expanse, 15 mm.

Type.—No. 16152, U.S.N.M.; selected from a series of 28; Corozal, Canal Zone, April, 1911 (Busck). Other from Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); La Chorrera, April, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, June, 1912 (C. P. Crafts). One of the specimens taken by Mr. Crafts has the markings of both wings yellow at base instead of red.

LYGROPIA MURINALIS Schaus.

4. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July (J. Zetek) and August, 1912 (C. P. Crafts).

AGATHODES DESIGNALIS Guenée.

2. Porto Bello, March, 1911 (Busck).

GLYPHODES NITIDALIS Cramer.

1. Porto Bello, February, 1911 (Busck).

GLYPHODES LATILIMBALIS Guenée.

1. Paraiso, Canal Zone, February, 1911 (Busck).

As determined by Mr. Schaus from Costa Rican specimens (*latilimbalis* Guenée = *contactalis* Dognin), but not the *latilimbalis* of his Guiana collections, nor the *contactalis* labeled by Mr. Dognin. In the present form, the spot on fore wing is very much larger (*latilimbalis* is "assez petite") and has no oblique prolongation below (as in *contactalis*). The band on the hind wing also is much wider. This is evidently a race, if not a good species. The name *epime-tralis* is accordingly proposed.

¹ Two species before me from the Guianas are closely allied, and may be characterized here.

LYGROPIA GLAPHYRA, new species.

Bronzy brown-black; fore wing with a small yellow costal spot at outer third; a narrow band at basal third, not attaining costa, bent below cell at right angles toward base and joining some diffused yellow on inner margin. Hind wing narrowly yellow at base. Expanse, 12 mm.

Type.—No. 16153, U.S.N.M.; St. Laurent, Maroni River, French Guiana, September, 1904 (W. Schaus).

LYGROPIA DISARCHE, new species.

Fore wing bronzy brown; two erect yellowish white bars, one costal at outer third, the other at inner third, not attaining costa or inner margin. Hind wing whitish costally at base. Expanse, 13 mm.

Cotypes.—Two specimens, selected from seven, No. 16154, U.S.N.M.; Cayenne, French Guiana, June, 1904 (W. Schaus).

Type.—No. 16156, U.S.N.M. Besides the type, six are before me from Costa Rica (W. Schaus) and one from Coatepec, Mexico (R. Müller).

GLYPHODES ARGUTA Lederer.

9. Taboga Island, February, 1912 (Busck); Trinidad River, March and June, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts).

GLYPHODES PLUMBIDORSALIS Guenée.

1. Paraiso; Canal Zone, February, 1911 (Busck).

GLYPHODES LUCIDALIS Hübner.

3. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

GLYPHODES HYALINATA Linnæus.

3. Porto Bello, March, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

GLYPHODES INFIMALIS Guenée.

23. Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

Of the above, five are of a variation with the marginal band broader, that of fore wing more concave. The variation is gradual in the five specimens, and the size is the same. It approaches *modialis* Dyar, but the broadening of the bands is not so great, while the size is not increased.

GLYPHODES BUSCKI, new species.

Translucent yellow; fore wing with a broad costal band of bronzy brown, irregular on lower edge, with a dot at bases of veins 3-5; outer border broad, with sinus centrally. Hind wing with broad curved outer border narrowing to tornus. Thorax black-brown; abdomen pale ochre brown, anal scales black. Expanse, 25 mm.

Cotypes.—Two males, No. 16157, U.S.N.M.; Porto Bello, February, 1911 (Busck).

Near *nitidalis* Cramer, but the yellow of fore wing runs to the base.

GLYPHODES AMŒOSTALIS Guenée.

1. Taboga Island, February, 1912 (Busck).

GLYPHODES JAIRUSALIS Walker.

1. Porto Bello, April, 1911 (Busck).

GLYPHODES AUSONIA Cramer.

4. Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Taboga Island, June, 1911 (Busck).

GLYPHODES SIBILLALIS Walker.

2. Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

GLYPHODES CUMALIS Druce.

1. Trinidad River, March, 1912 (Busck).

CROCIDOPHORA ADORNATALIS Warren.

1. Porto Bello, April, 1912 (Busck).

CROCIDOPHORA ZINGHALIS Walker.

3. Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

CROCIDOLOMIA PALINDIALIS Guenée.

1. Porto Bello, March, 1911 (Busck).

LEUCINODES IMPERIALIS Guenée.

26. Porto Bello, February and March, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, March and June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

LEUCINODES ELEGANTALIS Guenée.

22. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Porto Bello, April and May, 1912 (Busck); Trinidad River, March and June, 1912 (Busck).

Varies greatly in size. Some of those before me expand but 11 mm. (normal size about 25 mm.) and the markings are more or less reduced or obliterated; but they can always be told from *imperialis* Guenée by the long third joint of the palpi.

Variety PROPHETICA, new variety.

In this form the black line beyond the dark basal area is straight and a little outwardly oblique instead of curved; the marginal mark is reduced to a gray shade with the black submarginal patch before it. Expanse, 17 mm.

Type.—No. 16158, U.S.N.M.; Trinidad River, June, 1912 (Busck).

An exactly similar specimen from Avangarez, Costa Rica, July, 1907 (W. Schaus) is labeled *imperialis*, but the third joint of the palpi is too long for that species.¹

MEGASTES GRANDALIS Guenée.

4. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

ANALYTA PUCILLA Druce.

5. Paraiso, Canal Zone, February, 1911 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1912 (Busck).

ANALYTA SEMANTRIS, new species.

Fore wing with an irregularly triangular yellow patch near middle of inner margin, the costa broadly blackish purple, the outer area suffused with red-brown; the costal edge is red-brown with three incisions, followed by a broad purple band formed of a basal stripe, the very large and full orbicular and reniform (which touch) and another stripe to apex; outer line black, slender, bordering the

¹ This type of markings is carried further in—

LEUCINODES DISSOLVENS, new species.

Inner line straight, very oblique, running to near middle of inner margin: marginal marking in the incision of outer margin brownish, not darker than the discal shading, preceded by a small black dash at veins 5-6. Expanse, 24 mm.

Type.—Female, No. 16159, U.S.N.M.; St. Jean, Maroni River, French Guiana, March, 1904 (W. Schaus); also four others, the smallest 14 mm. from French Guiana and one from Aroa, Venezuela (Schaus collection).

reniform and continued narrowly to inner margin along the edge of the yellow patch; no terminal marks. Hind wing white, yellow shaded at base, apex and over discal mark; outer line irregular, lightly excurved centrally, broken into cusps, the most distinct one on submedian fold. Expanse, 17 mm.

Cotypes.—Two females, No. 16160, U.S.N.M.; Trinidad River, March, 1912 (Busck). A male from St. Jean, Maroni River, French Guiana, April, 1904 (W. Schaus) is also before me.

OMMATOSPILA NARCÆUSALIS Walker.

2. Corozal, Canal Zone, July and November, 1912 (C. P. Crafts).

SAMEODES DILECTICOLOR Dyar.

2. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck).

The male has the costa yellow (= *Sameodes flavibaccata* Hampson¹); in the female it is black and the markings are broader (= *Pyrausta dilecticolor*² Dyar). Under the name *flavibaccata*, Mr. Schaus sent three distinct species from his Costa Rican collections. The bright yellow one I take to be the real *flavibaccata* and the name falls before the earlier *dilecticolor*. The reference to *Sameodes* instead of *Pyrausta* seems preferable. The two other species agree with specimens in the collection labeled *Bocchoris insipidalis* Lederer and *B. actealis* Walker, respectively. I therefore transfer these two names from *Bocchoris* to *Sameodes*, as the palpi of the species seem structurally identical with those of *flavibaccata*.

SAMEODES ACTEALIS Walker.

5. Porto Bello, February, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), August and November, 1912 (C. P. Crafts).

All females, small and blunt winged in comparison with males.

SAMEODES ZOPHYRALIS Lederer.

13. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Porto Bello, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, August, 1912 (C. P. Crafts).

MARUCA TESTULALIS Geyer.

108. Porto Bello, February and March, 1911 (Busck); Taboga Island, February, 1912 (Busck); Trinidad River, March and June, 1912 (Busck).

AZOCHIS GRIPUSALIS Walker.

7. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

POLYGRAMMODES BÆUSCALIS Dyar.

4. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

¹ Ann. Mag. Nat. Hist., (8), vol. 11, 1913, p. 329.

² Proc. U. S. Nat. Mus., vol. 42, 1912, p. 103.

POLYGRAMMODES OSTREALIS Guenée.

14. Porto Bello, April, 1912 (Busck); La Chorrera, April, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck).

POLYGRAMMODES HERCULES Felder.

5. Porto Bello, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

POLYGRAMMODES HIRTALIS Guenée.

3. Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

PACHYZANCLA PHÆOPTERALIS Guenée.

45. Porto Bello, March, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek), August and November, 1912 (C. P. Crafts); Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck).

PACHYZANCLA ÆGROTALIS Zeller.

6. Paraiso, Canal Zone, February, 1911 (Busck); Porto Bello, February, 1911 (Busck); Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

PACHYZANCLA BIPUNCTALIS Fabricius.

14. Porto Bello, February, 1912, and March, 1911 (Busck); Corozal, Canal Zone, June (C. P. Crafts), July (J. Zetek, C. P. Crafts), August and November, 1912 (C. P. Crafts).

PACHYZANCLA DISTINCTA Kaye.

3. Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, June and August, 1912 (C. P. Crafts).

PACHYZANCLA XANTHOMETA Hampson.

6. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

DIASEMIA RAMBURALIS Duponchel.

3. Corozal, Canal Zone, July, 1912 (J. Zetek), November, 1912 (C. P. Crafts).

LIOPASIA SIMPLICISSIMALIS, new species.

Fore wing carneous brown, irrorated with blackish; lines slender, blackish, the inner obliquely outcurved, the outer crenulate on its exerted medial portion; outer discal mark a powdery ringlet, inner similar, fainter, or absent. Hind wing whitish, tinged with carneous brown on margin, in the male with blackish hairs on inner margin to tornus. Expanse, 36 mm.

Cotypes.—Two specimens, selected from a series of nine, No. 16161, U.S.N.M.; Paraiso, Canal Zone, January and February, 1911 (Busck); also Porto Bello, May, 1911 (Busck); Carom, Trinidad, January, 1911, "Bucere worm moth" (F. W. Urich); Cayenne, French Guiana, February, 1904 (W. Schaus).

PHLYCTÆNODES BIFILALIS Hampson.

1. Corozal, Canal Zone, July, 1912 (J. Zetek).

PHLYCTÆNODES HELVIALIS Walker.

9. Taboga Island, June, 1911 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

Four males and five females. Subterminal line wanting; marginal shade widened at apex. Identified on the strength of a specimen from Jamaica, labeled by Mr. Schaus as compared at the British Museum, and of the accepted determination of North American specimens by Professor Fernald and others. The males are normal, the females very small, but seem correctly associated.

PHLYCTÆNODES AUTOCRATORALIS Dyar.

20. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, June (C. P. Crafts) and July, 1912 (J. Zetek, C. P. Crafts).

Nine males and eleven females. Subterminal line present, dentate, often confluent to marginal shade. Allied to the North American *manalis* Lederer, but the markings darker and more distinct, the subterminal line nearer the margin. Mr. Schaus labeled all his Costa Rican material *manalis*, including both this species and the preceding, but I am inclined to consider the forms as distinct.

PHLYCTÆNODES BIFIDALIS Fabricius.

4. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), November, 1912 (C. P. Crafts).

PAGYDA APONIANALIS Druce.

Pionea aponianalis DRUCE, Biol. Cent.-Amer., Lep. Het., 1889, vol. 2, p. 557.

3. Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

This falls in *Pagyda* Walker by Hampson's tables. One specimen is a male and shows long and greatly swollen mid tibæ, with a groove concealing a hair-pencil.

BÆOTARCHA EXOGRAMMALIS, new species.

Reddish brown, the discal area semihyaline, followed by an oblique whitish band from outer fourth of costa to tornus; stigmata large, dark, of the ground color. Hind wing semihyaline whitish, with narrow red-brown outer border. Expanse, 27 mm.

Type.—Female, No. 16162, U.S.N.M.; La Chorrera, April, 1912 (Busck).

Allied to *B. stigmatialis* Warren.

CONDYLORRHIZA VESTIGIALIS Guenée.

46. La Chorrera, May, 1912 (Busck); Porto Bello, February, 1911.

Eleven of the yellow form; the majority are gray.

NOORDA ESMERALDA Hampson.

1. La Chorrera, April, 1912 (Busck).

GONOPIONEA ASCHANALIS Druce.

4. Trinidad River, March and June, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

PIONEA BICOLORALIS Guenée.

2. Corozal, Canal Zone, July, 1912 (C. P. Crafts); La Chorrera, April, 1912 (Busck).

PIONEA SYLVIALIS Walker.

1. Cabima, May, 1911 (Busck).

PIONEA INCLUSALIS Walker.

1. Trinidad River, March, 1912 (Busck).

PIONEA EUPALUSALIS Walker.

13. Taboga Island, February, 1912 (Busck).

PIONEA TÆNIOALIS Guenée.

19. Paraiso, Canal Zone, February, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts); Cabima, May, 1911 (Busck); Trinidad River, August, 1912 (Busck).

PIONEA EXUVIALIS Guenée.

3. Paraiso, Canal Zone, February, 1911 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

PIONEA LAGUNALIS Schaus.

2. Trinidad River, March, 1912.

I do not detect any differences between this and a specimen in the collection labeled "*autoclesalis* Walk. = type, Oxf., *notaspis* Led."

PIONEA VINOTINCTALIS Hampson.

27. Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck); Taboga Island, January, 1911 (Busck); Corozal, Canal Zone, May, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts).

PIONEA BELIALIS Druce.

6. Alhajuelo, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

PIONEA EXPLICALIS, new species.

Straw-color, dusted with fuscous, forming a shade along margin of fore wing and covering all of hind wing but the costa; fringe doubly lined, appearing dark on both wings; costa narrowly dark; lines dark, the inner straight, slightly oblique; discal mark lunate; outer line denticulate, indented above vein 2 to below reniform, then coarsely wavy to inner margin. Hind wing with the outer line running out close to margin, then far inward along vein 2 and arcuate to inner margin. Expanse, 16-20 mm.

Cotypes.—Male and female, No. 16167, U.S.N.M.; Trinidad River, June, 1912 (Busck), male; Corozal, Canal Zone, April, 1911 (Busck), female. Also two females, one from the same place as the male type, the others Cabima, May, 1911 (Busck).

PIONEA STHENNYMALIS, new species.

Dull reddish, the fringe yellow; lines slender, obscure, the outer far out, incurved along vein 2; discal mark small. Hind wing broadly whitish at base, the margin dull reddish and fringe yellow; a small dash across submedian fold. Expanse, 12 mm.

Type.—Male, No. 16168, U.S.N.M.; Cabima, May, 1911 (Busck). Also two others from Corozal, Canal Zone, July and November (C. P. Crafts).

Allied to *P. vinotinctalis* Hampson and *P. decetialis* Druce, nearest the latter but smaller and with pale base to the hind wing.

PIONEA EPANTHISMA, new species.

Straw-color, finely and densely irrorated with brown; lines lost in the general irroration except the outer, which is dark, punctiform, and excurved centrally nearly to outer margin, followed by pale points of the ground color; in some specimens a trace of inner line shows; discal mark lunate, faint; a row of terminal dark dots. Hind wing whitish at base, terminally straw-color or pale fuscous with terminal dots as on fore wing. Expanse, 16 mm.

Type.—Female, No. 16166, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also 10 others from the same place and Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (J. Zetek).

PYRAUSTA MELLINALIS Hübner.

1. Paraiso, Canal Zone, February, 1911 (Busck).

PYRAUSTA INSIGNATALIS Guenée.

18. Paraiso, Canal Zone, February, 1911 (Busck); Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek, C. P. Crafts); Cabima, May, 1911 (Busck).

PYRAUSTA CATONALIS Walker.

6. La Chorrera, May, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck); November, 1912 (C. P. Crafts).

PYRAUSTA MOPSALIS Walker.

7. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, April, 1912 (Busck).

PYRAUSTA FLAVIDALIS Guenée.

1. La Chorrera, May, 1912 (Busck).

PYRAUSTA ALIALIS Guenée.

1. La Chorrera, May, 1912 (Busck). The identification is only provisional.

PYRAUSTA RHODOCHROIA, new species.

Fore wing dark rose-color, the lines fine, yellowish, denticulate; inner broken above median vein, outer broadly excurved above; a faint, dark, lunate discal mark; fringe fuscous; apex acute. Hind wing fuscous with a rose-colored patch on outer margin above submedian fold. Body fuscous, abdomen with white segmental rings. Expanse, 13 mm.

Type.—Female, No. 16163, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts). Also six others, same place and date.

PYRAUSTA LIOPASIALIS, new species.

Wings with the margins nearly parallel, apex and tornus rounded; bright straw-yellow, more or less suffused with brown-gray, sometimes completely; lines slender, brown, crenulate, the inner curved, the outer excurved centrally and approaching the outer margin; orbicular and reniform annular. In the pale forms the suffusion is reddish, in scattered patches; in darker ones the median space becomes solidly suffused; in the darkest ones the suffusion covers the whole wing uniformly, the lines being greatly obscured. Hind wing pale at base with brown or fuscous tip. Abdomen with a white dorsal patch at tip in the male only. Expanse, 27 mm.

Type.—Male, No. 16165, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also 11 others from the same place and date, except 2 which were taken June, 1912.

Very close to *P. rhodope* Hampson from Cuba, but much less red, of a clearer yellow ground, and generally larger.

PYRAUSTA PLOIMALIS, new species.

Whitish, creamy, more strongly tinged with brown along the margins; lines broad, blurred, with scattering of black scales over the wings and in patches especially at middle of outer margin and tornus of fore wing and apex of hind wing; a dot at base of costa and one in cell near base; inner line with a blunt tooth on median and vein 1; orbicular punctiform, reniform elliptical, solid; outer line excurved mesially, retracted to reniform, wavy to inner margin; terminal dots small. Hind wing with discal dot, outer line, and terminal dots as on fore wing. Expanse, 16 mm.

Type.—Male, No. 16164, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts). Also nine others from the same place, April, 1911 (Busck), and August, 1912 (C. P. Crafts).

TEGOSTOMA DINICHEALIS Walker.

3. Porto Bello, February, 1911, and April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

STENOPTYCHA PTEROPHORALIS Walker.

3. Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

LINEODES MONETALIS Dyar (=DIANALIS Hampson).

9. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), June, 1912 (C. P. Crafts), July, 1912 (J. Zetek, C. P. Crafts); Porto Bello, December, 1912 (G. F. Cleveland).

LINEODES VULNIFICA Dyar (=ENCYSTALIS Hampson).

13.¹ Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek, C. P. Crafts).

LINEODES MESODONTA Hampson.

1. Corozal, Canal Zone, July, 1912 (C. P. Crafts).

LINEODES FONTELLA Hampson.

4. Porto Bello, May, 1912 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

¹ Four of the specimens are typical *vulnifica*; nine seem referable to *tridentalis* Hampson, but I doubt if the two forms are specifically distinct.

Subfamily NYMPHULINÆ.

DIATHRAUSTA NERINALIS Walker, form ANGUSTELLA Dyar.

13. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, March, 1912 (Busck); Corozal, Canal Zone, March and April, 1911 (Busck), July, 1912 (C. P. Crafts, J. Zetek); Cabima, May, 1911 (Busck); Trinidad River, May, 1911 (Busck).

PILEOCERA BUFALIS Guenée.

125. Porto Bello, February, 1912 (Busck); Taboga Island, February, 1912 (Busck); La Chorrera, April, 1912, and May, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck), July, 1912 (C. P. Crafts, J. Zetek), and November, 1912 (C. P. Crafts); Trinidad River, June, 1912 (Busck).

PILEOCERA SIMPLICIALIS Barnes and McDunnough.

15. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, April, 1911, and May, 1912 (Busck), June, 1912 (C. P. Crafts); La Chorrera, April, 1912 (Busck); Porto Bello, July, 1912 (Busck).

Smaller, darker, and narrower winged than *bufalis*, the male without fovea in the cell. One specimen from Costa Rica has been labeled *Stenia gelliasalis* by Mr. Schaus, but not correctly, I think.

PILEOCERA STERCORALIS Möschler.

33. Paraiso, Canal Zone, February, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July and November, 1912 (C. P. Crafts); Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck); Trinidad River, June, 1912 (Busck).

More or less ocher shaded, the wings more sharply pointed at apex than in *bufalis* Guenée. This name is given as a synonym of *bufalis* by Hampson, but I believe that two species are clearly indicated.

STENIA COSTALIS Hampson.

11. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

STENIA COLUBRALIS Guenée.

1. Cabima, May, 1911 (Busck).

STENIA PULVERALIS Druce.

2. Cabima, May, 1911 (Busck).

STENIA HYPHEROCHALIS, new species.

Similar to *pulveralis* Druce, but smaller, the apices of both wings with a large blackish patch. Lines of hind wing well divided, forming two across the wing without trace of cross-line. Expanse, 15 mm.

Type.—No. 16173, U.S.N.M., selected from a series of fifteen; Cabima, May, 1911 (Busck); La. Chorrera, May, 1912 (Busck); Trinidad River, March, 1912 (Busck).

STENIA DECLIVALIS, new species.

Similar to *S. gelliasalis* Walker, smaller, darker, the whitish outer line of hind wing distinct, sharply angled, touching the outer margin

in its outmost angle, not rounded, indistinct, not more or less withdrawn from the margin as it is in *gelliasalis* from Brazil. Expanse, 13 mm.

Type.—No. 16174, U.S.N.M., selected from a series of eleven specimens; Taboga Island, February, 1912, and June, 1911 (Busck); La Chorrera, May, 1912 (Busck); Aroa, Venezuela (Schaus collection).

A larger race of this species from Costa Rica has been identified as *gelliasalis* by Mr. Schaus, but the markings of hind wing and the color agree with *declivalis*. A form of this species occurs in the West Indies, for which I propose the name *indianalis*, in which the markings are very faint, hardly legible on either wing. The hind wings have a whitish tint toward base. Expanse, 13 mm.

Type.—No. 16175, U.S.N.M., selected from 20 specimens, Santiago de Cuba, Cuba, June, 1902 (W. Schaus); Jamaica (Schaus collection); Culebra Island, Porto Rico, February, 1899 (A. Busck); Grenada, British West Indies (Schaus collection).

STENIA ACUMINALIS, new species.

A rather large form, brownish black shaded, with a slight ochereous tint, which comes out strongly on the costa in rubbed specimens; lines whitish, black edged, essentially as in *gelliasalis*. Hind wing black, whitish only on the costa, the lines as in *declivalis*, but softened and somewhat less contrasted. Expanse, 14 mm.

Type.—No. 16176, U.S.N.M., selected from nine specimens, La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts, J. Zetek); Sixola River, Costa Rica, September (W. Schaus).

The Costa Rican specimen was labeled *gelliasalis* by Mr. Schaus, but it shows the characteristic pointed fore wing of this species.

STENIA ELECTALIS Walker.

1. Trinidad River, March, 1912 (Busck).

STENIA SAMEALIS, new species.

Brown; fore wing with whitish markings, a patch at basal third cut by the median vein, a discal bar, a white band forming spots between the veins from subcosta to vein 1, cut by the narrow outer line, which is wavy and bends inward along vein 2 to below the end of the cell. Hind wing whitish with brown outer border; a dark mark in the cell, yellowish spot at the end encircled with brown; outer line as on the fore wing, dislocated at vein 2; fringe pale with basal and central lines. Expanse, 20 mm.

Type.—Female, No. 16177, U.S.N.M.; Corozal, Canal Zone, August, 1912 (C. P. Crafts). Also 8 from the same place, July, 1912 (J. Zetek), August and November, 1912 (C. P. Crafts), and 12 from French Guiana, March, April, June, July, and August, 1904 (W. Schaus), of which one is a male, without modification of the antennæ.

NYMPHULA HERMEASALIS Walker.

118. Taboga Island, February, 1912 (Busck); Paraiso, Canal Zone, April, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Porto

Bello, April, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (J. Zetek); Cabima, May, 1911 (Busck); Trinidad River, May, 1911, and June, 1912 (Busck); La Chorrera, May, 1912 (Busck); Arajan, 1911 (Busck).

ARGYRACTIS HARPALIS Snellen.

13. Alhajuelo, March, 1912 (Busck); Trinidad River, March and June, 1912 (Busck); La Chorrera, May, 1912 (Busck).

ARGYRACTIS NECOMALIS, new species.

White; fore wing falcate, margin fulvous; a black dash at base of costa and inner margin and another dash on costa beyond (not a dot as in *harpalis*); a dull fulvous shade parallel to the oblique middle line, both toothed on subcosta; outer line strongly looped out in its upper third, the loop filled above and below with fulvous. Hind wing with markings as in *harpalis* with the addition of a large black blotch beyond the discal mark. Expanse, 10 mm.

Type.—Male, No. 16194, U.S.N.M.; Corozal, Canal Zone, August, 1912 (C. P. Crafts). Also four others, La Chorrera, May, 1912 (Busck); Porto Bello, April, 1912 (Busck); Alhajuelo, March, 1912 (Busck).

ARGYRACTIS TICONALIS, new species.

White; fore wing falcate, margin fulvous; a dot near base of costa; two on inner margin, the outermost the larger; inner line slender, irregular, blackish, nearly erect, with a faint inward duplication at costa; a blackish subapical triangle on costa with slender oblique line within it, narrowly joined to a large lunate mark before tornus. Hind wing (imperfect) with a black angled median half line and some black near the margin. Expanse, 10 mm.

Type.—Female, No. 16195, U.S.N.M.; Trinidad River, June, 1912 (Busck).

CATACLYSTA HAMIFERALIS Hampson.

18. Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, 1912 (C. P. Crafts); Porto Bello, March and April, 1911, and May, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

CATACLYSTA BIJONALIS, new species.

Discal dot of fore wing solid, black, followed by yellow; costa nearly continuously brown shaded; inner line oblique, preceded by yellow, followed by white, which cuts the costal shade; anal area filled by a curved yellow line, inclosing two patches of gray scales; outer and submarginal dashes wedge-shaped, converging below; margin yellow, edged by fine dark lines. Hind wing with three yellow bands, the terminal black dots in double row, alternating. Expanse, 9 mm.

Cotypes.—Two females, No. 16178, U.S.N.M., La Chorrera, April, 1912 (Busck).

CATACLYSTA ACLISTALIS, new species.

White, very little yellow, the marks slender and open; costa brown with expansions at base, opposite inner line and about discal mark; inner line curved, slender, obsolete; a curved median line arising from inner margin and directed below discal dash; the latter open, white, with two parallel dark lines; outer dash not joining submarginal dash, both directed toward tornus, where is a small yellow dash above a gray streak; termen yellow, preceded and followed by fine gray lines. Hind wing white; a broken bent brown line across middle; a pale yellow patch beyond cell; apex broadly pale yellow; terminal dots nearly fused, mixed with metallic violet scales. Expanse, 14–16 mm.

Cotypes.—Two females, No. 16179, U.S.N.M., Taboga Island, February, 1912 (Busck). Also one female, Alhajuelo, March, 1912 (Busck).

CATACLYSTA TRIUMPHALIS Schaus.

60. Taboga Island, February, 1912 (Busck); Trinidad River, March and June, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, April, 1912 (Busck); Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

The discal dot of fore wing is solid, brown, oblique.

CATACLYSTA AUSPICATALIS Schaus.

12. Porto Bello, February, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

Similar to *triumphalis*, but the discal dot of fore wing is pale, open, with a dark line on either side.

CATACLYSTA GLYCYSSALIS, new species.

White; a brown-gray patch at base of costa; an inwardly oblique dark inner band, rather distinctly duplicated by a slender line, not quite parallel; a blotch on costa, oblique, inclosing the narrow yellow discal bar, to a yellow patch on tornus; submarginal band yellow-filled below; termen yellow, preceded by a dark line. Hind wing with upright yellow bar across cell, followed by a gray line; a broad yellow discal area; terminal black dots in three groups of three each, mixed with metallic violet scales and broken apical arc. Expanse, 13 mm.

Cotypes.—Male and female, No. 16180, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also 11 others from the same place and date except one, Corozal, Canal Zone, April, 1911 (Busck).

Specimens of this species were determined as *C. opulentalis* Lederer by Mr. Schaus from Costa Rican material, and they do not disagree markedly with specimens from French Guiana labeled by Mr. Schaus "*opulentalis* Lederer; *divisalis* Walk., in B. M." but from a specimen marked "*opulentalis* Led.; *divisalis* Walk.=type" they do differ, as

that has the lower half of fore wing beyond outler line washed with yellow and a wide white space on hind wing before the terminal dots, which form but two groups.

CATACLYSTA CABIMALIS, new species.

Near *aclistalis*, the markings heavier and less open; yellow color deeper, that at anal angle of fore wing forming an arc. On hind wing the yellow is orange tinted and forms a large area touching the marginal dots. Expanse, 22 mm.

Type.—Female, No. 16181, U.S.N.M.; Cabima, May, 1911 (Busck).

CATACLYSTA COMPLICATALIS, new species.

Basal area of fore wing brown on costa, white below, with a yellow dash; inner line curved across wing, preceded by white; costa brown from thence to outer wedge-shaped mark; discal dot narrow, yellow, between two parallel dark lines; a sagittate dark mark above middle of inner margin; anal area yellow with a gray dash; subterminal wedge-shaped mark yellow-filled below; termen yellow, with dark lines bordering. Hind wing with a little gray near base of cell, slender median line, slight vacuolated yellow patch before the terminal black dots, which are fused, preceded by a broken black line and a distinct white space. Expanse, 15 mm.

Type.—Female, No. 16182, U.S.N.M.; Porto Bello, February, 1911 (Busck).

CATACLYSTA BRUNNEODORA, new species.

Similar to *C. triumphalis* Schaus, but heavily shaded with brown; base of hind wing brown, the outer white line of fore wing narrow. In the females the brown generally extends over most of fore wing; in males, a larger yellow area is left about anal angle. White space before the terminal spots of hind wing is wider than in *triumphalis*. Expanse, 13–19 mm.

Cotypes.—Male and female, No. 16183, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also 15 others with additional localities Trinidad River, June, 1912 (Busck); Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck).

CATACLYSTA ARGYROLEPTA, new species.

Similar to *C. peraltalis* Schaus, but the abdomen without the dark band at base and none or but a trace of dark color at base of hind wing. Brown costal area much reduced as compared with *peraltalis*, the wing largely overspread with deep yellow; discal mark oblique, white, between two parallel bars, the costa white, not dark beyond it. Hind wing largely deep yellow; two silvery white marks across the cell and near base of submedian; generally a small white space before the large, fused, terminal black spots. Expanse, 10–12 mm.

Cotypes.—Male and female, No. 16184, U.S.N.M.; Trinidad River, March and June, 1912 (Busck). Also 13 others from same place and

La Chorrera, May, 1912 (Busck); Porto Bello, March, 1911, and April, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts).

CATACLYSTA IOLEPTA, new species.

Fore wing with the basal area orange yellow, crossed by a straight subbasal line; a broad inner band, narrowing toward inner margin, cut by a white dash on costa; costa beyond gray, widening to a quadrate patch containing the pale, obscure discal dash; the rest of the wing orange yellow; an oblique outer white dash from costa, followed by a grayish triangle and a narrow white subterminal line, edged by fine dark lines; fringe gray; a metallic gray dash at tornus. Hind wing orange-yellow; two metallic violet dashes across cell; terminal spots large, condensed into three areas, each with a semicircular line within. Expanse, 14 mm.

Type.—Female, No. 16185, U.S.N.M.; Porto Bello, March, 1911 (Busck).

CATACLYSTA UNILINEALIS, new species.

Costa gray from base, apex white, crossed by a distinct dark gray oblique bar; inner area shaded with yellow; termen yellow; a gray dash at tornus. Hind wing irregularly yellow; terminal dots fused with a small space before them. Expanse, 7 mm.

Type.—Male, No. 16186, U.S.N.M.; La Chorrera, May, 1912 (Busck).

CATACLYSTA MIGNONALIS, new species.

Fore wing broadly shaded with dark gray, solidly from base along costa, incompletely cut by a whitish inner line and outer dash; discal mark narrow, pale, oblique; some white before the yellow anal area, which is partly bounded by a broken dark arc; a slender white dash before the yellow termen, all bounded by slender dark lines. Hind wing broadly blackish shaded at the base, then yellow, cut by a white line; terminal dots somewhat irregularly placed in two rows on a violaceous ground, a small white space before. Expanse, 13–18 mm.

Cotypes.—Male and female, No. 16187, U.S.N.M.; Chiriquicito, April, 1907 (W. Schaus). Also four from same place and Chiriqui, May, 1907 (W. Schaus). Mr. Schaus collected a series of this species in Costa Rica, but he labeled the specimens *jalapalis* Schaus. From *jalapalis* (= *orizabalis* Schaus) the present species differs conspicuously in a number of characters. *C. mignonalis*, rather, is allied to *C. amathystina* Schaus, but that has the dark basal areas vacuolated with white. *C. jalapalis* has no dark basal area on the hind wing.

CATACLYSTA SYMPHONALIS, new species.

Fore wing nearly solidly blackish at base, followed by a white line, then a slender blackish one bent on submedian; median space whitish below, solidly blackish powdered on costa; outer line zigzag, followed by two white oblique areas above and one below; between the two upper is the oblique dark discal dash, sometimes prolonged and bent; following area dark to the white erect subterminal line; ter-

men orange, separated by a slender line; fringe dark. Hind wing broadly blackish at base; then a white area traversed by a zigzag blackish line; apex black dotted with a concentric pale ring or loop; terminal black spots large, single, separated by metallic violet, without preceding white space. Expanse, 13 mm.

Cotypes.—Male and female, No. 16188, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also ten others from the same place and Paraiso, Canal Zone, June, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck).

Somewhat allied to *C. annulalis* Guenée.

CATACLYSTA MULTIPICTA, new species.

Similar to *symphonalis*, but with oval orange patches before tornus and in middle of submarginal costal wedge of fore wing and at anal angle of hind wing. Lines more oblique, the basal dark area cut by a pale line and blotched with orange. Hind wing with the looped line not inclosed among the subapical dots but preceding them. Expanse, 9–13 mm.

Cotypes.—Male and female, No. 16189, U.S.N.M.; Porto Bello, March, 1911 (Busck). Also six others from the same place.

CATACLYSTA AUTOBELLA, new species.

Fore wing with a dark patch at base, the median area finely lined and irrorated with black; apical area dull orange with two oblique convergent silvery half lines on costa; fringe dark; a leaden patch at tornus. Hind wing with numerous crooked black lines over the disk on a white ground; terminal black spots confluent, separated by violet and followed by little orange dots. Expanse, 12 mm.

Type.—Female, No. 16190, U.S.N.M.; Trinidad River, June, 1912 (Busck). Also 22 others from the same place and La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck).

Allied to *C. divulsalis* Walker.

CATACLYSTA VACUOLATA, new species.

Costa dark at base; inner line oblique, median zigzag, all confluent and dividing the base into five white areas and one orange one; apical half of wing orange, with two white convergent costal half lines; fringe dark; a leaden spot before tornus; hind wing with three straight black lines, one before, two beyond the orange, dark-edged discal spot; terminal dots small, uniform, followed by orange dots; an orange streak at tornus. Expanse, 10 mm.

Type.—Male, No. 16191, U.S.N.M.; Corozal, Canal Zone, June, 1912 (J. Zetek, No. 76). Also 26 others from the same catch and August and November, 1912 (C. P. Crafts); Cabima, May, 1911 (Busck).

CATACLISTA DIALITHA, new species.

Base of fore wing gray; inner band broad, white; median area gray powdered, with fine curved subcostal lines to discal dash, pale, between two parallel lines; subapical triangle dark, with a white

line on each side; termen orange. Hind wing narrowly dark at base, then white; a naked orange discal mark, followed shortly by another; apical area with coarse black dots; a broad white area before the irregular, fused, terminal spots. Expanse, 9 mm.

Type.—Male, No. 16192, U.S.N.M.; Paraiso, Canal Zone, January, 1911 (Busck).

CATACLYSTA ZELOTA, new species.

White; fore wing with subbasal, inner and mesial lines pale fulvous, becoming blackish on costa, angled subcostally; outer line crumpled, visible only below; subapical triangle fulvous, short, edged within by blackish geminate submarginal line, which is excurved below and in-angled on submedian fold, preceded there by orange; termen orange; fringe dark. Hind wing with a fulvous line across the disk, slight fulvous shading outwardly; terminal spots doubled and preceded by short arcs, separated by metallic scales. Expanse, 11 mm.

Type.—Female, No. 16193, U.S.N.M.; Trinidad River, June, 1912 (Busck).

PARAMBIA, new genus.

Palpi upturned, the third joint long and acuminate; maxillary palpi filiform, rather long; front rounded, not prominent. Fore wing with veins 8-11 stalked; hind wing with the margin excavated below apex and again very slightly before anal angle.

Type of the genus.—*Parambia gnomosynalis*, new species.

PARAMBIA GNOMOSYNALIS, new species.

Fore wing white at base; inner line blackish, faint, bounding the white area; median space irrorated with black, becoming fulvous on costa, but leaving a white area in the curve of outer line; discal mark black, clouded; outer line slender, black, denticulate, broadly excurved over cell; terminal space black-irrorate, with a patch near center of margin, dull fulvous at apex. Hind wing whitish at base; a black patch below cell, with a large hair-tuft; outer line black, slender, curved; terminal space black-filled, leaving a little pale line on each side; termen narrowly fulvous and blackish, between two slender black lines; fringe pale. Expanse, 13 mm.

Type.—Female, No. 16196, U.S.N.M.; Porto Bello, March, 1911 (Busck). Also seven females from the same place, April, 1912 (Busck); Taboga Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (C. P. Crafts). Males of the same, or a closely allied species from French Guiana, have the antennæ thickened to two-thirds their length, then suddenly narrowed and twisted.

PARAMBIA GLENEALIS, new species.

Close to *gnomosynalis*, but all the fore wing beyond the inner line shaded with fulvous brown; outer line and discal lunule black on the brown ground; a trace of white in the curve of outer line; ter-

minimal line black, strong. Hind wing with the shading brown, filling in beyond the cell as well as in terminal space. Expanse, 12 mm.

Type.—Female, No. 16197, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck). Also two females from Cayenne, French Guiana (W. Schaus).

AMBIA FOVECOSTA, new species.

Fulvous, blackish irrorate, marked with broad silvery white bands; subbasal and inner curved; a spot in cell with raised black dot on costal edge; discal dot black with a white streak beyond it; outer line curved around cell, dislocated, forming a cone in submedian space; subterminal line curved, forming an angle in submedian. Hind wing with the same markings as on fore wing, the inner lines wavy, the outer not broken but twice curved, the submarginal broken. Expanse, 10 mm.

Type.—Male, No. 16198, U.S.N.M.; Porto Bello, March, 1911 (Busck). Also one male, Trinidad River, March, 1912 (Busck).

AMBIA FULVALIS, new species.

Close to *fovecosta*, but clearer fulvous, the dark irrorations confined to the edges of the white bands; markings essentially the same, the subterminal area of hind wing broader, the white mark after the discal mark large. Expanse, 12 mm.

Type.—Male, No. 16199, U.S.N.M.; Trinidad River, March, 1912 (Busck).

AMBIA FUSCALIS, new species.

Near *fovecosta*, but without fulvous, all fuscous brown between the lines; lines narrow, about half as wide as in the allied species, with essentially the same arrangement; discal dots of both wings blackish, without following white dash. Expanse, 11 mm.

Type.—Female, No. 16200, U.S.N.M.; Porto Bello, February, 1911 (Busck).

AMBIA FULVITINCTALIS Hampson.

1. Trinidad River, March, 1912 (Busck).

Agrees with a specimen from Costa Rica labeled "*Ambia fulvitinctalis* Hps., fide Hps." by Mr. Schaus, but the specimen does not agree very closely with the description.

AMBIA FLAVALIS Warren.

1. La Chorrera, May, 1912 (Busck).

A female, agreeing fairly well with two males from French Guiana, which are apparently conspecific with a labeled specimen from southern Brazil.

AMBIA PAIGNIODESALIS, new species.

White, much irrorated with blackish; a black patch at base of inner margin; inner line white, far out, sharply and lengthily angled on subcosta and submedian; discal mark white, lunular, between two black bars; outer line black and oblique above, running to outer margin, where there is a black spot on the fringe, then indistinctly

and obliquely inward to its normal position; a row of terminal black dots; fringe grayish. Hind wing with a triangular black patch and tuft below the cell; outer line blackish, crenulate; terminal dots forming a spot on submedian and stain on the fringe at anal angle. Expanse, 11 mm.

Type.—Female, No. 17201, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another female with the same label.

Allied to a species from southern Brazil labeled *Ambia albibasalis* Hampson by Mr. Schaus.

AMBIA ENARERALIS, new species.

White, dusted with black, very broadly and solidly so in outer half of median space; inner line curved, blackish, slender, indistinct; outer line far out, limiting the dark area, excurved above, then inward at vein 2, slightly excurved again below; subterminal line similar, parallel, evenly dividing the white marginal area; termen a little fulvous, with dots before and line beyond. Hind wing with diffuse shading below cell and a raised black tuft; outer line looped up on submedian; seven minute black dots on the lower half of margin in a fulvous band. Expanse, 12 mm.

Type.—Female, No. 16202, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also one female, Cabima, May, 1911 (Busck).

AMBIA ENALLASSALIS, new species.

Close to *enareralis*, but without black shading in outer half of median space; outer line broad above; subterminal line close to and parallel with outer line, not evenly dividing terminal space, but leaving a rather wide white apex. Hind wing with a broader leaden gray area before the seven dots; third joint of palpi longer and sharper than in *enareralis*. Expanse, 11 mm.

Type.—Female, No. 16203, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts). Also one female, Porto Bello, April, 1912 (Busck).

AMBIA ENANTIALIS, new species.

Close to the two preceding species, but entirely without black shading, hardly irrorate; a blackish discal spot; outer and submarginal lines parallel, curved. Hind wing with only an angular patch of black irrorations in center of disk; outer line far out, slightly angled only on submedian fold; terminal seven dots gathered in three pairs and one single, with a narrow gray preceding area; discal tuft of but few long black hairs. Expanse, 11 mm.

Type.—Female, No. 16204, U.S.N.M.; Trinidad River, May 1911 (Busck).

The type has lost the head, left front wing, and part of right hind wing, but the distinctive characters are obvious.

OLIGOSTIGMA PROFUSALIS Schaus.

2. Trinidad River, June, 1912 (Busck); Chiriquicito, April, 1907 (W. Schaus).

OLIGOSTIGMA MOLLITALIS Schaus.

2. Chiriquicito, April, 1907 (W. Schaus).

OLIGOSTIGMA PURIFACTALIS, new species.

Near *mollitalis* Schaus; subbasal line forming two yellowish patches across the wing; inner line far out, partly blackish, erect, straight; discal mark faint, yellowish; outer line double, of two black parallel lines above, single in its incurve to discal mark and below. Hind wing similarly marked; one fulvous discal line, two parallel outer ones, black on their costal segments. Expanse, 11 mm.

Type.—Female, No. 16205, U.S.N.M.; Porto Bello, April, 1912 (Busck).

OLIGOSTIGMA SEMIMARGINALE, new species.

Black; discal dot a shade darker; outer line faint, whitish, curved from costa to discal spot; subterminal line white, curved, forming a small spot above tornus; termen blackish. Hind wing with the subterminal line followed by a narrow even orange border, containing the terminal dots and fading toward apex. Expanse, 12 mm.

Cotypes.—Two males, No. 16206, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts).

OLIGOSTIGMA TIGRINALE, new species.

Fulvous, powdery; lines white, slender, edged with purplish black scales; fore wing with the inner line curved, the outer making a sinus below cell; discal mark large, powdery, black and white; terminal line slender, like the others; fringe concolorous. Hind wing with the same lines, the outer without sinus, only flexuous. Expanse, 8 mm.

Type.—Female, No. 16207, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also one male, Corozal, Canal Zone, August, 1912 (C. P. Crafts).

OLIGOSTIGMA ELECTRALE, new species.

White; wings at basal third and thorax densely irrorated with dull purple; fore wing with the color extending up to cell, then an orange costal dash; beyond, three orange cuneiform dashes, one to apex, one to tornus, one between; small lines on costa representing the inner and outer lines. Hind wing with the whole base purple, crossed by two white lines; terminal area with six radiating orange streaks. Expanse, 11 mm.

Type.—Male, No. 16208, U.S.N.M.; Porto Bello, March, 1911 (Busck).

AULACODES ŒCHMIALIS Guenée.

2. Corozal, Canal Zone, April, 1911 (Busck); Paraiso, Canal Zone, May, 1911 (Busck).

AULACODES REVERSALIS, new species.

Black, with fine white lines; fore wing with the first line sharply angled, the second looped smoothly around it, third oblique, straight; costal triangle without white central wedge; subterminal band straight, short; terminal line slender. Hind wing with second and

third lines with paler area between, the first three lines nearly straight and parallel; subterminal and terminal lines approximate, slender. Expanse, 10 mm.

Type.—Male, No. 16209, U.S.N.M.; Porto Bello, June, 1912 (Busck). Also three others from the same place and Trinidad River, June, 1912 (Busck).

Allied to *A. delicata* Schaus.

AULACODES TRAVERSALIS, new species.

First line broken, forming two long, parallel, longitudinal dashes; second line following, sharply angled; third line oblique, with a costal wedge before it; costal triangle with central wedge; subterminal and terminal lines similar; all lines distinct. Hind wing with four straight and two curved lines. Expanse, 10 mm.

Type.—Male, No. 16210, U.S.N.M.; Trinidad River, May, 1911 (Busck). Also two others with the same data.

Allied to *A. citronalis* Druce.

AULACODES OBTUSALIS, new species.

First line obsolete; second and third oblique, parallel, bent a little near inner margin; costal loop round, U-shaped; subterminal line single, broad, spotted, the other lines all very slender. Hind wing with three slender equidistant lines and traces of the marginal spotted one. Expanse, 11 mm.

Type.—Male, No. 16211, U.S.N.M.; Porto Bello, April, 1912 (Busck). Allied to *A. psyllalis* Guenée.

HOMOPHYSODES, new genus.

Palpi upturned, fringed with scales in front, forming triangular tufts at the ends of first and second joints, third slender; maxillary palpi filiform, moderate; fronts rounded, not prominent. Hind wing evenly rounded. Antennæ with the shaft annulate.

Type of the genus.—*Homophysodes morbidalis*, new species.

This is only a *Homophysa* in which vein 10 of fore wing has become stalked with veins 8-9 instead of with 11; but the exigencies of our present classification require its removal to another subfamily and the erection of a new genus.

HOMOPHYSODES MORBIDALIS, new species.

Cream-colored; fore wing orange at base and apex and a blotch at end of cell; irrorated with purple over the rest of wing, intensified below apical spot and at tornus. Lines curved, crenulate, edged with blackish powderings, the outer excurved gently over cell. Hind wing pale along costa, powdered with blackish over the disk, with a faint paler outer line. Expanse, 10 mm.

Type.—Male, No. 16212, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also one male, two females from the same place and Corozal, Canal Zone, April, 1911 (Busck).

Much like *Homophysa cynalis* Dyar and *H. moribundalis* Dyar, previously described in this paper.

ESCANDIA, new genus.

Tongue distinct; palpi upturned, the second joint expanded with scales at summit; third joint long, slender. Maxillary palpi minute, scale-like. Fore wing with veins 7-10 on a stalk arising long before apex of cell; outer margin shallowly excavate. Hind wing pointed subapically, the margin excavate below and thence coarsely wavy.

Type of the genus.—*Escandia fimbrialis*, new species.

ESCANDIA FIMBRIALIS, new species.

Fore wing shaded with pink at the base, followed by olive gray, brown and pink shades to the margin, leaving the inner margin broadly yellowish and pale; costa before apex nearly white; no lines or spots, except a little black along inner margin. Hind wing heavily marbled with black, the fringe with black spatulate scales; a white mesial band, broken centrally, with a little yellow beyond and followed by deeper black; a pale crenulate faint subterminal line. Expanse, 15 mm.

Type.—Female, No. 16213, U.S.N.M.; Corozal, Canal Zone, July, 1912 (C. P. Crafts). Also one female, Trinidad River, June, 1912 (Busck).

Subfamily CHRYSAUGINÆ.

SACCOPLEURA CATOCALIS Ragonot.

2. La Chorrera, May, 1912 (Busck); Porto Bello, May, 1912 (Busck).

GEPHYRA COSTINOTATA Schaus.

11. Taboga Island, February, 1912 (Busck); Cabina, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Trinidad River, June 1912 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

GEPHYRA POMONIUS Druce.

6. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

As identified by Mr. Schaus in Costa Rican examples. It is conspecific with *Salobrena tecomæ* Riley.

SALOBRENA VACUANA Walker.

11. Porto Bello, April, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Cabina, May, 1911 (Busck); Trinidad River, May, 1911 (Busck).

SALOBRENA DICELA, new species.

Fore wing with veins 7-10 stalked; two incisions in the costa. Dark purple-brown; fore wing with two very faint darker slender lines. Hind wing gray-brown; beneath with a broad black half-band on costa, shaded inwardly, edged outwardly by a whitish line. Expanse, 12 mm.

Type.—Female, No. 16277, U.S.N.M.; Trinidad River, May, 1912 (Busck). Also five others, three from the same place, one May, 1911 (Busck), and one Corozal, Canal Zone, August, 1912 (C. P. Crafts). Also one male in poor condition, the fore wing apparently lighter purplish, the lines more contrasted, the hind wing deep black above.

A specimen from Aroa, Venezuela, is labeled "*Salobrena excisana* Walk. fide B. M.," but Hampson figures and describes vein 10 from the cell in that species.¹

EOBRENA, new genus.

General characters of *Salobrena* Walker, but veins 10 and 11 of fore wing stalked.

Type of the genus.—*Eobrena melopoalis*, new species.

EOBRENA MELOPOALIS, new species.

Fore wing of the male with a tympanic vesicle at base of costa, the costa lobed and excavate beyond at middle. Purplish brown, the costa and a broad band beyond basal vesicle more or less distinctly orange-ocher; a white mark at costal incision and dots beyond; a white patch in the fringe below apex and above tornus; center of wing darker shaded. Hind wing with traces of a pale outer line. Expanse, 12 mm.

Female with the costa with a slight emargination at the middle; apex pointed; purple-brown; no orange markings; a white dash at costal incision and dots beyond; wing faintly transversely shaded. Expanse, 14 mm.

Cotypes.—Male and female, No. 16276, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also 20 males and 31 females from the same place and Porto Bello, May, 1912 (Busck); Tabogilla Island, February, 1912 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Cabima, May, 1911 (Busck); Trinidad River, March and June, 1912 (Busck).

In the series the size varies for males from 9–13 mm.; for females, 10–14 mm. The males vary in color, the orange markings being more or less distinct, sometimes absent; the females are quite uniform in color.

TOSALE OVIPLAGALIS Walker.

46. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); Chiriquicito, April, 1907 (W. Schaus); Tabernilla, Canal Zone May, 1907 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

¹Proc. Zool. Soc. Lond., 1890, p. 649.

GEPHYRELLA, new genus.

Palpi porrect, straight, somewhat shaggy in the male, exceeding the head by its own length, smooth and gently downcurved in the female, rather longer than in the male; a long frontal tuft; costa convex beyond the middle; male with tympanic vesicle. Fore wing with veins 3, 4 from the cell, 4-5 stalked, distorted and appressed in the male; 6 from below the end of cell; 8 absent in the male, present in the female; 7-9 stalked, 10 and 11 on the cell; veins 7-11 distorted in the male. Hind wing with vein 2 from before the end of the cell, 4 absent, 3 and 5 from the drawn-out lower angle of the cell; 6 from the apex of cell; 7 anastomosing with 8.

Type of the genus.—*Gephyrella parsimonalis*, new species.

GEPHYRELLA PARSIMONALIS, new species.

Dark purple-brown, shining; fore wing with two very pale violaceous filiform lines, the inner curved, the outer wavily oblique; a minute white speck on costa in the emargination before apex; fringe touched with yellow. Hind wing black, the fringe touched with yellow; a short oblique obscure whitish streak before center of margin. Expanse, 8 mm.

Cotypes.—Male and female, No. 16273, U.S.N.M.; Alhajuelo, April, 1911 (Busck). Also 67 others from the same place and Corozal, Canal Zone, March, 1911, and May, 1912 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, February, 1912 (Busck); Taboga Island, February, 1912 (Busck); Paraiso, Canal Zone, January, 1911 (Busck).

The long series shows considerable variation. Some are a little larger or smaller, the range of expanse being 7-10 mm. In color the darkest are uniform purple-blackish without the yellow tint in the fringe; the lightest are red-brown, the color deepest at base and lighter in the discal field, sometimes resembling a patch of light color; these also without the yellow fringe.

CASUARIA PURPUREA Schaus.

1. Trinidad River, March, 1912 (Busck).

SAMCOVA DAMIA Ragonot.

5. Chiriquicito, April, 1907 (W. Schaus); Taboga Island, June, 1911 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July, 1912 (Busck).

RESTIDIA, new genus.

Palpi and wing-shape of *Gephyrella*, but different in venation. Fore wing with veins 3-5 from the cell, straight, not distorted in the male; 6 from the end of the cell; 7-9 stalked, not distorted in the male; 10 and 11 from the cell, straight in both sexes. Hind wing with 2 to 5 from the cell, 4 present, 6 from the apex of the cell, 7 anastomosing with 8.

Type of the genus.—*Restidia ruha*, new species.

RESTIDIA RUHA, new species.

Male with the costal edge full and rounded at base over the tympanic vesicle, slightly emarginate beyond the middle; reddish brown, the vesicle dark; lines very faint, the outer most distinct, whitish, double, finely crenulate, gently excurved above middle. Hind wing gray-black. Beneath purplish, the hind wing with an outer pale line defined by dark. Expanse, 10 mm.

Female with the costa nearly straight; a very slight shallow emargination near the middle. Purplish, the lines less distinct than in the male, scarcely visible. Beneath more uniformly dark than in the male, the outer pale line of hind wing distinct. Expanse, 10 mm.

Cotypes.—Male and female, No. 16275, U.S.N.M.; male, Porto Bello, April, 1912 (Busck), female, Cabima, May, 1911 (Busck). Also 17 males and 40 females with additional localities Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck); November, 1912 (C. P. Crafts); Alhajuelo, April, 1911 (Busck); Paraiso, Canal Zone, January, 1911 (Busck); Trinidad River, May, 1911, March and June, 1912 (Busck); La Chorrera, May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

The males vary in color from light red to a dark purple like the females. Range in size for males, 8–10 mm.; for females, 8–10 mm. The females are constant in coloration.

I possess specimens like these (except that veins 4–5 of fore wing are stalked) from Trinidad and French Guiana labeled "*Lepidomys fuscalis* Hampson, cotype ♂" [recte ♀], from Venezuela labeled "*Lepidomys cuprealis* Hampson, cotype ♂, type ♀," and one from Mexico with the same label (*fuscalis*, cotype male). In this latter, veins 4 and 5 of the fore wing are from the cell, as in the Panama specimens. *Lepidomys* Guenée¹ was described as a Noctuid and its single species, *L. irrenosa* Guenée was credited to New York. The name stood in our old lists, but I omitted it from Bulletin 52, United States National Museum, as the late Prof. J. B. Smith stated that it was not North American. Hampson did not include it in his papers on the Pyralinæ (1895–8), evidently having discovered that it was a Pyralid only subsequently to that date.² As the species *L. irrenosa* is unknown to me, I use the new name *Restidia*, which can be made a synonym if no differences appear. The names *fuscalis* and *cuprealis* of Hampson apply to the forms with veins 4–5 of fore wing stalked, to light and dark males on one species, in my opinion.

I have also specimens identified by Mr. Schaus as *Lepidomys lineosa* Druce (*Azamora lineosa* Druce³), one from Mexico, one from Costa Rica. They are not conspecific, and neither, perhaps, the true *lineosa* from Ecuador, but they appear from Guenée's description to be simi-

¹ Spec. Gen., vol. 6, 1852, p. 201.

² Ann. Mag. Nat. Hist. (7), vol. 17, 1906, p. 205.

³ Idem, vol. 9, 1902, p. 323.

lar to *irrenosa*. If really related, and *irrenosa* proves structurally similar, they may be easily separated generically by the absence of vein 10 in fore wing, so that the genus *Restidia* will be justified.

LEPIDOMYS VIRIDANS Schaus.

4. Tabernilla, Canal Zone, May, 1907 (Busck).

LEPIDOMYS BILINEALIS, new species.

Fore wing with vein 10 from the cell; 4 and 5 apart on fore wing, from a point or shortly stalked on hind wing. Dark purple-brown, with two slender white lines on fore wing, the inner straight, oblique across the wing, the outer coarsely wavy and retracted a little below costa. Hind wing purplish fuscous with outer whitish line, angled on submedian, faint toward costa. Expanse, 12 mm.

Type.—Female, No. 16306, U.S.N.M.; Trinidad River, May, 1911. (Busck). Also 13 others, all females, with additional localities, Porto Bello, February, 1911, and April, 1912 (Busck); Paraiso, Canal Zone, January, 1911 (Busck).

LEPIDOMYS PLATYBATHYRALIS, new species.

Fore wing with vein 8 absent; basal and terminal spaces pale olive brown, the basal space very wide; median space pale grayish, much paler than the rest of the wing, containing a dark discal dot and bounded by two dark lines, which are indistinctly relieved from the dark adjoining spaces. Hind wing pale fuscous. Male darker than the female throughout, the hind wing nearly black; fore wing dark olive with light mesial band. Expanse, male, 10 mm.; female, 12 mm.

Cotypes.—Male and female, No. 16305, U.S.N.M.; Corozal, Canal Zone, July, 1912, male (J. Zetek), female, April, 1911 (Busck). Also seven females from the same locality and Porto Bello, February, 1912 (Busck).

HYPOCOSMIA BIMACULALIS, new species.

Orange-red; fore wing purple at base and through inner half of median space; a white spot on costa at inception of each line; lines purple, single, the inner arcuate, accompanied faintly by white; outer excurved below costa, then oblique and straight; fringe dark. Hind wing dark orange with purplish outer line near the costa. Expanse, 17 mm.

Type.—Male, No. 16293, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

Hampson gives this genus as having veins 4, 5 of fore wing separate, but in my specimens they are more commonly stalked. In the present species vein 7 arises before 9, whereas in *H. definitalis* Ragonot 7 arises after 9.

HYPOCOSMIA RECTILINEALIS, new species.

Fore wing with veins 4, 5 from the cell, 7-9 stalked, 7 arising before 9, 10 and 11 from the cell, free. Fore wing brown, with tint of olive at base and outer margin, shading to whitish next the outer line; median space dark brown filled outwardly, shading lighter next the

inner line; lines white, narrow, straight, perpendicular, parallel. Hind wing blackish. Expanse, 18 mm.

Cotypes.—Male and female, No. 16292, U.S.N.M.; male, Cabima, May, 1911 (Busck); female, Porto Bello, April, 1912 (Busck).

CARCHA VIOLALIS Hampson.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

Described from a female. In the male, the venation is very different; veins 4 and 5 are approximated at base, 6 below the angle of the cell, 7-9 stalked, 7 near the base of the stalk, 9 being near the apex, 10 and 11 on the cell, free; a flattened vesicle at base of costa.

STHENOBAEA DYOPSATA Schaus.

1. Cabima, May, 1911 (Busck).

Described as *Sanguesa*¹ but clearly belonging to *Sthenobaea*.

ADENOPTERYX METALLESCENS, new species.

Male with the venation of *A. conchylialalis* Ragonot, except that veins 4, 5 of fore wing are long-stalked and 6-7 well stalked; glandular swelling at base of costa rather more elongate than in Hampson's figure². Female with the venation unmodified, veins 4-5 stalked, 6-9 stalked, 10, 11 from the cell, 11 anastomosing shortly with 12.

Fore wing violaceous black with coppery reflection, roughly scaly, without markings, the apex downcurved and wrinkly. Hind wing black, squamose, with less metallic reflection. Expanse, male, 14 mm.; female, 18 mm.

Cotypes.—Male and female, No. 16274, U.S.N.M.; Cabima, May, 1911 (Busck). Also eleven males, one female, all from the same place but two, La Chorrera, May 1912, (Busck).

HYPERPARACHMA RHODALIS Hampson.

15. Corozal, Canal Zone, March, 1911 (Busck); Cabima, May, 1911 (Busck); Porto Bello, May, 1912 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, May, 1911 (Busck).

ZAMANNA, new genus.

Front smooth, no tuft. Fore wing of the female with vein 3 before the end of the cell, 4 and 5 approximated at the base; 6 from upper angle; 7-9 stalked, 10, 11 on the cell. Hind wing with 2 and 3 free, 4 and 5 approximated at base. Male with the costa distorted, an emargination at end of cell with a fold on upper side beyond cell containing hairs; veins 6 and 7 approximated at base, 7-9 stalked, 8 absent, 10 and 11 from the cell, distorted. Palpi slender in the male, upturned to the middle of the front; shorter in the female, scarcely upturned, oblique.

Type of the genus.—*Zamanna dimorphalis*, new species.

¹ Trans. Amer. Ent. Soc., vol. 30, 1904, p. 176.

² Proc. Zool. Soc. Lond., 1897, p. 672, fig. 45.

ZAMANNA DIMORPHALIS, new species.

Dark brown, slightly olive tinted; male with the distorted costa darker, especially the fold beyond cell; two slender, obscure, whitish lines, a little curved, especially the outer one above; discal and terminal dots clouded, a shade darker than the ground. A whitish line at base of fringe on both wings. Hind wing dark, uniform. Expanse, male, 14 mm.; female, 16 mm.

Cotypes.—Male and female, No. 16264, U.S.N.M.; Porto Bello, February and March, 1911 (Busck). Also 12 males and 3 females, all from the same place but two, Paraiso, Canal Zone, January and February, 1911 (Busck).

ARICA SPLENDENS Druce.

1. Trinidad River, March, 1912 (Busck).

PARIDNEA MONOFLEXA, new species.

Very similar to *P. holophaealis* Ragonot, but the inner line excurved on its middle third; also somewhat smaller and darker, brown color less reddish; fringe interlined with brown, the basal whitish line divided. Expanse, 25–27 mm.

Cotypes.—Three females, No. 16265, U.S.N.M.; La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

XANTIPPE SUAVIS Schaus.

3. Porto Bello, April, 1912 (Busck); Trinidad River, June, 1912 (Busck).

XANTIPPE OLIVALIS, new species.

Fore wing dark olive, easily fading to ocher, the termen rather broadly blackish shaded, persistent; two slender, nearly straight, pale, obscure lines; fringe yellow, touched with black and red at apex; costa narrowly black scaled. Hind wing blackish, the fringe with light basal line following a narrow dark terminal one, touched with red at apex; beneath, costa ocher and black; a red subcostal line; apex broadly dark red, the rest of the wing black. Hind wing whitish, broadly red along the costa; an outer pale line, farther from the margin apically. Expanse, male, 13 mm.; female, 15 mm.

Cotypes.—Male and female, No. 16266, U.S.N.M.; Taboga Island, January, 1911, and February, 1912 (Busck). Also one male and nine females, five from Taboga Island, five from Alhajuelo, April, 1911 (Busck).

The fore wing has vein 3 from the cell, 4–5 stalked.

XANTIPPE ERNA, new species.

Fore wing olive green with two slender, straight, obscure, whitish lines; costa very narrowly marked with red and black scales; a narrow, broken terminal black line; fringe whitish, black at tornus. Hind wing blackish, with pale line in base of fringe; below, fore wing black, with only a narrow red area along costa. Hind wing pale, gray-shaded, the costal fourth powdered with red; outer line pale, gray-edged, retracting from the margin at apex. Expanse, 12 mm.

Type.—Female, No. 16267, U.S.N.M.; Cabima, May, 1911. Also a male with the same data, in much poorer condition, but I think the same species.

XANTIPPE GERTRIA, new species.

Fore wing olive green with two faint, pale lines; costa narrowly black, both the lines forming minute dots; termen a little browner; a marginal broken black line; fringe pale orange, except at apex and tornus. Hind wing blackish. Below without any red; fore wing all black but the fringe; hind wing black-powdered, the outer curved pale line defined by black on both sides. Expanse, 12 mm.

Type.—No. 16268, U.S.N.M.; Cabima, May, 1911 (Busck).

XANTIPPE TRUDIE, new species.

Fore wing brownish ocher, shading to crimson-brown on the margin; costal edge crimson; terminal black line broken into spots; fringe orange-yellow centrally. Hind wing black; a pale yellowish line in the base of the long fringe. Below, fore wing black; costa narrowly ocher with red powdering; terminal line black; fringe as above. Hind wing pale, sordid, the costa broadly washed with reddish; outer line pale, with black inner edge. Expanse, 11 mm.

Type.—Female, No. 16269, U.S.N.M.; Trinidad River, March, 1912 (Busck).

XANTIPPE TRESKA, new species.

Fore wing crimson-brown with two fine, illy defined, ocher lines; a terminal row of black dashes; fringe pale yellow, red at apex, black at tornus. Hind wing sordid, pale, the costal third red-powdered; outer line curved, pale, dark-edged. Expanse, 13 mm.

Type.—Female, No. 16270, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Fore wing with vein 3 shortly before the end of the cell, 4-5 stalked.

CRAFTSIA, new genus.

Palpi upturned to slightly above vertex, smoothly scaled, pointed; front rather smoothly scaled. Fore wing with veins 3 and 4 absent, cell open, 6 from the end of cell, 7-10 stalked, 7 arising beyond 10, 8 absent, 11 free. Hind wing with 2 before the end of the cell, 3-5 stalked, 4 absent, 6 and 8 stalked, 7 and 8 coincident.

Named in honor of Mr. C. P. Crafts, who contributed to the collections here listed.

Type of the genus.—*Craftsia vaetta*, new species.

CRAFTSIA VAETTA, new species.

Red-brown; fore wing with two faint, pale lines, the inner angled on median vein, the outer excurved a little subcostally; costa and apex somewhat more heavily scaled. Hind wing whitish, stained with red-brown, especially at apex; a distinct fold submedianly, reaching

the margin close below the end of vein 2, at a dark-brown mark. A stiff pencil of dark ocher-brown hairs lies along subcosta. Expanse, 11 mm.

Type.—Male, No. 16272, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts). Also two females, presumably the same, but of such fresh color as to appear quite different from the faded male, Corozal, Canal Zone, April, 1911 (Busck); La Chorrera, May, 1912 (Busck).

Apparently closely allied to *Chenevadia huralis*, but the venation of fore and hind wings curiously transposed.

CHENEVADIA, new genus.

Palpi upturned about to vertex, third joint smooth, long, second with scales beneath. Fore wing with vein 2 from the end of the cell, 3-5 stalked, 4 absent, 6 from the upper angle of cell, 7-10 stalked, 7 arising beyond 9, 11 anastomosing with 12. Hind wing with 3 and 4 absent, cell open, 6 from the upper angle of cell, 7 anastomosing with 8.

Type of the genus.—*Chenevadia huralis*, new species.

CHENEVADIA HURALIS, new species.

Red-brown; fore wing shading to fuscous at apex; two pale, slender lines, the inner irregular and toothed on median vein, the outer incurved subcostally. Hind wing washed with pale toward base; an inner area of modified yellow androconia in a patch in the cell and in a long groove along submedian; a long yellow pencil subcostally, lying parallel to costa and having its origin near base of both hind and fore wing. Expanse, 13 mm.

Type.—Male, No. 16271, U.S.N.M.; Trinidad River, June, 1912 (Busck). Also six males from the same place and Cabima, May, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

PARACHMA METERYTHRA Hampson.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

PARACHMA FERVIDALIS, new species.

Fore wing red, brownish crimson, with two nearly straight, pale, diffused lines a row of terminal black dots; fringe like the general color. Hind wing blackish. Expanse, male, 9 mm.; female, 10 mm.

Fore wing with veins 3-5 stalked, 4 present, 7-10 stalked, 9 absent.

Cotypes.—Male and female, No. 16295, U.S.N.M.; Porto Bello, April, 1912 (Busck). Also one male and nine females from the same place, May, 1912 (Busck) and La Chorrera, May, 1912 (Busck); Taboga Island, February, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck).

PARACHMA TARACHODES, new species.

Venation variable in the fore wing: (1) female, 2, 3 well spaced, 3 from end of cell, 4-5 shortly stalked; (2) female, similar but 3 shortly before end of cell; (3) male, 3 shortly stalked on stem of 4-5; (4) male, 2 and 3 approximate before end of cell, 4, 5 separate; vein 7 present, stalked with 8-10. Hind wing with 3 absent, 4 and 5 seeming stalked but really separate, borne on the long-pointed narrow lower angle of the cell.

Fore wing light purplish in basal and terminal spaces, median area darker brown, bounded by the two pale, nearly straight lines; costa with interrupted black line, resembling the black terminal dashes; fringe light purplish. Hind wing light fuscous, with distinct terminal dashes and a line in the fringe. Below, washed with fuscous. Expanse, 15 mm.

Type.—Male, No. 16297, U.S.N.M.; Porto Bello, April, 1912 (Busck). Also one male, two females from the same place and La Chorrera, May, 1912.

TOROTAMBE, new genus.

Palpi downcurved, about one and a half times the length of the head, rather thickly scaled. Fore wing with veins 2 and 3 before end of cell, 4, 5 from a point, 6 before apex of cell, 7-10 stalked, 7 arising beyond 9, 11 free. Hind wing with 2, 3 before end of cell, 4-5 stalked, 6 shortly stalked, 7 anastomosing with 8.

Type of the genus.—*Torotambe mirabella*, new species.

TOROTAMBE MIRABELLA, new species.

Fore wing with the costa arched beyond base, the apex a little produced and turned upward; violaceous, with olive-brown markings; a spot on costa at basal third; a band from apex, containing a round white spot on vein 6, widening below and shading off; a lunate patch at end of cell. Hind wing straw-color, a little fuscous tinted outwardly.

Type.—Male, No. 16290, U.S.N.M.; La Chorrera, May, 1912 (Busck).

DEOPTERYX, new genus.

Fore wing with the venation distorted, the cell involved in the distortion; 2-3 stalked, 4-5 stalked, bent down at origin and approximated to 2-3; 6-7 distant from 4-5, approximated at base and bent downward; 7-9 stalked, distant; 8 absent; 10 and 11 free, arising from the cell, somewhat crumpled. Costa with an oval swelling at the base, incised and folded at middle, with long curved tufts of hair on the upper side over the cell. Hind wing with vein 2 near the middle of the cell, 4-5 free, arising close together from the produced lower angle of the cell, 6 from the upper angle of the cell, 7 anastomos-

ing with 8. Palpi upturned, short, blunt, reaching the middle of the front; hairs of front long, appressed, directed downward.

Type of the genus.—*Deopteryx hypenetes*, new species.

DEOPTERYX HYPENETES, new species.

Dark brown, scarcely metallic, the curved tufts over the cell purplish; no markings except a dark terminal line. Hind wing of the same color, not metallic. Expanse, 19 mm.

Type.—Male, No. 16291, U.S.N.M.; Cabima, May, 1911 (Busck). Also four males from the same place.

GALASA MONITORALIS, new species.

Dark purplish, blackish irrorated; inner line whitish, acutely angled subcostally and at vein 1; outer line excurved, pale, faint; traces of a dark inner discal dot. Hind wing subtranslucent fuscous, a little paler at base, especially in males. Expanse, male, 11 mm.; female, 14 mm.

Cotypes.—Male and female, No. 16278, U.S.N.M.; Porto Bello, April and May, 1912 (Busck). Also four males and five females with additional localities, Cabima, May, 1911 (Busck) and Trinidad River, May, 1911, and March, 1912 (Busck).

GALASA SUBPALLIDALIS, new species.

Dark purplish, the basal space darker; inner line obscure, showing a distinct white angle on vein 1; outer line dark, clouded, far out; a little whitish on the costa in the incisions. Hind wing pale whitish, dark only in the terminal line and hairs of inner margin; in female, fuscous shaded on outer half. Expanse, male 11 mm.; female 12 mm.

Type.—Male, No. 16279, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also three males, one female with additional locality Porto Bello, March and May, 1911 (Busck).

GALASA FERVIDALIS, new species.

Fore wing brownish orange along costa to the middle, spreading downward in the center nearly to vein 1, shading into deep purple on inner half. Hind wing light fuscous, the veins and margin darker. Expanse, 18 mm.

Type.—Female, No. 16280, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another female, Cabima, May, 1911 (Busck).

GALASA LOPHOPALIS, new species.

Purplish brown with a tint of luteous; lines narrow, obscure, whitish, dentate, accompanied by dark shadings, which give to median space a pale appearance; some white scales in the costal emargination; outer line excurved above; a row of terminal black dots. Hind wing subtranslucent fuscous, the veins darker. Expanse, 16 mm.

Type.—Female, No. 16281, U.S.N.M.; Cabima, May, 1911 (Busck).

GALASA BELLICULALIS, new species.

Fore wing vinous red, the median venules and vein 1 scaled with black, forming dots in the place of the outer line; a black dot in center

of cell; white scaling along costa and inner margin narrowly; a row of terminal black dots in a narrow pale line. Hind wing pale fuscous, darker outwardly, with fuscous marginal line. Expanse, 12 mm.

Type.—Female, No. 16282, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck).

GALASA LUTEALIS, new species.

Luteous, dusted with gray, the dustings forming edgings, defining the lines as of the pale ground, the inner oblique, dentate, the outer excurved above; the irrorations form vague dots before the outer line and sometimes a shade in the median space along inner margin; a row of terminal black dots; a dark discal dot in the cell. Hind wing pale fuscous in the male, darker in the female. Expanse, male, 14 mm.; female, 16 mm.

Cotypes.—Male and female, No. 16283, U.S.N.M.; La Chorrera, May, 1912, male (Busck); Cabima, May, 1911, female (Busck). Also three males and four females with additional locality, Porto Bello, March, 1911 (Busck), October, 1912 (G. F. Cleveland).

GALASA STRENUALIS, new species.

Uniform purplish red, faintly orange tinted along costa; a terminal row of white points in the pale, narrow, terminal line. Hind wing fuscous, uniform. Expanse, 16 mm.

Type.—Female, No. 16284, U.S.N.M.; Porto Bello, April, 1912 (Busck). Also two females, Cabima, May, 1911 (Busck).

GALASA STYGIALIS, new species.

Fore wing dark fuscous, the lines formed of white dots on the veins, rather sparsely placed; terminal pale line nearly obsolete. Hind wing subtranslucent fuscous, a dark dash on submedian below vein 2. Expanse, male, 14 mm.; female, 16 mm.

Cotypes.—Male and female, No. 16285, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck). Also one male and one female with the same data. One of the males has veins 4-5 of fore wing coincident instead of long-stalked, but agrees entirely in coloration.

GALASA RELATIVIALIS, new species.

Fore wing purplish luteous, dusted with gray, defining two rather broad lines of the pale ground color, the basal space uniformly dusted, appearing darker; a spot in the cell near inner line; a terminal row of dark dots. Hind wing fuscous, veins dark, fringes pale. Expanse, 15 mm.

Type.—Female, No. 16286, U.S.N.M.; Cabima, May, 1911 (Busck).

Allied to *lutealis* in markings and the anastomosis of veins 11 and 12 of fore wing, which I notice only in these two species, but with one vein less in the hind wing.

GALASA PALLIDALIS, new species.

Straw-color, with a little purplish shading, the lines vague, of the pale ground, but without distinct defining shades; black dots on the

veins, especially in cell and central costal lobe and before the bend in the outer line; a row of terminal black dots. Hind wing pale, washed with fuscous outwardly, especially in a streak along submedian fold and terminal dashes. Expanse, 15 mm.

Type.—Male, No. 16287, U.S.N.M.; Trinidad River, June, 1912 (Busck). Also one male, Porto Bello, April, 1912 (Busck).

GALASA DUBITALIS, new species.

Dark purple-brown, becoming blackish on inner margin; lines obsolete; scaling a little paler along the submedian fold; terminal pale line very narrow. Hind wing fuscous-black, uniform; a pale line in base of fringe. Expanse, 14 mm.

Type.—Male, No. 16288, U.S.N.M.; Cabima, May, 1911 (Busck).

Very close to *caustalis* Hampson, but with dark hind wings. The female specimens I have referred to that species.

GALASA CAUSTALIS Hampson.

4. Trinidad River, June, 1912 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, April, 1912 (Busck).

GALASA DILIRIALIS, new species.

Fore wing with the basal space purple-brown, median space pinkish, thickly irrorate with purple-brown, terminal space similar on tornus, orange at apex and purple-brown next to the outer line; lines whitish, the inner curved, the outer bent on median vein; a round black discal dot in center of cell; a row of terminal black dots; fringe purple-brown. Hind wing fuscous, with terminal black line, the fringe touched with purple. Expanse, 11 mm.

Type.—Male, No. 16289, U.S.N.M.; Trinidad River, March, 1912 (Busck).

HYALOSTICTA OBLIQUALIS Hampson.

5. Porto Bello, March, 1911 (Busck); Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek), August, 1912 (C. P. Crafts).

REPLICIA, new genus.

Palpi porrect, downcurved, extending about twice the length of the head. Fore wing with veins 2 and 3 rather approximate, from long before the end of the cell, 4-5 connate, 6 from upper angle of cell, 7-9 stalked, 7 arising before 9, 10 and 11 shortly stalked. Hind wing with 2 and 3 before the end of the cell, 4-5 stalked, 6 from upper angle of the cell, 7 anastomosing with 8.

Type of the genus.—*Replicia inchoalis*, new species.

REPLICIA INCHOALIS, new species.

Fore wing with the costal lobe on basal third, followed by two small incisions; blackish, shading to purple-brown at apex; a whitish irregular marking at the end of the cell, touching the incision follow-

ing the costal lobe, where are some yellowish scales. Hind wing fuscous black. Expanse, 13 mm.

Type.—Female, No. 16294, U.S.N.M.; Cabima, May, 1911 (Busck).

ACUTIA XANTIPPE, new species.

Fore wing of normal shape, not sharply acute at apex; straw-yellow, thickly irrorate with crimson-brown; costal edge and two lines of this color, the inner one straight and a little oblique, the outer slightly flexuous and divergent on inner margin; fringe dark. Hind wing immaculate straw-yellow. Expanse, 12–13 mm.

Cotypes.—One male, two females, No. 16298, U.S.N.M.; Cabima, May, 1911 (Busck).

ACUTIA AMBLYTALIS, new species.

Fore wing purplish with slender dark lines defined by pale borders; inner line straight, oblique, outer indented subcostally and broadly on submedian; a terminal dark line. Hind wing blackish fuscous with a pale line at base of fringe. Expanse, 12–14 mm.

Cotypes.—Two males, one female, No. 16299, U.S.N.M.; Trinidad River, September, 1912 (Busck).

ULIOSOMA RHODOESIS, new species.

Venation of *U. discoloralis* Walker except that vein 7 is stalked with 8–9. Abdominal tufts and those on tibiae ochereous. Fore wing yellowish, shaded with rosy; lines yellowish, straight, but a little indented, bordered with deep rosy toward the center of the wing; margin rosy shaded; a dark rosy terminal line. Hind wing pale, with rosy tint at apex and a rosy mesial line, most distinct costally. Expanse, 9 mm.

Type.—Male, No. 16296, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another male, Porto Bello, April, 1912 (Busck).

CAPHYS TITANA Schaus.

1. Paraiso, Canal Zone, February 1911 (Busck).

CAPHYS BILINEA Walker.

25. Paraiso, Canal Zone, January, 1911 (Busck); Taboga Island, February, 1912 (Busck); Trinidad River, March and June, 1912, May, 1911 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), November, 1912 (C. P. Crafts); Cabima, May, 1911 (Busck).

CAPHYS EUSTELECHALIS, new species.

Fore wing with vein 3 stalked with 4–5; 6 stalked with 7–10. Rosy; fore wing irrorated with fuscous evenly and with two dark lines, rather near together, parallel above, diverging roundedly above inner margin. Hind wing rosy, darker outwardly, a gray shade on the margin. Beneath sordid rosy, hind wing pale on inner margin; a double dark outer line on costal segment. Expanse, 11 mm.

Type.—Male, No. 16300, U.S.N.M.; Alhajuelo, April, 1911 (Busck).

CAPHYS SUBSORDIDALIS, new species.

Fore wing with vein 11 shortly anastomosing with 12; hind wing with the lower angle of the cell long drawn out, 4-5 stalked from its end. Fore wing dull purple-brown, thickly and finely irrorate over straw-color; lines straw-color, rather broad, the inner straight, the outer bent a little above the middle. Hind wing whitish, dusted with purplish fuscous, especially along the costa and apex. Expanse 22 mm.

Type.—Female, No. 16301, U.S.N.M.; Taboga Island, February, 1912 (Busck).

ACROPTERYX HERBACEALIS Ragonot.

3. Porto Bello, February, 1912 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

OCOBA, new genus.

Palpi downcurved, reaching four times the length of the head, smooth, with short rough hairs at the base above. Fore wing with vein 2 beyond the middle of the cell, 3 before the angle, 4 and 5 separate, 6 from the upper angle, 7-9 stalked, 8 absent, 10 and 11 from the cell, 11 anastomosing with 12. Hind wing with 2 to 6 as on fore wing, 7 anastomosing with 8.

Type of the genus.—*Ocoba melanophila*, new species.

OCOBA MELANOPHILA, new species.

Fore wing black, shining, with purple reflection, the apex bent down. Hind wing duller, fuscous along the costa. Expanse, 18 mm.

Type.—Female, No. 16304, U.S.N.M.; Cabima, May, 1911 (Busck). Also one female, Porto Bello, October, 1912 (G. F. Cleveland).

Greatly resembles *Nachaba nyctalis* Hampson, but in that species veins 4-5 are stalked and the palpi of the female are not over half as long.

STREPTOPALPIA DEERA Druce.

28. Corozal, Canal Zone, April, 1912 (Busck), July, 1912 (C. P. Crafts); Trinidad River, March and June, 1912 (Busck); Cabima, May, 1911 (Busck); Porto Bello, April and May, 1912 (Busck), September, 1912 (G. F. Cleveland); La Chorrera, May, 1912 (Busck).

NAVURA LOBATA Schaus.

1. Trinidad River, May, 1911 (Busck).

BONCHIS MUNITALIS Lederer.

10. Taboga Island, February, 1912 (Busck); Porto Bello, April, 1912 (Busck); Chiriquicito, April, 1907 (W. Schaus); Tabernilla, Canal Zone, May, 1907 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, March and May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

BONCHIS GLANYSIS, new species.

Hind wing with veins 4 and 5 stalked. Fore wing purplish brown, with two approximate, slender, white lines, the inner nearly straight,

the outer inflexed a little subbasally, both a little stronger on the costa; a terminal row of black dots. Hind wing dark fuscous. Expanse 11 mm.

Type.—Female, No. 16302, U.S.N.M.; Porto Bello, April, 1912 (Busck).

PELAGIS GEROMALIS, new species.

Fore wing with vein 10 shortly stalked with 7-9; hind wing with 4-5 stalked. Fore wing dull ocher (faded from olive green?), the inner line at the middle of the wing, the outer at the outer fourth, the space between them pinkish gray, powdered with black outwardly; lines whitish, the inner across an obscure pale spot in the cell, angled on median vein and edged with blackish there; outer line gently curved, covered by black powderings except at costa and margin. Hind wing fuscous shaded, the veins and discal dot darker. Expanse 13 mm.

Type.—Female, No. 16303, U.S.N.M.; Cabima, May, 1911 (Busck).

MURGISCA DIPLOMMATALIS, new species.

Dark olive; a large white spot in the cell, joining another below, larger, reaching to vein 1; lines slender, white; inner line crinkled on costa, running into the spots, appearing below to join the outer line on the margin; outer line evenly curved, parallel to the margin, forming a dash on costa. Hind wing fuscous, becoming black on the margin; a small dark discal dot. Expanse, 18-20 mm.

Cotypes.—Three females, No. 16307, U.S.N.M.; Trinidad River, June, 1912 (Busck); La Chorrera, May, 1912 (Busck.)

SENNIA AURITALIS Hübner.

14. La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, June (Busck), and August, 1912 (C. P. Crafts).

SENNIA SUBAURITALIS Ragonot.

1. Cabima, May, 1911 (Busck).

CYCLOPALPIA MONOTONALIS, new species.

Fore wing pale yellowish with purple irrorations, that segregate and define rather broad lines of the ground color; inner line near base and slightly oblique; outer line straight and far from the margin; a round dot at the end of the cell. Hind wing pale stramineous. Expanse, 14 mm.

Type.—Male, No. 16310, U.S.N.M.; Taboga Island, February, 1912 (Busck).

PASSELGIS, new genus.

Palpi porrect, downcurved, three times as long as the head, rostriform, the third joint with long appressed hairs. Fore wing with veins 4-5 stalked, 7-10 stalked, 11 from the cell, anastomosing with 12. Hind wing with vein 2 from the cell, 3 from the end of the long lower angle, 4-5 stalked, 6 from apex of cell, 7 anastomosing with 8.

Type of the genus.—*Passelgis xanthothricalis*, new genus.

PASSELGIS XANTHOTHICALIS, new species.

Rufous, a deeper, more crimson tint at apex and purplish along the inner margin; discal dot round, slaty black; lines faint, purple, remote and far from margin, evenly curved, subparallel to the outer margin and rather more strongly curved than it. Hind wing straw-whitish, purple-shaded along the margin and costa. Expanse, 29 mm.

Type.—Female, No. 16308, U.S.N.M.; La Chorrera, May, 1912 (Busck).

CONOTAMBE, new genus.

Palpi porrect, reaching to the end of the large, angular, pointed frontal cone. Fore wing with veins 4-5 stalked, 6 from the end of the cell, 7-10 stalked, 11 from the cell, free. Hind wing with 2 and 3 present, 4-5 stalked, 8 from end of the cell, 7 anastomosing with 8. Legs with the tibiae and tarsi, especially the hind pair, greatly thickened and flattened.

Type of the genus.—*Conotambe paralyssialis*, new species.

CONOTAMBE PARALYSISALIS, new species.

Fore wing dark purple-red, the lines darker, very faint and clouded, hardly legible: outer line remote from the margin, curved. Hind wing shaded with black, except a patch between veins 2-5, which is purple-red, crossed by a mesial faint dark dentate line. Expanse, 34 mm.

Type.—Female, No. 16309, U.S.N.M.; Cabima, May, 1911 (Busck).

Subfamily **SCHOENOBIINÆ**.**SIGA PYRONIA** Druce.

1. Paraiso, Canal Zone, May, 1911 (Busck).

CACOGRAPHIS OSTEOLALIS Lederer.

15. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, July (J. Zetek), August and November, 1912 (C. P. Crafts).

MIDILA CARNEIA Druce.

3. Porto Bello, March, 1911 (Busck); La Chorrera, May, 1912 (Busck).

DISMIDILA, new genus.

Proboscis absent: labial palpi ascending, the second joint hairy below, the third thickened with short hairs, blunt. Fore wing with veins 8-9 stalked, the rest from the cell. Both wings with a projection on outer margin at vein 3.

Type of the genus.—*Dismidila atoca*, new species.

DISMIDILA ATOCA, new species.

Lilacine gray; fore wing with two slender darker irregular lines, subparallel to the outer margin; costa white centrally, cut by both lines; a white semihyaline constricted patch in the end of the cell

and a small one below the reniform, which is brown-ringed and yellow-centered; a black clouded patch follows; fringe pale, spotted with dark. Hind wing with two slender outer lines, crenulate, close together and near the margin; a small round discal dot. Expanse, 24 mm.

Type.—Male, No. 16313, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Allied to *Midila halia* Druce from Colombia, which has the same venation as the present species.

HOSITEA BICINCTA Schaus.

1. Trinidad River, June, 1912 (Busck).

RUPELA ALBINELLA Cramer.

24. Porto Bello, May, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, August, 1913 (C. P. Crafts).

PATISSA PARVIPUNCTALIS Schaus.

10. Cabima, May, 1911 (Busck); Corozal, Canal Zone, July, 1912 (Busck), and November, 1912 (C. P. Crafts).

PATISSA ONIROPHANTA, new species.

White; costa dark brown to near the middle, with three teeth, the outer giving rise to the inner line; lines pale brown; the inner broad, straight, the outer also broad, gently waved; some pale brown irrations in terminal space and a large discal spot confluent with the upright outer band from costa to beyond tornus; a submarginal half-band from costa to middle of outer margin. Expanse, 9 mm.

Type.—Male, No. 16312, U.S.N.M.; Porto Bello, April, 1912 (Busck). Also 2 males, 5 females with localities, Cabima, May, 1911 (Busck); Corozal, Canal Zone, August and November, 1912 (C. P. Crafts).

CRYPTOSES CHOLCEPI D_{jar}.

33. Taboga Island, February, 1912 (Busck); Alhajuelo, March, 1912 (Busck); Trinidad River, March, 1912 (Busck); Porto Bello, March, 1911, May, 1912 (Busck), and September, 1912 (G. F. Cleveland); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, May, 1912 (Busck).

CHALCOËLOPSIS, new genus.

Palpi porrect, very short, hardly exceeding the front. Fore wing with veins 4-5 stalked, 7-10 stalked; hind wing with 4-5 stalked, a long cross-vein without veins, 6 from apex of cell, 7 anastomosing with 8. Male antennæ lengthily bipectinated, of female, serrate; spurs of hind tibiæ moderate, equal.

Type of the genus.—*Chalcoëlopsis pigrissima*, new species.

CHALCOËLOPSIS PIGRISSIMA, new species.

Fore wing dark brown, coarsely irrorate with black; an oblique blackish, slightly bronzy, band arises from middle of inner margin to

cell; outer line double; its inner segment heavy, oblique from costa to vein 6 near margin, roundedly incurved to vein 2, inclosing an orange stain, oblique again below, slightly paler filled. Hind wing with a marginal row of metallic blue and violet spots in a black band, preceded by a little yellowish, the irrorations forming lines. Expanse, male, 14 mm.; female, 17 mm.

Cotypes.—Male and female, No. 16311, U.S.N.M.; Trinidad River, June, 1912 (Busck). Also 46 others, all females, with additional localities, La Chorrera, May, 1912 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, August, 1912 (C. P. Crafts).

This would seem to be a *Chalcoëla* or *Cataclysta* with aborted mouth parts. Specimens from the Guianas have been labeled by Mr. Schaus "*Cataclysta perlalis* Led.; *trilinealis* Walk." But I have been unable to trace these names. The species can not be a *Cataclysta* on account of the absence of the tongue.

MACROTHERCA PEGILOSTIGMA, new species.

Fore wing sordid luteous, powdered with dull crimson, which forms a streak on the costa at base and a large patch about tornus, rising nearly to the cell; a round black discal dot, large or minute. Hind wing pale fuscous. Expanse, 10 mm.

Cotypes.—Two males, No. 16314, U.S.N.M.; Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

Subfamily CRAMBINÆ.

CRAMBUS FISSIRADIELLUS Walker.

206. Porto Bello, February, 1911 (Busck); Alhajuelo, April, 1911 (Busck); Paraiso, Canal Zone, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, May (Busck), July (J. Zetek), August and November, 1912 (C. P. Crafts); Taboga Island, June, 1911 (Busck).

CRAMBUS TENUISTRIGATUS Zeller.

3. Trinidad River, March, 1912 (Busck); Arajan, March, 1911 (Busck).

CRAMBUS MERETRICELLA Schaus.

4. Trinidad River, May, 1911, March and September, 1912 (Busck); La Chorrera, May, 1912 (Busck).

CRAMBUS TACTELLUS, new species.

Near Zeller's figure of *immuniellus* Zeller,¹ but the outer line is bent sharply at costa so that the triangular dark patch rests directly above the general course of the line and not beyond it; terminal line slender, not so heavy; wing pale lilacine gray, about evenly powdered; median powdery dark line curving around end of cell, oblique below, nearly complete. Hind wing soiled whitish in the male, fuscous in the female. Expanse, 11–12 mm.

¹ Stett. Ent. Zelt., vol. 33, 1872, pl. 2, fig. 6.

Cotypes.—Three males, two females, No. 16325, U.S.N.M.; La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck); Paraiso, Canal Zone, April, 1911 (Busck).

CRAMBUS RETUSELLUS Schaus.

6. Cabima, May, 1911 (Busck); Trinidad River, September, 1912 (Busck).

Near Zeller's figure of *expansellus* Zeller,¹ but without the black moniliform line shown in that figure between the double outer line and termen. The specimens do not agree absolutely with Schaus's type of *retusellus*, but are so close that I do not like to separate them. Hind wing of male soiled whitish, of female, dark fuscous.

CRAMBUS AGNESIELLA, new species.

Silvery white; fore wing with extra-median fulvous line, bent at right angles above the middle; a subcostal fulvous dash from base to this line; outer line double, approaching outer margin below and ending near tornus, curved above; termen stained with fulvous; a terminal black line, forming spots in the interspaces from submedian to vein 4. Hind wing pale gray. Expanse, 9 mm.

Type.—No. 16327, U.S.N.M.: Trinidad River, March, 1912 (Busck).

CRAMBUS INTANGENS, new species.

White, with faint violaceous tint, coarsely irrorated with brown; a brown line along costa to beyond middle; median line oblique to cell, recurved next to costa, powdery, brown, with an inner duplication below cell; outer line double, its inner segment powdery and irregular, curving a little at costa, where the outer segment is slightly expanded; terminal line a trace only; fringe metallic gray. Hind wing faintly straw-color tinted, without markings, concolorous in the two sexes. Expanse, 9–11 mm.

Cotypes.—Three males, two females, No. 16326, U.S.N.M.; Porto Bello, March and April, 1911, and April, 1912 (Busck).

A specimen of this species from Costa Rica, in poor condition, is labeled *C. expansellus* Zeller by Mr. Schaus, but I do not think it can be that species.

CULLADIA EUCOSMELLA, new species.

Palpi white, a little touched with sordid ocher; front and vertex black-brown. Fore wing silvery white; a black-brown patch at base; a broad band before the middle and broad submarginal band, sending out a projection to the margin above the middle; a dark terminal line; fringe dark. Hind wing blackish, the fringe pale. Expanse, 12 mm.

Type.—Male, No. 16328, U.S.N.M.; Trinidad River, September, 1912 (Busck). Also six others with additional localities; Cabima, May, 1911 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, August, 1912 (C. P. Crafts).

¹ Hor. Ent. Soc. Ross., vol. 13, 1877, pl. 1, fig. 18.

PTOCHOSTOLA INCANELLUS Zeller.

10. Tabogilla Island, February, 1912 (Busck); Corozal, Canal Zone April and May, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, May, 1911 and June, 1912 (Busck); Taboga Island, June, 1911 (Busck).

PTOCHOSTOLA PYGMAEUS Zeller.

129. Paraiso, Canal Zone, February, May, and June, 1911 (Busck); Corozal, Canal Zone, March and May, 1911, May, 1912 (Busck) and July, 1912 (J. Zetek); Trinidad River, March, 1912, May, 1911 and June, 1912 (Busck); Alhajuelo, April, 1911 (Busck); Porto Bello, February, March, April, and May, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck).

ARGYRIA NIVALIS Drury.

6. Corozal, Canal Zone, March, 1911 (Busck) and August, 1912 (C. P. Crafts); Cabima, May, 1911 (Busck).

The fringe is entirely dark leaden, not white-tipped as in the northern form. It may be named *fimbrialis*, new subspecies.

Type.—No. 16321, U.S.N.M.

ARGYRIA TENELLA Zeller.

1. Trinidad River, March, 1912 (Busck).

ARGYRIA OPPOSITA Zeller.

19. Porto Bello, April and May, 1912 (Busck); Cabima, May, 1911 (Busck); Corozal, Canal Zone, May (Busck), July (J. Zetek) and November, 1912 (C. P. Crafts); Trinidad River, June, 1912 (Busck).

ARGYRIA PUSILLALIS Hübner.

26. Porto Bello, February and March, 1911 (Busck); Trinidad River, March, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Corozal, Canal Zone, March, 1911 (Busck), July, August, and November, 1912 (C. P. Crafts).

All the specimens have the median band continuous across the wing. The varietal name *multifacta* is proposed.

Type.—No. 16316, U.S.N.M. (Porto Bello, February, 1911).

ARGYRIA MOLYBDOPECTA, new species.

Dark gray, the inner area of fore wing broadly shaded with dull yellow nearly up to median vein. Hind wing whitish, shading to fuscous at margin. In the males the wing is more blunt at apex than in the females, the markings more distinct and contrasted. Lines slender, black, edged with white very narrowly; inner line crenulate, with inward angle at vein 1; outer line with a sinus below vein 2 which joins the large reniform, making it part of the sinus; a row of terminal dark dots. In the female the lines are slender and pulverulent, the sinus of outer line appears occluded. Expanse, 14–24 mm.

Cotypes.—Male and female, No. 16315, U.S.N.M.; Corozal, Canal Zone, July and November, 1912 (C. P. Crafts). Also 52 others with additional data, Cabima, May, 1911 (Busck); Corozal, Canal Zone, April and May, 1911 (Busck), and July, 1912 (J. Zetek); Porto Bello, February, 1911 (Busck); Trinidad River, May, 1911 (Busck).

ARGYRIA ARGYRODIS, new species.

Markings as in *A. croceivittella* Walker, but without any yellow along the inner margin of fore wing; silvery white; vertex of head and dorsal stripe on thorax golden yellow; fore wing with erect median band, costal stripe and subapical patch, with oblique spur yellow, stained with brown; termen and fringe of same color. Expanse, 14 mm.

Type.—Female, No. 16317, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also six others from the same place.

ARGYRIA CENTRIFUGENS, new species.

White; front white, vertex dark ocher; fore wing silvery white; a dark brown spot on costa and one on inner margin joined by a slender line; costal triangle divided by a white line; a dark terminal line, the fringe leaden brown. Hind wing white. Expanse, 14 mm.

Type.—No. 16318, U.S.N.M.; Paraiso, Canal Zone, February, 1911 (Busck). Also two others, Cabima, May, 1911 (Busck).

ARGYRIA XANTHOGUMA, new species.

Palpi white-tipped; front white; fore wing with median line slender, forming costal and marginal dots; costal triangle cut by a white line; terminal line narrow, the fringe dark leaden. Hind wing pale yellow tinted. Expanse, 14 mm.

Type.—Male, No. 16319, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also three others from the same place.

UBIDA THYONELLA Schaus.

Platytes thy nella SCHAU, Ann. Mag. Nat. Hist. (8), vol. 11, 1913, p. 239.

1. Chiriqui, May, 1907 (W. Schaus).

The specimen is smaller than the type and in better condition. I think it is conspecific.

UBIDA CRETACEIPARS, new species.

Chalky white, the margin dull ocher; veins lined with dark brown, an oblique line from near middle of inner margin curving around cell to costa, with a broad shade from its loop to apex, cut by black veins; discal dot round, black; a terminal row of black dots. Hind wing white, unmarked. Expanse, 15 mm.

Type.—Female, No. 16329, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another female from the same place.

UBIDA MONODISA, new species.

Chalky white, the veins narrowly dark brown, the interspaces largely filled with dull ocher rays, broadest in the cell and in a broad shade beyond; a white ray dividing the cell to the round black discal

dot; costa on outer half with three faint oblique shades; terminal dots black, small. Hind wing white, veins and apex a little touched with sordid. Expanse, 23 mm.

Type.—No. 16330, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another female from the same place.

UBIDA NEOGYNÆCELLA, new species.

Ground color white, veins and interspaces lined with creamy brown, a double border around cell, the discal ray double; an oblique costal line before apex bounds a narrow white subterminal line, at which all the linings end; termen creamy brown with a row of black terminal dots with white specks before them; fringe with brown interline. Hind wing whitish, becoming sordid outwardly and toward costa, defining a white subterminal line, beyond which are traces of black terminal dots in the gray termen, repeating imperfectly the marking of fore wing. Expanse, male, 18 mm.; female, 21 mm.

Cotypes.—Male and female, No. 16331, U.S.N.M.; Porto Bello, April and May, 1912 (Busck). Also five males, two females, with additional localities, Trinidad River, September, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck).

The tongue is present, but very weak, so I place the species in *Ubidia* rather than in *Platytes* (*Argyria*). Male antennæ simple, flattened; female frenulum a single strong spine as in the male.

DIATRÆA SACCHARALIS Fabricius, form TABERNELLA Dyar.

69. Trinidad River, March and June, 1912 (Busck); Alhajuelo, April, 1911 (Busck); La Chorrera, May, 1912 (Busck), Porto Bello, May, 1911 (Busck); Corozal, Canal Zone, June (Busck); July and August, 1912 (C. P. Crafts).

DIATRÆA LINEOLATA Walker.

33. Cabima, May, 1911 (Busck); Porto Bello, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck); Corozal, Canal Zone, June, 1912 (Busck), July, 1912 (J. Zetek).

DIATRÆA GAGA, new species.

Fore wing straw-color, the veins lined in blackish, interlines brown; discal dot black, round, prominent; two outer lines subparallel, oblique, rounded off above; terminal dots compressed, subconfluent. Hind wing white. Expanse, 15–17 mm.

Cotypes.—Male and female, No. 16323, U.S.N.M.; Corozal, Canal Zone, June, 1912 (C. P. Crafts). Also 11 others with additional data, April, 1911 (Busck), July, 1912 (J. Zetek), and August, 1912 (C. P. Crafts).

DIATRÆA SOLIPSA, new species.

Wings narrower and more pointed at the apex than in *gaga*; markings similar, the vein-lines and interlines indistinct; discal dot small. Expanse, 12–15 mm.

Cotypes.—Male and female, No. 16324, U.S.N.M.; Porto Bello, February, 1911 (Busck); Trinidad River, May, 1911 (Busck). Also seven others, Corozal, Canal Zone, April, 1911, May and June, 1912 (Busck), November, 1912 (C. P. Crafts).

Very much like *gaga*, but whereas *gaga* looks like a minute *lineolata*, the present species resembles a minute *saccharalis*.

IESTA CANCELLALIS, new species.

Pale straw color, the two lines faint, powdery, approximate, slightly oblique; discal dot round, prominent; terminal dots distinct; a brown shade on costa at base and a patch at apex. Hind wing nearly white, unmarked. Expanse, 11 mm.

Type.—Male, No. 16322, U.S.N.M.; Corozal, Canal Zone, May, 1911 (Busck). Also 13 others with the same data except one, July, 1912 (J. Zetek); Paraiso, Canal Zone, January, 1911 (Busck).

DORATOPERAS ATROPARSELLUS Walker.

5. Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck).

ERUPA INCOLORALIS, new species.

Fore wing pale lilacine straw-color with a few dark specks that form indistinctly a subterminal line. Hind wing pale straw-color. Expanse, 43 mm.

Type.—Female, No. 16320, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Allied to *E. evanidella* Schaus.

Subfamily SCOPARIINÆ.

SCOPARIA PUSILLA, new species.

Fore wing light gray powdered with black; inner line very oblique, straight, pale within, dark-powdered without; discal mark an agglomeration of dark scales in two opposed cusps; outer line with central outcurve, whitish, dark-powdered within; a row of terminal black dots. Hind wing sordid milky whitish. Expanse, 11 mm.

Type.—Female, No. 16334, U.S.N.M.; Cabima, May, 1911 (Busck). Also 11 males and 62 females that I take to be the same species (all in poor condition) with additional localities, Alhajuelo, April, 1911 (Busck); Trinidad River, June, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Corozal, Canal Zone, April, 1911 (Busck), August, 1912 (C. P. Crafts); Paraiso, Canal Zone, January, 1911 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, March, 1911, and February, 1912 (Busck); Taboga Island, June, 1911 (Busck).

Subfamily PYRALINÆ.

PYRALIS MANIHOTALIS Guenrée.

1. Paraiso, Canal Zone, January, 1911 (Busck).

TEGULIFERA RESECTALIS Lederer.

30. Alhajuelo, April, 1911 (Busck); Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, April, 1911 (Busck), August and

November, 1912 (C. P. Crafts); Taboga Island, February, 1912, and June, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, September, 1912 (Busck); Chiriquito (W. Schaus).

Varies in color and distinctness of markings. I make *Pyralis nigrapuncta* Kaye to be the same species. Mr. Schaus separated Costa Rican specimens under the two names. His *nigrapuncta* consisted of two males, small and brightly marked as usual. His *resectalis*, a male and a female; the male, I take to be a species of *Herculia*; the female is large and dark, but fits well with the males marked *nigrapuncta*. The Costa Rican series runs strongly marked. The Panama one runs about like a series from Venezuela before me, that is rather contrastingly marked, more so than the Guiana series.

Subfamily ENDOTRICHINÆ.

TABOGA, new genus.

Fore wing with veins 2 and 3 from before the angle of the cell, 4, 5 separate, 6 below the upper angle, 7-9 stalked, 8 and 9 coincident, 10 and 11 on the cell. Hind wing with vein 2 long before the angle of the cell, 3 before the angle, 4-5 stalked, 6 stalked with 7-8 which anastomose strongly. Labial palpi upturned nearly to vertex, smooth, terete; maxillary palpi very distinct, similar to the labial ones in shape and color, only smaller.

Type of the genus.—*Taboga inis*, new species.

TABOGA INIS, new species.

Fore wing dark gray, blackish powdered; lines whitish, the inner bent on submedian, else straight and followed by a little denser powdering; median line shown only below the cell, bent at right angles on submedian and vein 1; discal spot black, placed far out at the outer fourth of the wing on account of the very long cell; outer line far out, strongly and shortly excurved over end of cell; terminal line black, minutely broken. Hind wing impure whitish, the termen fuscous narrowly. Expanse, 13 mm.

Type.—Male, No. 16363, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also eight others, six from the same place and date, one Porto Bello, March, 1911 (Busck), and one, La Chorrera, April, 1912 (Busck).

Subfamily EPIPASCHINÆ.

ARNATULA CIRCUMLUCENS, new species.

Base of fore wing olive gray; a quadrate patch of the same color on the costa surrounded by white, which extends narrowly to the inner margin at the place of the inner line; wing olive gray beyond, shading to violaceous toward tornus, lighter on the middle of the outer margin, where a series of black dashes are revealed. Hind wing fuscous with

dark veins and a light line in the base of the fringe. Expanse, male, 13 mm.; female, 15 mm.

Cotypes.—Male and female, No. 16335, U.S.N.M.; Porto Bello, October, 1912 (G. F. Cleveland). Also four females from the same place with additional data, April and May (Busck) and December, 1912 (G. F. Cleveland).

Two males and two females are before me from French Guiana (W. Schaus).

ARNATULA COLORATA, new species.

Gray, stained with luteous before the inner and beyond the outer lines; basal space dark gray without bordering line; a black dot in cell; inner line at middle of wing, dark gray, bent outward below median vein; outer line similar, excurved above middle and slightly denticulate; a whitish mark on costa beyond it, forming a faint border below; terminal dots black. Hind wing soiled whitish, fuscous at apex. Expanse, 16 mm.

Type.—Female, No. 16336, U.S.N.M.; Trinidad River, March, 1912 (Busck).

ARNATULA SUBFLAVIDA, new species.

Fore wing olive gray; a white ray through the middle from base, nearly touching the outer line; a similar white line on the inner margin; outer line curved, white, parallel to and near the outer margin; a darker spot at end of cell and at base of inner margin. Hind wing orange-yellow with narrow gray border. Expanse, 17 mm.

Type.—Male, No. 16337, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also one male, Cabima, May, 1911 (Busck).

TIIGA FOVEALIS Hampson.

1. Corozal, Canal Zone, June, 1912 (Busck).

TIIGA TERSILLA, new species.

Small; grayish white; fore wing with black at the base; inner line white, curved to vein 1, then straight, with black shades on both sides; median space with a brown shade and black irrorations outwardly; outer line white, denticulate, outbent in a blunt point a little above the middle, edged within by a black dotted line; terminal space clouded with brownish below, with black at apex; a terminal row of black dots. Hind wing whitish, with fuscous veins and margin. Expanse, 10 mm.

Type.—Male, No. 16342, U.S.N.M.; La Chorrera, May, 1912 (Busck).

POCOCERA ATRAMENTALIS Lederer.

25. Paraiso, Canal Zone, January and February, 1911 (Busck); Porto Bello, February and March, 1911, April and May, 1912 (Busck); La Chorrera, April and May, 1912 (Busck); Corozal, Canal Zone, April and May, 1912 (Busck).

POCOCERA BASIGERA, new species.

Fore wing with the basal space broad, black; inner line pale, straight, upright bounded outwardly by a fine dark line; rest of the

wing sordid yellowish, clouded with brownish over tornus and black at apex; outer line vague, pale, denticulate, exserted above middle; terminal dots nearly confluent. Hind wing fuscous-black, pale at base. Fringes pale on both wings. Expanse, 16 mm.

Type.—Female, No. 16338, U.S.N.M.; La Chorrera, May, 1912 (Busck).

POCOCERA ADOLESCENS, new species.

Fore wing greenish gray, the costa dark centrally; a blackish triangular mark at base of inner margin, origin of vein 2 and round arc in cell; inner line oblique, of the pale ground, slightly irregular; outer line whitish, dentate, excurved above, relieved in the dark outer ground, which shades to violaceous gray at apex. Hind wing dark fuscous. Palpi of male very long, recurved over the thorax, concealing a hair-pencil; no process on antenna.

Cotypes.—Male and female, No. 16339, U.S.N.M.; Porto Bello, May, 1912 (Busck).

POCOCERA CAPNODON, new species.

Dark gray, irrorate, the lines of lighter ground color; fore wing blackish at base on inner margin; outer line bent outward on submedian, broad, edged by dark narrow lines, not waved; a luteous gray patch bounded by vein 2, segment of the obsolete median line, outer line and inner margin; discal venules dark-lined in the male; outer line pale, slightly excurved in the upper portion, edged by dotted denticulate dark lines; terminal space shaded with blackish; terminal black line of nearly joined dots. Hind wing dark fuscous, lighter between the veins in the male. Expanse, 14 mm.

Cotypes.—Two males, one female, No. 16340, U.S.N.M.; Porto Bello, April, 1912 (Busck); Trinidad River, March, 1912 (Busck).

POCOCERA SPHÆROPHORA, new species.

Wings long and narrow; fore wing fuscous shaded over luteous, which appears mesially; base dark to the inner line, which is black, of three arcs, each inclosing a black tufted spot, of which the center one is large; a black waved shade beyond the middle; outer line close to the margin, black within, pale without, denticulate, oblique above; terminal space dark. Hind wing blackish fuscous, subtranslucent between the veins. Expanse, 26 mm.

Type.—Female, No. 16341, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck).

MACALLA THYRSISALIS Walker.

2. Porto Bello, March, 1911 (Busck).

MACALLA NIVEORUFA Hampson.

5. Corozal, Canal Zone, April, 1911 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June and September, 1912 (Busck).

LEPIDOGMA VIOLESCENS, new species.

Violaceous gray with sparse black irrorations; a black mark at base of inner margin; inner line near the middle of the wing, slightly

curved, pale with dark inner edge; outer line distinct, narrow, white with black powdering on the inner edge, broadly excurved above; a black curved shade at apex. Hind wing fuscous, blackish outwardly; a paler line in base of fringe. Expanse, 16 mm.

Type.—Female, No. 16343, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck).

STERICTA SCOPIPES Felder.

2. Trinidad River, March, 1912 (Busck); Cabima, May, 1911 (Busck).

JOCARA SUBCURVALIS Schaus.

1. Porto Bello, May, 1912 (Busck).

CHLOROPASCHIA CANITIES Schaus.

1. Cabima, May, 1911 (Busck).

GENOPASCHIA, new genus.

Palpi porrect, short, downcurved and hairy below in the male, exceeding the front, twice as long as the head, smooth, the second joint somewhat thickened with scales above. Fore wing with veins 2, 3 before the end of the cell, 4-5 stalked, 6 from apex to cell, 7-10 stalked, 11 on the cell. Hind wing with vein 2 long before the end of the cell, 3 shortly stalked with 4-5 (3 from the end of the cell in the female), 6 from the apex of the cell, 7 anastomosing with 8.

Type of the genus.—*Genopaschia protomis*, new species.

GENOPASCHIA PROTOMIS, new species.

Fore wing gray, shaded with blackish; inner line white, straight; inwardly oblique, followed by a round black dot in the end of the cell; outer line white, near the margin, excurved above the middle; outer half of median space and terminal space darkly shaded. Hind wing soiled whitish in the male, fuscous in the female. Expanse, male, 11 mm.; female, 14 mm.

Cotypes.—Male and female, No. 16348, U.S.N.M.; male, Porto Bello, February, 1912 (Busck); female, Trinidad River, March, 1912 (Busck).

POCOPASCHIA, new genus.

Palpi short, in the male upturned to the middle of the front, the third joint clawlike, in the female porrect, shortly exceeding the front. Fore wing with vein 2 near the middle of the cell, 3 before the end, 4-5 shortly stalked, 6 from the apex of the cell, 7-10 stalked, 11 on the cell. Hind wing with 2, 3 from the cell, 4-5 long-stalked, 6 from the apex of cell, 7 anastomosing with 8.

Type of the genus.—*Jocara noctuina* Schaus.¹

a¹. Fore wing with vein 7 arising beyond vein 9.

b¹. Hind wing with vein 3 from end of cell.

POCOPASCHIA NOCTUINA Schaus.

8. Cabima, May, 1911 (Busck); Trinidad River, March and June, 1912 (Busck).

*b*². Hind wing with vein 3 stalked with 4 and 5.

POCOPASCHIA BELLANGULA, new species.

Fore wing purple-brown, shading to gray on outer fourth; base deep purple-brown, bounded by a white line that runs obliquely from costa to vein 1 and is there bent at right angles; median space reddish purple, shading outward to gray; outer line very near the margin, white, denticulate, retreating at apex, which is blackish purple. Hind wing blackish fuscous. Expanse, 17 mm.

Type.—Male, No. 16344, U.S.N.M.; Trinidad River, March, 1912 (Busck).

*a*². Fore wing with vein 7 arising before vein 9.

POCOPASCHIA ACCELERANS, new species.

Fore wing densely black-irrorate over pale ocher tinted ground; basal area velvety black, bounded by a narrow curved whitish inner line; a small rounded discal dot; outer line pale, incurved at subcosta and submedian, outcurved close to margin between; a round black patch in the incurve below apex; a terminal broken black line. Hind wing ocher tinted, with narrow terminal fuscous shade-line. Expanse, 24–26 mm.

Cotypes.—Two males, No. 16345, U.S.N.M.; Trinidad River, March, 1912.

STENOPASCHIA, new genus.

Palpi porrect, short, curved in the male, exceeding the front, twice as long as the head in the female and hairy below. Maxillary palpi with a triangular tuft of scales. Fore wing with veins 2 and 3 from the cell, 4 and 5 separate, 6 below apex of cell, 7–9 stalked, 8 absent, 10 and 11 on the cell, free. Hind wing with vein 2 from the cell, 3 and 5 separate, 4 absent, 6 from apex of cell, 7 anastomosing with 8.

Type of the genus.—*Stenopaschia trichopteris*, new species.

STENOPASCHIA TRICHOPTERIS, new species.

Fore wing olive green (faded to ocher); a black band along the basal half of the costa, joining a tufted black spot in the cell; a patch below in submedian space, further out in the male than in the female; a small dot at the end of the cell; outer line of black scales, excurved above, more or less broken and containing a few silvery scales. Hind wing fuscous, dark in the female, lighter between the veins in the male. Expanse, male, 15 mm.; female, 19 mm.

Cotypes.—Male and two females, No. 16346, U.S.N.M.; Taboga Island, June, 1911, male (Busck); Trinidad River, June, 1912, females (Busck).

GLOSSOPASCHIA, new genus.

Labial palpi smooth, upturned, the second joint reaching vertex, the third slender, long. Maxillary palpi small, scaly. Tongue projecting about twice the length of the head, downcurved, completely scaled, the scales forming a long fringe beneath. Fore wing with vein 2 from the cell, 3 from the end, 4-5 stalked, 6 from the apex of cell, 7-9 stalked, 10 and 11 on the cell, free. Hind wing with vein 2 from the cell, 3 and 5 from its end, 4 absent, 6 from the apex of cell, 7 anastomosing with 8.

Type of the genus.—*Glossopaschia cænoses*, new species.

GLOSSOPASCHIA CÆNOSES, new species.

Fore wing narrow, light gray with scattered black irrorations; a black tufted spot below the middle of the cell; a little dot at end; outer line near the margin, dotted, black, slightly outcurved; termen dark-shaded; terminal dots black. Hind wing soiled white with fuscous veins and margin. Expanse, 15-19 mm.

Cotypes.—Two females, No. 16347, U.S.N.M.; La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck).

Subfamily PHYCITINÆ.

MYELOIS TRANSITELLA Walker.

24. Trinidad River, March and June, 1912 (Busck); Alajuelo, April, 1911 (Busck); Panama City, April, 1911 (Busck); Cabima, May, 1911 (Busck); Taboga Island, June, 1911 (Busck); Porto Bello, April (Busck) and December, 1912 (G. F. Cleveland).

The larva feeds in the dry cacao pods. None of the specimens agree with Ragonot's definition in having vein 8 of hind wing free. Guiana specimens are the same, and of three before me from Grenada, British West Indies, only one agrees with Ragonot's character, the two having veins 7 and 8 anastomosing nearly to apex. I have no specimens from Haiti, the type locality, but believe the character to be valueless, as the specimens all agree otherwise.

MYELOIS DECOLOR Zeller.

2. Porto Bello, April (Busck) and December, 1912 (G. F. Cleveland).

MYELOIS POMBRA, new species.

Pale gray, the veins and discal cross-vein lined in pale fuscous; lines whitish, rather broad but not contrasted, the inner one far out and straight across the wing, the outer one bent on the stalk of veins 4-5; no terminal dots; fringe pale. Hind wing translucent pale gray, paler at base. Expanse, 17 mm.

Type.—Male, No. 16365, U.S.N.M.; Cabima, May, 1911 (Busck).

MYELOIS EUZOPHERELLA, new species.

Fore wing with veins 4-5 stalked, 10 stalked; hind wing with 3-5 stalked; gray, a little mixed with reddish; lines distinct, pale, with

dark edges, far out, parallel and nearly straight; a circle of black blotches about the discal spot; veins with broken black streaks, terminal dots present, small. Hind wing subtranslucent, pale fuscous, the veins, costa, and margin darker. Expanse, male, 18 mm.; female, 22 mm.

Cotypes.—Male and female, No. 16367, U.S.N.M.; Cabima, May, 1911 (Busck); Trinidad River, June, 1912 (Busck). Also nine others with additional localities, Corozal, Canal Zone, May, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

FUNDELLA PELLUCENS Zeller..

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

DIFUNDELLA, new genus.

Fore wing with veins 2-3 curved, parallel, rather near the end of the cell, 4-5 approximate at base, 6 below apex of cell, curved at base, 8-9 stalked, 10 and 11 on the cell. Hind wing with 2 rather near the end of the cell, 3 approximated to the stalk of 4-5, which is very long, 6 from the apex of the cell, 7 anastomosing with 8. Labial palpi upturned to vertex; smooth; maxillary palpi stout-filiform. Male antennæ simple, not curved at base, not ciliate.

Type of the genus.—*Difundella corynophora*, new species.

DIFUNDELLA CORYNOPHORA, new species.

Fore wing dull black in the basal space and upper half of median space, with short black rays on the discal venules; rest of wing brown with red irrorations; inner line oblique, straight, red-centered; discal mark reniform, reddish, pale; outer line red-centered, irregular and a little excurved over discal venules, followed by blackish above; termen slightly purplish. Hind wing blackish, translucent, in the male beneath with a brown tuft on discal vein in cell and a large one on submedian below it; inner margin grooved and hairy. Expanse, 15 mm.

Type.—Male, No. 16377, U.S.N.M.; La Chorrera, May, 1912 (Busck).

ANYPSIPYLA, new genus.

Fore wing with veins 2, 3 close to angle of cell, 4-5 long-stalked, 6 below angle of cell, straight, 8-9 stalked, 10 and 11 on the cell. Hind wing with vein 2 before the angle of the cell, 3-5 stalked, all the veins firmly united, 6 from apex of cell, 7-8 long-anastomosing. Labial palpi upturned above vertex; maxillary palpi filiform, slightly dilated with scales; antennæ of male simple, ciliate.

Type of the genus.—*Anypsipylla univitella*, new species.

ANYPSIPYLA UNIVITELLA, new species.

Fore wing dark gray; a broad white band through the cell, touching the costa for a space beyond the base and at its termination; base rather broadly dark gray; two small black dots and a dash at

the end of the cell; terminal dots black, nearly confluent; a narrow black line along submedian fold. Hind wing whitish, translucent, the veins and termen dark. Expanse, 22 mm.

Type.—Female, No. 16368, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts). Also one male and two females with additional data, April, 1912 (Busck) and additional locality, Porto Bello, May, 1912 (Busck).

DRESCOMA, new genus.

Fore wing with veins 2, 3 before angle of cell, 4, 5 separate, 6 below upper angle of cell, 8-9 stalked, 10, 11 on the cell. Hind wing with 2 before the angle, median vein bifid, 4-5 stalked, cell short the cross-vein not opposite 3, 6 at apex of cell, 7 and 8 separate, parallel. Labial palpi upturned to vertex; maxillary palpi thickly filiform, bent inward; male antennæ simple, very slightly thickened at base. Hind wing with modifications beneath in the male; tip of abdomen with dense black tufts.

Type of the genus.—*Drescoma cyrdipsa*, new species.

DRESCOMA SORAELLA Druce.

Homæosoma soraella DRUCE, Biol. Cent.-Amer., Lep. Het., vol. 2, 1899, p. 565.

5. Trinidad River, March, 1912 (Busck); Corozal, Canal Zone, May, 1912 (Busck) and November, 1912 (C. P. Crafts); Porto Bello, October, 1912 (G. F. Cleveland).

Druce's characterization is insufficient to distinguish between the three species before me, consequently I adopt Schaus's identification of *soraella* in Costa Rican specimens, the male with a raised shining black disk in the cell of hind wing below, adjoined by a hair tuft. The specimens have very dark hind wings and do not agree well with Druce's figure (Plate 101, fig. 28), which comes nearer to *civilixa*. I therefore suggest the alternative name *druceella* for this form.

Type.—Male, No. 16373, U.S.N.M.; Porto Bello, October, 1912 (G. F. Cleveland).

DRESCOMA CYRDIPSA, new species.

Markings as in *D. druceella* Dyar and *Megarthritis peterseni* Zeller, rather larger than the former, smaller than the latter; distinguished only by the male secondary character, an impressed pale fovea on costa of hind wing below, bending the veins into the cell, and followed basally by a notched area of black scales. Expanse, 16 mm.

Type.—Male, No. 16374, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also five males and eight females, the latter presumably of this species, with additional localities, Trinidad River, March and June, 1912 (Busck); Porto Bello, May (Busck) and October, 1912 (G. F. Cleveland); Cabima, May, 1911 (Busck); Corozal, Canal Zone, February, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

DRESCOMA CINILIXA, new species.

Markings essentially as in the preceding; fore wing narrower, the outer line further out and more excurved below; dark bar crossing the white costal space slender and indistinct. Hind wing whitish, fuscous only on margin and costa. Expanse, 16 mm. Male with small oblique black mark on costa below, the costa slightly indented; streaks of rusty scales along subcosta and vein 7 well toward apex and a short one on discal fold in the cell; a row of black scales along the base of inner margin.

Type.—Male, No. 16375, U.S.N.M.; La Chorrera, May, 1912 (Busck).

ZAMAGIRIA, new genus.

Fore wing with veins 2, 3 before the angle of the cell, 4-5 closely approximated on basal third, 6 from the apex of the cell, 8-9 long stalked, 10 and 11 on the cell. Hind wing with vein 2 before the angle of the cell, 3 from the angle, 4-5 stalked for over half their length; median nervure bifid (in Ragonot's sense), cell short, the cross-vein not opposite vein 3. Maxillary palpi of the male with two long tufts, furcate on a slender stem. Labial palpi upturned above vertex, thick, hollowed, the third joint short, acicular. Antennæ pubescent; a hollow at base filled with scales.

Type of the genus.—*Zamagiria dixolophella*, new species.

ZAMAGIRIA DIXOLOPHELLA, new species.

Dark gray, the lines indistinct; basal space lighter gray below the costa, lightest next the inner line; a broad salmon reddish area, except on costa, edged by a line of black scales within, by a whitish line without, which is dentate on vein 1; outer line a pale shade close to the margin, bordered by black marks on the veins within. Hind wing translucent pale fuscous, the veins and termen darker. Expanse, 21 mm. The two long tufts on the maxillary palpi are dark pink and reach back on the fore wing in the specimen.

Type.—Male, No. 16376, U.S.N.M.; Corozal, Canal Zone, November, 1912 (C. P. Crafts).

CABIMA, new genus.

Fore wing with veins 2, 3 before the end of the cell, 4-5 closely approximated to their basal thirds or stalked, 6 below apex of cell, 8-9 stalked, 10 and 11 from the cell, 10 running close to the stalk of 8-9. Hind wing with the cell long, vein 2 near the middle, 3 from the lower angle, joining the cross-vein narrowly, 4-5 long-stalked, 6 from apex of cell, 7 anastomosing with 8 nearly to apex. Labial palpi slender, oblique, straight, the third joint long and distinct; maxillary palpi small, filiform. Antennæ of male ciliate, a deep sinus at base of flagellum with a small tooth of scales, not filling the sinus, but making it into a notch.

Type of the genus.—*Cabima dosia*, new species.

Near *Hypsipyla* Ragonot, but differing in the palpi and male antennæ.

CABIMA DOSIA, new species.

Light gray, shading to red-brown on the inner half of wing; veins with many black streaks; inner line a vague cloud; outer line of dots on the veins, followed by whitish, angled at the veins 4-5; terminal dots black. Hind wing soiled white in the male, shaded with fuscous on costa and margin in the female, translucent. Expanse, male, 25 mm.; female, 31 mm.

Cotypes.—Male and female, No. 16369, U.S.N.M.; Cabima, May, 1911 (Busck). Also seven others from the same place.

CABIMA DECURRENS, new species.

Luteous gray, the veins streaked with black, forming nearly a band from vein 1 to inner margin, close streaked costally; the streaks are cut across the discal venules for the outer line. Hind wing pellucid white, gray on costa and termen; fringe pale gray. Expanse, 24 mm.

Type.—Male, No. 16370, U.S.N.M.; Trinidad River, March, 1912. (Busck). Also one male from the same place, three females from La Chorrera, May, 1912 (Busck), and one from Corozal, Canal Zone, March, 1912 (Busck).

The notch in the antennæ is smaller than in *dosia* and involving fewer joints.

CABIMA HOPLIDICE, new species.

Dark gray with traces of purplish veins, the costa streaked with black; a small discal mark; outer line indicated by a row of dots. Hind wing semitranslucent smoky blackish, darker on the costa. Expanse, 26 mm.

Type.—Male, No. 16371, U.S.N.M.; Porto Bello, April, 1912 (Busck).

HYPSSIPYLA MURISCIS, new species.

Fore wing white on costal half, shading to purplish gray on the inner half; a blackish spot near base of costa and another on inner margin; inner line blackish, bent at an angle on median vein, its termination opposite its inception; two black discal dots; discal venules streaked with black; outer line double and black on upper third, whitish and without borders below, bent out a little at veins 4-5; a row of terminal black dots. Hind wing whitish, translucent, the costa and termen gray. Expanse, 24 mm.

Type.—Male, No. 16367, U.S.N.M.; Cabima, May, 1911 (Busck).

CHORRERA, new genus.

Fore wing with veins 2 to 5 separate, 6 below end of cell, 8-9 stalked, 10 and 11 on the cell. Hind wing with 2 before the end of the cell, 3 closely approximated to 4-5 at base, 4-5 stalked; cell rather long, reaching to the middle of the wing; 6 from the apex of

the cell, 8 close to 7 for a long distance, not anastomosing. Palpi slender, upturned. Antennæ of male with a small but rather long tuft of scales in a shallow sinus at base.

Type of the genus.—*Chorrera idiotes*, new species.

CHORRERA IDIOTES, new species.

Dark gray with slightly luteous underground, irrorated with black, somewhat transversely; general effect dark; lines inconspicuous, the inner far from the base, pale, with black outer edge, a little oblique, denatate in the cell and on submedian; outer line near the margin, its inner black edge only distinct, indented subcostally, followed by black; a black terminal line. Hind wing pure white, translucent; costa narrowly dark fuscous. Expanse, male, 14 mm.; female, 17 mm.

Cotypes.—Male and female, No. 16378, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also 11 others from the same place.

ORCYTOMETOPIA FOSSULATELLA Ragonot.

5. Corozal, Canal Zone, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Porto Bello, October, 1912 (G. F. Cleveland).

ORCYTOMETOPIA CLEVELANDELLA, new species.

Fore wing rosy gray on the inner half, the costa broadly white; base dark; inner line oblique, broken into dots, dull crimson across the white, gray below; discal dot double, dull crimson; outer line near the margin, nearly straight, whitish, edged with dull crimson within across the white, gray below; termen tinged with crimson; a dark shaded terminal line. Hind wing translucent whitish in the male, darker in the female, the veins strongly dark-lined and the folds slightly lined; a double dark fuscous terminal line; fringe dark. Expanse, male, 16 mm.; female, 17 mm.

Cotypes.—Male and female, No. 16372, U.S.N.M.; Porto Bello, December, 1912 (G. F. Cleveland). Also two dwarfed females, Tabogilla Island, February, 1912, marked "leaf-roller on tree at seashore." (Busck).

ACROBASIS CRASSISQUAMELLA Hampson.

3. Porto Bello, April, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

ACROBASIS (?) JOCARELLA Schaus.

1. Porto Bello, December, 1912 (G. F. Cleveland).

I do not think this species belongs to *Acrobasis*, but as the specimen is a female it can not be positively placed.

DASYPYGA QUERNA, new species.

Fore wing gray; basal space faintly tinged with reddish; inner line straight, oblique, composed of a row of black dots; discal dot powdery, followed by a cloud below; outer line of black dots in faint whitish, bent at vein 5 and a little incurved above; costal region powdered

with black; terminal black dots distinct. Hind wing pale, translucent; veins, costa, terminal line and a line in fringe fuscous. Expanse, 11 mm.

Type.—Male, No. 16384, U.S.N.M.; La Chorrera, May, 1912 (Busck).

HOMALOPALPIA, new genus.

As in *Piesmopoda* Zeller, but the labial palpi of the male flattened and thickened with scales; male antennæ with the basal joint modified by a central notch or pocket, the shaft simple or with a row of flattened teeth on the upper side.

HOMALOPALPIA DALERA, new species.

Basal joint of antennæ of male with a round pocket containing a black prominence, the shaft thickened at base by a row of black teeth on the upper side. Vertex with a high tuft of scales. Fore wing with the basal space black-brown, with large, somewhat raised scales; rest of wing light tan-gray, the marks indistinct; a broad brownish shading across cell; narrow conjoined discal dots and dotted border to the pale outer line; terminal dots joined by a fine line; fringe pale rosy. Hind wing translucent soiled whitish, with terminal fuscous line; fringe dark at base. Expanse, 15 mm.

Type.—Male, No. 16379, U.S.N.M.; La Chorrera, April, 1912 (Busck). Also one from Porto Bello, March, 1911 (Busck).

A fine series from Costa Rica has been identified by Mr. Schaus as *Piesmopoda columnella* Zeller, but we have another similar species with different male antennæ, so named by Sir G. F. Hampson and they can not both be Zeller's species. Zeller described from a female from Colombia and his species is unrecognizable except by further collections from the same locality.

PIESMOPODA LAIDION Zeller.

1. Porto Bello, February, 1911 (Busck).

PIESMOPODA XANTHOPOLYS, new species.

Fore wing bright yellow, a little olive tinted, shading to purple and white along costa and beyond the middle, finally deep purple with white irrorations; only slight traces of the outer line. Hind wing faintly fuscous stained, especially on the margin. Expanse, 13 mm.

Type.—Female, No. 16380, U.S.N.M.; Porto Bello, September, 1912 (G. F. Cleveland). Also three others with additional data, December, 1912 (G. F. Cleveland), and additional localities, La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, July, 1912 (J. Zetek).

Near *P. flavicans* Zeller, but the yellow more restricted, the outer line obsolete.

PIESMOPODA XANTHOMERA, new species.

Fore wing with a small area of olive yellow near the base; base and wing beyond purple, washed with white over the costal area; discal dots dark, double; outer line far out, whitish, straight. Hind wing blackish fuscous, the disk between the veins semitransparent. Expanse, 15 mm.

Type.—Female, No. 16381, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also two males and four females with additional localities, Porto Bello, September and October, 1912 (G. F. Cleveland); Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck).

Varies in size, the males 10 mm., the females 11–16 mm. A male from French Guiana is labeled by Sir G. F. Hampson "*Piesmopoda flavicans* Zeller. The Guatemala sp. on which *Discopalpia* is founded is quite distinct." *Discopalpia* Ragonot¹ was supposed to have been founded on *Myelois flavicans* Zeller, but according to the above note, Ragonot's specimen was misidentified. *Flavicans* falls in *Piesmopoda*, and *Discopalpia*, with this type, therefore becomes a synonym of *Piesmopoda*, its diagnosis being in error, taken from a different, unnamed species.

PIESMOPODA XANTHOUEMIA, new species.

The whole of fore wing violaceous-olive, no separate yellow area, the colors entirely blended; costal half thickly white-powdered; costal edge dark red; inner line a trace, dark; outer line far out, whitish, nearly straight. Hind wing whitish with fuscous veins and margin. Expanse, 16 mm.

Type.—Male, No. 16382, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also one male and one female with additional locality, Paraiso, Canal Zone, January, 1911 (Busck).

PHYCITA ALMONELLA, new species.

Fore wing dark gray, rosy tinged, broadly powdered with white along costa to outer line; inner line obscure, outer one far out, straight, whitish; discal dots minute but distinct, dark, separate. Hind wing translucent, fuscous tinged. Expanse, 15 mm.

Male with a pale hair tuft on the claspers; hind wing with rusty brown scales along base of costa and bases of veins beneath; antennæ with a broad flattened area at base, probably bearing a tuft in fresh condition; fore wing with vein 10 running close to 8–9, 4 and 5 approximated closely for a short distance at base.

Type.—Male, No. 16383, U.S.N.M.; Porto Bello, May, 1912 (Busck). Also two females, presumably the same species, La Chorrera, May, 1912 (Busck).

ELASMOPALPUS LIGNOSELLUS Zeller.

58. Trinidad River, March, 1912 (Busck); Porto Bello, April, May (Busck) and October, 1912 (G. F. Cleveland); Alhajuelo, April, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); Paraiso, Canal Zone, May, 1911 (Busck); La Chorrera, May, 1912 (Busck); Corozal, Canal Zone, May, 1912 (Busck), and July, 1912 (C. P. Crafts.)

ELASMOPALPUS RUBEDINELLUS Zeller.

67. Taboga Island, February, 1912 (Busck); Trinidad River, March, 1912 (Busck); Porto Bello, April, May (Busck) and October, 1912

¹ Romanoff, Mém. sur les Lep., vol. 7, 1893, p. 167.

(G. F. Cleveland); Alhajuelo, April, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck); La Chorrera, April and May, 1912 (Busck); Corozal, Canal Zone, April and May, 1911 (Busck), July (J. Zetek, C. P. Crafts) and August, 1912 (C. P. Crafts).

ANCYLOSTOMIA STERCOREA Zeller.

3. Trinidad River, March, 1912 (Busck); La Chorrera, May, 1912 (Busck).

ILLATILA, new genus.

Fore wing with vein 2 before the angle of the cell, 3 at the angle, 4-5 stalked, not forming a straight line with the median, 6 below apex of cell, 8-9 stalked, 10 and 11 on the cell, 10 close to the end. Hind wing with the cell short, vein 2 at the angle, 4 absent, 3 and 5 long stalked, 6 at the apex of cell, 7 and 8 anastomosing for half the distance beyond the cell. Labial palpi upturned to vertex, terete, cylindrical; maxillary palpi scaly, filiform. Male antennæ simple.

Type of the genus.—*Illatila gurbyris*, new species.

ILLATILA GURBYRIS, new species.

Fore wing brownish gray, shaded with black at base and over cell beyond inner line and discal spot, the latter pale with club-like rays on the discal venules; lines black, slender; inner line beyond the black basal space, bent a little on the median vein; outer line far out, its median segment a little exerted, not dentate, followed by a pale line; terminal dots subconfluent. Hind wing soiled whitish, a little ocherous on the fringe; costa narrowly grayish. Expanse, 13 mm.

Type.—Male, No. 16385, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also two males, one female with the same data.

EUZOPHERA TINTILLA, new species.

Fore wing narrow, pale gray, a trace of reddish on the inner half, which accumulates into a rounded patch on vein 1 at middle of median space; lines distinct, slender, black, the inner one strongly rounded outwardly and irregularly crenulate, the outer parallel to the margin, denticulate on the median venules, but hardly excurved; discal dots joined; terminal dots subconfluent. Hind wing whitish, translucent, the veins terminally and double line fuscous. Expanse 19 mm.

Type.—Male, No. 16386, U.S.N.M.; Porto Bello, April, 1912 (Busck).

EUZOPHERA MABES, new species.

Fore wing broad, purplish brown, perhaps green when fresh; inner line blackish, bent at right angles in the middle; discal dots imperfectly separated; outer line parallel to the margin, subcrenulate and very slightly exerted over the discal venules, blackish, followed by a pale shade and a second blackish line at costa only; terminal dots subconfluent. Hind wing blackish, subtranslucent between the veins, the fringe with a pale basal line. Expanse, 15 mm.

Type.—Female, No. 16387, U.S.N.M.; Taboga Island, February, 1912. Also another female, less distinctly marked, Porto Bello, April, 1912 (Busck).

EUZOPHERA CONQUISTADOR, new species.

Purplish brown, dark through the median space and narrowly at base; inner line a broad light area, angled outwardly on submedian fold and incurved on vein 1; discal mark light; outer line broad, pale, denticulate on its inner border. Hind wing fuscous blackish. Expanse, 18 mm.

Type.—Female, No. 16390, U.S.N.M.; Cabima, May, 1911 (Busck).

EUZOPHERA RINMEA, new species.

Gray, dusted with brown black; inner line white, oblique, distinct, crumpled in the middle, followed by a black shade that diffuses outwardly; discal dots black, separate, followed by a row of streaks on the venules; outer line whitish, incurved subcostally and outward below, preceded by dots on the veins; terminal dots black. Hind wing pale fuscous with dark veins and termen. Expanse, 15 mm.

Type.—Female, No. 16391, U.S.N.M.; Trinidad River, March, 1912 (Busck).

EUZOPHERA GLOMIS, new species.

Violaceous gray, perhaps faded from a richer color; base blackish; inner line black, oblique, broad on costa, narrowing below, angled outwardly in submedian fold; discal dots separated; outer line very near the margin, gently excurved, angled at submedian fold, blackish, slender, subdenticulate, followed by a pale border more distinct than the line; terminal dots small. Hind wing blackish; a pale line at base of the fringe. Expanse, 15 mm.

Type.—Female, No. 16388, U.S.N.M.; Taboga Island, February, 1912 (Busck).

EUZOPHERA CLIMOSA, new species.

Fore wing broad and more trigonate than usual; purplish gray; costa broadly white shaded, narrowly dark at the edge; inner line obsolete; discal dot sometimes absent; outer line a pale diffuse shade, preceded by blackish and followed by the same near costa also; terminal dots nearly obsolete. Hind wing dark fuscous in the male, black in the female. Expanse, male, 12 mm.; female, 15 mm.

Cotypes.—Male and female, No. 16389, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also four females with additional locality, Taboga Island, February, 1912 (Busck).

ANTHOPTERYX, new genus.

Fore wing with vein 2 from long before the angle of the cell, 3 and 5 from the angle, 4 absent, 6 above the middle of the cross vein, 8-9 stalked, 10 close to the apex of the cell, 11 on the cell. Hind wing with the cell long, over half the length of the wing, vein 2 from

before the angle, 3 and 5 stalked, 4 absent, 6 from the apex of the cell, 7 and 8 anastomosing nearly to the tip. Labial palpi slender, obliquely upturned to the vertex. Antennæ of female ciliate.

Type of the genus.—*Anthopteryx irichampa*, new species.

ANTHOPTERYX IRICHAMPA, new species.

Gray, shaded with reddish brown except along costa; basal space wide with narrow longitudinal black lines in the center; inner line slender, regularly and distinctly arcuate, blackish; preceded by pale; discal dots strongly fused into a black bar; discal venules lined in black, at bases of veins 2, 3, and 4, forming short bars; outer line near the margin, nearly parallel thereto, slightly flexuous, whitish, with faint bordering dark shades; no terminal dots. Hind wing pale fuscous, translucent, the fringe pale. Expanse, 14 mm.

Type.—Female, No. 16392, U.S.N.M.; Taboga Island, February, 1912 (Busck).

BEMA, new genus.

Fore wing with vein 2 well before the angle of the cell, 3 and 5 separate, 4 absent; 6 below apex of cell, 8-9 long-stalked, the stalk curved and approximate to 10, 10, and 11 on the cell. Hind wing with the cell very short, vein 2 long before the angle, 3 and 5 separate, 4 absent, 6 from the apex of cell, approximate to 7-8 at base, 7 and 8 anastomosing nearly to apex, 8 indistinct. Labial palpi upturned, short, not reaching the vertex. Maxillary palpi minute. Antennæ of male with the basal joint triangular, the flagellum set on one corner, thickened, simple.

Type of the genus.—*Bema myja*, new species.

BEMA MYJA, new species.

Pale gray, lines pale, wavy, far out, the outer one near the margin and preceded by black dots; discal dots small, black, separated. Hind wing translucent, the veins and termen fuscous, interspaces faintly lined. In the male the veins show dark rough scaling. Beneath, behind the fore coxa, is a large tuft of creamy white hairs; costa of fore wing with a small fold at base; a patch of metallic black scales on the abdomen dorsally before the tip. Expanse, male, 16 mm.; female, 15 mm.

Cotypes.—Male and female, No. 16393, U.S.N.M.; Taboga Island, February, 1912 (Busck).

RELMIS, new genus.

Fore wing with vein 2 from before angle of cell, 3, 5 separate, 4 absent, 6 below apex of cell, 8-9 long-stalked, 10 and 11 on the cell, free. Hind wing with the cell short, about one-third the length of wing, vein 2 long before the angle, 3 and 5 separate, 4 absent, 6 close to 7 at base, 7 and 8 anastomosing nearly to apex. Labial palpi slender, upturned to vertex.

Type of the genus.—*Relmis ydda*, new species.

RELMIS YDDA, new species.

Dark gray, a little violaceous; base dark; inner line paler than the ground, oblique, straight, edged with blackish within and very broadly so without; discal dots joined; outer line in-angled on subcostal and submedian and broken-dentate, pale, with dark inner edge; terminal dots small; fringe pale. Hind wing dark fuscous, veins and termen blackish; fringe pale. Expanse, 19 mm.

Type.—Female, No. 16394, U.S.N.M.; Trinidad River, June, 1912 (Busck). Also another female, in poor state, from the same place, May, 1911 (Busck).

RELMIS FIFACA, new species.

Soft pale gray, the veins lined with dark powderings; inner line very oblique, whitish, dentate on the outer side on subcostal and submedian and followed by a narrow dark shade; discal dots joined in a line; outer line near the margin, angled inward on subcostal and outward on vein 5, faint below, whitish with dark inner shade; terminal dots subconfulent. Hind wing whitish, gray on costa and termen. Expanse, 18 mm.

Type.—Female No. 16395, U.S.N.M.; Porto Bello, December, 1912 (G. F. Cleveland).

MOERBES, new genus.

Fore wing with vein 2 from the cell, 3 close to the end of the cell, 4-5 stalked, 6 below apex of cell, 8-10 stalked, 11 on the cell. Hind wing with the cell short, 2 from long before the angle, 3 and 5 stalked, 4 absent, 6 from the apex of cell, 7 and 8 anastomosing nearly to tip of wing. Labial palpi moderate, porrect, the second joint scaly above, third blunt; maxillary palpi in both sexes small, stout, smoothly scaled. Antennæ of male ciliate, without bend or tuft. A fold at base of costa of fore wing below.

Type of the genus.—*Zophodia dryopella* Schaus.¹

MOERBES DRYOPELLA Schaus.

3. Porto Bello, April, 1912 (Busck); Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

HARNOCHA, new genus.

Fore wing with veins 2-3 shortly stalked, 4-5 long stalked, 6 below apex of cell, 8-9 stalked, 10, 11 on cell. Hind wing with 2 from the angle of the cell, 3 absent, 4-5 long-stalked, 6 from the apex of cell, 7 anastomosing with 8. Palpi porrect, down curved, two-and-a-half times as long as the head. Maxillary palpi minute, scale-like. Tongue distinct. Antennæ of male simple, slightly bent at the base.

Type of the genus.—*Harnocha velessa*, new species.

¹ Ann. Mag. Nat. Hist. (8), vol. 11, 1913, p. 249.

HARNOCHA VELESSA, new species.

Fore wing rosy luteous, the costa broadly white to the middle of cell; an oblique black band, touching costal stripe near base; a round patch below cell; two black discal dots; a terminal row of close dots, absent at apex. Hind wing soiled whitish, slightly grayish at costa. Expanse, 12 mm.

Type.—Male, No. 16401, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also nine others from the same place but one, Trinidad River, June, 1912 (Busck).

EURYTHMIDIA IGNIDORSELLA Ragonot.

14. Porto Bello, March, 1911, April, 1912 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Alhajuelo, March, 1912, April, 1911 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

Smaller and brighter than Mexican specimens, on which the name was founded, and with whitish, not fuscous, hind wings in both sexes.

ENDOMMASIS NIGRITELLA Hampson.

23. Corozal, Canal Zone, April, 1912 (Busck); Paraíso, Canal Zone, April and May, 1911 (Busck); Porto Bello, February, 1911, April, May, 1912 (Busck); October and December, 1912 (G. F. Cleveland); La Chorrera, May, 1912 (Busck).

EURYTHMASIS, new genus.

Fore wing with veins 2-3 long-stalked from the angle of the cell, 4 absent, 5 from the angle of the cell, 6 below apex, 8-9 stalked, 10, 11 on cell. Hind wing with 2 from angle of cell, 4 absent, 3-5 long-stalked, 6 at apex of cell, 7-8 anastomosing half way to apex of cell. Labial palpi broken. Maxillary palpi small, filiform, scaly. Tongue distinct. Antennæ broken. Front without tuft, smooth.

Type of the genus.—*Eurythmasis ignifatua*, new species.

EURYTHMASIS IGNIFATUA, new species.

Scarcely distinguishable in markings from either *Endommasis nigritella* Hampson or *Eurythmidia ignidorsella* Ragonot. Rather light gray, the pale space above inner margin of fore wing indistinct and but little reddish. Expanse, 13 mm.

Type.—Male, No. 16400, U.S.N.M.; La Chorrera, May, 1912 (Busck).

DANNEMORA QUADRIPUNCTA Zeller.

2. Cabima, May, 1911 (Busck); La Chorrera, May, 1912 (Busck).

VITULA RUSTO, new species.

Wing-shape of *V. bodkini* Dyar, the markings similar, but bright and distinct; inner line white, distinct, with a small tooth on submedian, followed by a broad blackish shade; discal dots large, nearly contiguous; outer line white, slightly excurved centrally with inner dotted black edge; terminal dots small, distinct. Hind wing pale fuscous, with dark veins and termen. Expanse, 15 mm.

Type.—Female, No. 16405, U.S.N.M.; Paraiso, Canal Zone, May, 1911 (Busck).

VITULA TABOGA, new species.

Male without tuft on costa below; pale gray; inner line sharply angled in the center, followed by a black shade; discal dots separated; outer line whitish, near the margin, appearing denticulate from the dotted black inner segment; dark streaks on the discal venules; terminal dots nearly confluent. Hind wing whitish, very faintly fuscous tinted, veins and double terminal line fuscous. Expanse, male, 13 mm.; female, 14 mm.

Cotypes.—Male and female, No. 16404, U.S.N.M.; Taboga Island, February, 1912 (Busck).

Very close to *V. bodkini* Dyar,¹ perhaps the same, but the fore wing seems narrower, the hind wing paler.

VITULA BODKINI Dyar.

1. Trinidad River, May, 1911 (Busck).

CABOTIA RHYTHMATICA, new species.

Fore wing luteous purplish, powdered with white on the costa; inner line far out, very faint, forming a tooth on subcosta, arcuate below; discal dots blackish; outer line a trace, dark, especially toward costa, far out and parallel to the margin. Hind wing sordid whitish, fuscous on veins, margin and fringe. Expanse, 13 mm.

Cotypes.—Male and female, No. 16403, U.S.N.M.; Porto Bello, March, 1911, and April, 1912 (Busck).

Near *C. cundajensis* Zeller, but not the same as the specimens so identified before me.

EDULICA COMPEDELLA Zeller.

3. Porto Bello, April and May, 1912 (Busck).

EURYTHMIA VESTILLA, new species.

Palpi long and slender, frontal tuft prominent; inner line vague whitish, nearly erect, followed by a broad black shade; discal dots dark; outer line like the inner reversed, more slender, very vague. Hind wing transparent pale fuscous. Expanse, 10 mm.

Type.—Female, No. 16406, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck). Also one female from the same place.

EURYTHMIA COQUILLA, new species.

Palpi long, oblique, rather shaggy and pointed. Base of wing pale nearly to the middle, its end erect, sharp; discal dots joined; outer line lost. Hind wing translucent pale fuscous. Expanse, 11 mm.

Type.—Female, No. 16407, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also another female from the same place.

EURYTHMIA COCA, new species.

Palpi rather short and stout. Fore wing luteous gray, black-powdered; lines lost, but indicated by some rather coarse black dots;

¹ Ins. Ins. Men., vol. 1, 1913, p. 99.

discal dots black, separate. Hind wing white with fuscous termen. Expanse, 10 mm.

Type.—Male, No. 16408, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also two females with the same data.

EURYPHYTHIA MOSSA, new species.

Palpi rather short and stout, upturned. Fore wing narrow, blackish gray; inner line pale, erect, irregular, followed by a black shade that reaches the discal dots, which are large and rather diffused; outer line far out, whitish, somewhat irregular and diffused. Hind wing whitish, veins and termen fuscous. Expanse, 10 mm.

Type.—Female, No. 16409, U.S.N.M.; Tabogilla Island, February, 1912 (Busck). Also another female from the same place.

EURYPHYTHIA UNCTA, new species.

Palpi slender, oblique, a small tuft at end of second joint; front prominent. Fore wing dark gray; inner line white, strongly oblique, denticulate, followed by a black shade; discal dots black, separate; outer line far out, parallel to outer margin, denticulate, slender, white. Hind wing whitish, translucent, veins and termen fuscous. Expanse, 10 mm.

Type.—Female, No. 16410, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also two females with the same data and three others in indifferent condition and not certainly the same species with additional localities, Porto Bello, April, 1912 (Busck); La Chorrera, May, 1912 (Busck).

HARNOCHINA, new genus.

Fore wing with veins 2 and 3 before the angle of the cell, separated, 4-5 stalked, not in line with the median, 6 below apex of cell, 8-9 long-stalked, 10 and 11 on the cell. Hind wing with 2 at the angle of the cell, 4 absent, 3-5 very long-stalked, 6 stalked, 7 and 8 strongly anastomosing. Labial palpi upturned, the second joint oblique or nearly erect, widened a little with scales on both sides, third joint gently deflexed. Maxillary palpi small, filiform. Antennæ of male strongly ciliate, subserrate, not bent.

Type of the genus.—*Harnochina rectilinea*, new species.

HARNOCHINA RECTILINEA, new species.

Fore wing yellowish, the costa white; a black powdering at apex running down center of terminal space; lines blackish, straight, nearly parallel, the inner one sometimes a little irregular and not crossing the costal white stripe. Hind wing fuscous blackish, darker in the female, uniform; a pale line showing in the base of the fringe. Expanse, 10 mm.

Type.—Male, No. 16402, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck). Also one male from the same place, May, 1912 (Busck), and five females, La Chorrera, May, 1912 (Busck); Cabima, May, 1911 (Busck).

MESCINIA BEROSA, new species.

Fore wing grayish white, shaded with dull vinous on the basal third, along inner margin and up terminal space; inner line whitish, narrow, indistinct, showing as a cusp centered on vein 1; discal dots black, separated; outer line straight but denticulate, whitish, narrow, parallel to the margin, preceded by a black shade centrally only; terminal line dark, powdery. Hind wing pale fuscous, darker on the termen. Expanse, 11 mm.

Type.—Female, No. 16398, U.S.N.M.; Trinidad River, March, 1912 (Busck).

MESCINIA TRILOSES, new species.

Fore wing very pale gray, faintly pinkish, the costa white; inner line blackish, powdery and diffused, but broad, upright and nearly straight, not reaching the costa or margin; discal dots joined; outer line oblique, straight, whitish, edged with blackish, distinctly within, narrowly and faintly without. Hind wing soiled whitish, fuscous on the margin. Expanse, 11 mm.

Type.—Male, No. 16396, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also four males and seven females with additional localities, Tabogilla Island, February, 1912 (Busck); Alhajuelo, April, 1911 (Busck).

MESCINIA MOSCES, new species.

Similar to the above, the inner line broken and indistinct, lost in a general longitudinal powdering which is strong in the discal area; colors rather brighter, the pinkish gray of the inner area contrasting with the white costa; outer line strongly black-edged. Expanse, 12 mm.

Type.—Female, No. 16397, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also one male and five females with additional locality, Corozal, Canal Zone, April, 1911, and May, 1912 (Busck).

HYPERMESCINIA, new genus.

Differs from *Mescinia* in having veins 2 and 3 of fore wing coincident.

Type of the genus.—*Hypermescinia lambella*, new species.

HYPERMESCINIA LAMBELLA, new species.

Whitish gray, the costa white; lines dark gray, powdery, straight; inner line a little irregular centrally; outer line doubled; discal dots joined. Hind wing whitish in the male, pale fuscous in the female, the veins and termen darker. Expanse, 10 mm.

Type.—Male, No. 16399, U.S.N.M.; Tabernilla, Canal Zone, May, 1907 (Busck). Also three females, Porto Bello, February, 1912 (Busck); La Chorrera, May, 1912 (Busck); Trinidad River, June, 1912 (Busck).

MOODNA SUPPLICELLA, new species.

Fore wing long and narrow, vinous blackish; basal space vinous-black; median black; lower half of terminal space vinous; lines whitish, slender, powdery and broken, the inner far out, oblique, the outer near and parallel to the margin. Hind wing translucent pale fuscous, veins and termen dark. Expanse, 13 mm.

Type.—Female, No. 16417, U.S.N.M.; Trinidad River, June, 1912 (Busck). Also one male and six females, Porto Bello, April and May, 1912 (Busck), October, 1912 (G. F. Cleveland); Cabima, May, 1911 (Busck).

HOMÆOSOMA MUSIOSUM, new species.

Fore wing rather square and bluntly rounded; whitish, uniformly sprinkled with black, the general effect pale gray; lines obsolete; basal area a little darker; discal spots distinct, separated; a blackish streak on the costa before apex. Hind wing sordid whitish; a terminal fuscous line. Expanse, 13 mm.

Type.—Female, No. 16411, U.S.N.M.; Porto Bello, May, 1911 (Busck). Also one male and five females with additional data, May, 1912 (Busck) and localities, Taboga Island, February, 1912 (Busck); Cabima, May, 1911 (Busck); Trinidad River, March, 1912, and May, 1911 (Busck).

HOMÆOSOMA MUCIDELLA Ragonot.

13. Trinidad River, March and September, 1912 (Busck); Porto Bello, February, 1912 (Busck); Corozal, Canal Zone, November, 1912 (C. P. Crafts).

CALAMOPHLEPS, new genus.

Fore wing with vein 2 near angle of cell, 3-5 stalked, 6 below apex of cell, 8-9 stalked, coincident or nearly so, 10 and 11 on cell. Hind wing with vein 2 from the angle of the cell, 3 and 5 long-stalked, 4 absent, 6 from apex of the cell, 7 anastomosing with 8, nearly coincident. Labial palpi slender, obliquely upturned; maxillary palpi small, filiform. Antennæ of male minutely ciliate with spines at the apices of the joints.

Type of the genus.—*Calamophleps squalidella*, new species.

CALAMOPHLEPS SQUALIDELLA, new species.

Dark gray; inner line oblique, straight, defined only by a following black shade that spreads over part of median space; discal dot double, generally separated; outer line close to margin, pale, vague, straight, defined by a dark, narrow, inner shade. Hind wing pale fuscous, veins and termen darker; a pale line in base of fringe. Expanse, 12 mm.

Type.—Female, No. 16414, U.S.N.M.; Porto Bello, May, 1912 (Busck). Also 3 males and 9 females from the same place with additional data, December, 1912 (G. F. Cleveland), and from La Chorrera,

May, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck), March, 1911 (Busck).

Two of the specimens have veins 4 and 5 coincident on one wing.

Since preparing these descriptions I find that *Calamophleps squalidella* is undoubtedly the same as *Azæra mucicella* Schaus;¹ but as *Azæra* is too near *Azara* D'Orbigny (Mollusca) to be retained I let the descriptions stand as written, leaving *squalidella* to designate the specimens actually under observation, to avoid possible future confusion.

CALAMOPHLEPS NODOSES, new species.

Pale gray, whitish on costa; lines dark, the inner broad, nearly straight, not attaining either margin; discal dot clouded, double; outer line straight, parallel to and near the outer margin, with narrow following pale shade. Hind wing translucent fuscous. Expanse, 10 mm.

Type.—Female, No. 16415, U.S.N.M.; Corozal, Canal Zone, April, 1911 (Busck).

CALAMOPHLEPS LOPHOPHORA, new species.

Front with projecting divided tuft. Dark gray, finely powdered with black; inner line whitish, oblique, irregular, followed by a black shade; discal dots dark, separated; outer line narrow, pale, a little flexuous, all the markings obscure and apparently inconstant. Hind wing silky translucent pale fuscous. Expanse, 11 mm.

Type.—Female, No. 16416, U.S.N.M.; Porto Bello, May, 1912 (Busck). Also one female, La Chorrera, May, 1912 (Busck).

COMOTIA, new genus.

Fore wing with vein 2 before the angle of the cell, 3 and 5 shortly stalked, 4 absent, 6 below apex of cell, straight, long; 8 and 9 coincident, close to 10 at base, 10 and 11 on the cell. Hind wing with the cell very short, vein 2 long before the angle, 4 absent, 3 and 5 separate, 6 close to 7 at base, 7 and 8 coincident. Labial palpi slender, upturned to vertex. Maxillary palpi minute. Antennæ of male with the basal joint triangular, the flagellum on one corner, a small spine on the other; flagellum with its second joint large, flat, excavated behind into a pocket, followed by a ridge of crests on the succeeding joints. Abdomen long and slender, the anal segment tufted.

Type of the genus.—*Comotia torsicornis*, new species.

COMOTIA TORSICORNIS, new species.

Fore wing long, very narrow, pale gray, a little streaked with black on the veins; discal dots black, separated; lines pale, obscure; terminal dots black. Hind wing translucent pale fuscous with dark veins and termen. Expanse, 13 mm.

¹ Ann. Mag. Nat. Hist. (6), vol. 11, 1913, p. 250.

Type.—Male, No. 16418, U.S.N.M.; Porto Bello, March, 1911 (Busck). A worn female, Taboga Island, February, 1912 (Busck), apparently belongs here, but shows small differences in venation. A trace of vein 8 is visible at apex of fore wing and veins 4 and 5 of fore wing are separate at origin.

STRYMAX, new genus.

Fore wing with veins 2 and 3 close to the end of the cell, parallel, 4 and 5 coincident, 6 below the apex of the cell, 8-9 coincident, 10 and 11 on the cell. Hind wing with vein 2 before the angle of the cell, bent a little at base, 4 absent, 3 and 5 separate, 6 from the apex of the cell, 7 anastomosing with 8 nearly to the tip. Labial palpi slender, upturned above vertex; maxillary palpi small, filiform. Antennæ of male simple, with a constriction at base of the flagellum.

Type of the genus.—*Strymax dorae*, new species.

STRYMAX DORAE, new species.

Whitish gray; inner line represented by two or three black patches in a line or triangle; discal dots small, black, narrow, separate; outer line defined by two dark shades, itself of the ground color. Hind wing translucent whitish, a little fuscous along the costa. Expanse, 10 mm.

Type.—Male, No. 16419, U.S.N.M.; La Chorrera, April, 1912 (Busck). Also 8 males and 9 females with additional localities, Corozal, Canal Zone, March, 1911, and May, 1912 (Busck); Trinidad River, March, 1912, and May, 1911 (Busck); Taboga Island, June, 1911 (Busck); Paraiso, Canal Zone, April, 1911 (Busck).

STRYMAX PYLLIS, new species.

Whitish gray, markings obsolete; discal dots distinct though minute, only traces of the inner dots; outer line a pale trace. Hind wing clear yellowish white in the male. Expanse, 11 mm.

Type.—Male, No. 16420, U.S.N.M.; Porto Bello, February, 1911 (Busck). Also four females tentatively referred here, Taboga Island, February, 1912 (Busck); Corozal, Canal Zone, April, 1912 (Busck); Trinidad River, March, 1912 (Busck).

EPESTIODES PLORELLA, new species.

Fore wing rather dark gray, finely peppered with black, of the same color throughout; inner line whitish, broad, rather diffused, straight, followed by a broad black shade; discal dots conjoined; outer line whitish, parallel to and near the margin, narrow, a little irregular, with slight black defining shade; a dark terminal shade-line. Hind wing translucent soiled whitish with fuscous terminal line. Expanse, 13 mm.

Type.—Female, No. 16413, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck), also five females with additional data, April, 1911 (Busck), and additional localities, La Chorrera, April and May, 1912 (Busck).

EPHESTIODES NONIELLA, new species.

Fore wing gray, dark, the long basal space tinged with olive yellow, bounded by an erect line that curves basally at costa, blackish, shading into the dark mesial color; discal dots dissolved; outer line barely indicated, whitish, oblique, near the margin. Hind wing pale fuscous with darker veins and terminal line. Expanse, 10 mm.

Cotypes.—Two females, No. 16412, U.S.N.M.; La Chorrera, May, 1912 (Busck). Also one male, Trinidad River, September, 1912 (Busck).

EPHESTIA CAUTELLA Walker.

1. Porto Bello, May, 1911 (Busck).

EPHESTIA ELUTELLA Hübner.

1. Cabima, May, 1911.

EPHESTIA DIVERGENS, new species.

Dark gray, a little purplish; inner line at middle of wing, erect, black, widening on the costa; discal dots joined; outer line oblique, parallel to the margin incurved on submedian fold, black, followed by a pale border. Hind wing dark fuscous. Expanse, 16 mm.

Type.—Female, No. 16423, U.S.N.M.; Taboga Island, June, 1911 (Busck).

Resembles *E. nonparilella* Dyar, but broader winged, darker colored, the inner line erect and not parallel to the outer.

EPHESTIA COLORELLA, new species.

Fore wing with the basal space dull red; inner line white, oblique, straight, broad and distinct; median space blackish, with more or less distinct white area around the double, separated, discal dots; outer line straight, white, narrow; terminal space dull red, black at apex. Hind wing pale translucent fuscous, dark on veins and termen. Expanse, 12 mm.

Type.—Female, No. 16421, U.S.N.M.; Taboga Island, February, 1912 (Busck). Also one male and nine females with additional localities, Cabima, May, 1911 (Busck); Corozal, Canal Zone, March, 1911 (Busck); Tabogilla Island, February, 1912 (Busck); Porto Bello, May, 1912 (Busck).

EPHESTIA ANIMOSELLA, new species.

Similar to the preceding, narrower winged, veins 3 and 5 separate, whereas they are generally shortly stalked in *colorella*; inner line more oblique, narrow and continued along costa to base; outer line narrow. Expanse, 11 mm.

Type.—Female, No. 16422, U.S.N.M.; Porto Bello, May, 1912 (Busck). Also 1 male, 12 females, with additional localities, Trinidad River, May, 1911, March and June, 1912 (Busck); La Chorrera, April, 1912 (Busck).

PLODIA INTERPUNCTELLA Hübner.

1. Porto Bello, May, 1912 (Busck).

VARNERIA NANNODES, new species.

Fore wing bronzy purple-red. Hind wing translucent fuscous. Expanse, 8 mm.

Type.—Female, No. 16424, U.S.N.M.; Cabima, May, 1911 (Busck).

I am not sure that *Varneria* is distinct from *Eurythmia*; the small size, bluntly rounded wings and short abdomen, together with the peculiar coloration may, perhaps, hold the genus.

MICROPHYCITA, new genus.

Fore wing with vein 2 before angle of cell, 3 and 5 stalked, 4 absent, 6 from slightly above middle of cross-vein, 7-8 absent, 9 and 10 stalked, 11 on cell. Hind wing with five veins, cell open, 3 and 4 absent, 6 from 8, 7 absent. Labial palpi slender, upturned, the third joint long and thin. Maxillary palpi small. Tongue distinct. Head rounded, smooth.

Type of the genus.—*Microphycita titillella*, new species.

MICROPHYCITA TITILLELLA, new species.

Fore wing gray, irrorate with dark; arufous tint about outer portion; two slender, slightly curved lines, parallel, approximate, the inner at the middle of the wing, pale, edged toward median space with dark; fringe long, gray. Hind wing pointed at apex, the costa a little concave, pale fuscous with long gray fringes. Expanse, 8 mm.

Type.—Male, No. 16427, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also 17 others with additional data, May, 1911, and June 1912 (Busck) and locality, Cabima, May, 1911 (Busck).

MICROPHYCITA CONOPS, new species.

Dark bronzy black, without markings. Hind wing pale translucent fuscous, with dark terminal line; fringe very long, with pale line at base, followed by a dark one. Expanse, 8 mm.

Type.—Female, No. 16428, U.S.N.M.; La Chorrera, April, 1912 (Busck). Also three others with additional data, May, 1912 (Busck) and localities, Cabima, May, 1911 (Busck); Trinidad River, May, 1911 (Busck).

MICROPHESTIA, new genus.

Fore wing with veins 2, 3, and 5 separate from near angle of cell, 4 absent, 6 below apex of cell, 8-9 coincident, 10, 11 on the cell. Hind wing with vein 2 long before the angle of the cell, 4-5 long-stalked, 6 from apex of cell, 7-8 coincident. Labial palpi slender, terete, obliquely ascending; maxillary palpi small, filiform.

Type of the genus.—*Microphestia animalcula*, new species.

MICROPHESTIA ANIMALCULA, new species.

Fore wing glossy black-brown. Hind wing pale fuscous. Expanse, 8 mm.

Type.—Female, No. 16426, U.S.N.M.; Trinidad River, March, 1912 (Busck).

MICROMESCINIA, new genus.

Fore wing with veins 2-3 stalked, 4-5 stalked, 6 below apex of cell, 8-9 coincident, 10, 11 on cell. Hind wing with 2 close to angle of cell, 4 absent, 3-5 stalked, 6 from apex of cell, 7-8 coincident. Labial palpi slender, oblique; maxillary palpi filiform, small. Male with fold and tuft on costa at base of fore wing beneath.

Type of the genus.—*Micromescina pygmæa*, new species.

MICROMESCINIA PYGMÆA, new species.

Fore wing yellowish ocher, deep purple-red on costa and in a broad terminal band. Hind wing fuscous, lighter at base; a pale line in base of fringe. Expanse, 9.5 mm.

Type.—Male, No. 16425, U.S.N.M.; Porto Bello, March, 1911 (Busck). Also one male and one female, Taboga Island, February, 1912 (Busck); Tabernilla, Canal Zone, May, 1907 (Busck).

NAVASOTA MYRIOLECTA, new species.

Pinkish, strewn with dark atoms, the veins marked with light lines, most distinct along costa; the dark scales border the cell veins and those running to apex. Hind wing soiled whitish, the costa gray. Expanse, 19 mm.

Type.—Female, No. 16434, U.S.N.M.; Cabima, May, 1911 (Busck).

PECTINIGERA VIOLODIS, new species.

Fore wing uniform light purple. Hind wing soiled whitish, the costa gray. Expanse, 20 mm.

Type.—Female, No. 16430, U.S.N.M.; Cabima, May, 1911 (Busck).

PECTINIGERA MUSÆELLA Schaus.

7. Corozal, Canal Zone, April, 1911, and June, 1912 (Busck), July, 1912 (J. Zetek), November, 1912 (C. P. Crafts); Trinidad River, June, 1912 (Busck).

POUJADIA CYTTARELLA, new species.

Fore wing pink with scattered brown scales, cell whitish, the color not reaching costa. Hind wing very pale fuscous; abdomen ocher. Expanse, 16 mm.

Type.—Male, No. 16429, U.S.N.M.; Cabima, May, 1911 (Busck). Also two others from the same place.

TINITINOA, new genus.

Fore wing with veins 2, 3, and 5 separate near end of cell, 4 absent, 6 below apex of cell, 8-10 stalked, 11 on the cell. Hind wing with 2 before the angle of the cell, 3-5 long-stalked, 4 absent, 6 from apex of cell, 7 anastomosing with 9. Labial palpi porrect; maxillary palpi filiform. Antennæ of male with long pectinations at base, decreasing to serrations at the middle; a slight flat tuft at base.

Type of the genus.—*Tinitinoa phyrdes*, new species.

TINITINOA PHYRDES, new species.

Fore wing with distinct white costal stripe, ending in a point at apex; a dark streak at base; rest of wing pinkish with scattered dark dots, irregularly representing the ordinary lines; veins longitudinally lined in pale; terminal dots small, black, distinct. Hind wing pale fuscous tinged, with dark terminal line. Expanse, 15 mm.

Type.—Male, No. 16431, U.S.N.M.; Trinidad River, March, 1912 (Busck). Also 9 males and 2 females from the same place with additional data May, 1911, and June, 1912 (Busck), and additional locality, Porto Bello, February, 1912 (Busck), the latter specimen very small (expanse, 9.5 mm.).

SCHENECTADIA, new genus.

Fore wing with vein 2 from the cell, 4 absent, 3 and 5 from the angle, separate, 6 below apex of cell, 8-10 stalked, 11 on the cell. Hind wing with 2 and 5 separate, from the angle of the cell, 3 and 4 absent, 6 from apex of cell, 7 and 8 anastomosing. Labial palpi long, obliquely erect, far exceeding the vertex. Maxillary palpi scaly, small. Front smooth.

Type of the genus.—*Schenectadia merilesella*, new species.

SCHENECTADIA MERILESELLA new species.

Fore wing pinkish with scattered black scales; costal edge, vein 12 and subcosta white, giving the appearance of a white costal stripe; median vein black; brownish streaks on the folds, subcostal and submedian. Hind wing sordid whitish. Expanse, 13 mm.

Type.—Male, No. 16432, U.S.N.M.; Corozal, Canal Zone, March, 1911 (Busck). Also two males, La Chorrera, May, 1912 (Busck); Taboga Island, June, 1911 (Busck).

CÆNOCHROA MONOMACULA, new species.

Dull ocher, longitudinally streaked with blackish, radiating at base from dark center on submedian fold; a distinct, oval, black spot at lower angle of cell. Hind wing stained with fuscous. Expanse, 14 mm.

Type.—Male, No. 16433, U.S.N.M.; Cabima, May, 1911 (Busck). Also one male and one female, La Chorrera, May, 1912 (Busck).

Family CASTNIIDÆ.

CASTNIA CACICA Herrich-Schäffer.

1. Porto Bello, February, 1912 (Busck).

CASTNIA VIRYI Boisduval.

2. La Chorrera, March, 1912 (Busck); Porto Bello, April, 1912 (Busck).

CASTNIA LICUS Cramer.

1. Cabima, May, 1911 (Busck).

CASTNIA ATYMNIUS Dalman.

2. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck).

CASTNIA HUMBOLDTI Boisduval.

2. Taboga Island, January, 1911 (Busck).

Family COSSIDÆ.

ZEUZERA PYRACMON Cramer.

11. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck); Cabima, May, 1911 (Busck).

ZEUZERA COMISTEON Schaus.

4. Paraiso, Canal Zone, January, 1911 (Busck).

ZEUZERA RAMOSA Schaus.

4. Paraiso, Canal Zone, January, 1911 (Busck); Porto Bello, February, 1911 (Busck).

PSYCHONOCYPTA TERRAFIRMA Schaus.

3. Taboga Island, February, 1912 (Busck).

PSYCHONOCYPTA NULLIFERA, new species.

Fore wing creamy, thickly dusted with chocolate brown atoms. Hind wing cream-colored with slight brown shading at anal angle. Expanse, 58 mm.

Type.—Female, No. 16435, U.S.N.M.; Taboga Island, February, 1912 (Busck).

Two males which I associate with this have the same creamy brownish tint; some blackish reticulations at base, less distinct ones terminally and a discal dot. From the same locality and date.

COSSULA ARPI Schaus.

1. Cabima, May, 1911 (Busck).

LANGSDORFIA FRANCKII Hübner.

1. Cabima, May, 1911 (Busck).

HEMIPECTEN NIVEOGRISEA Schaus.

1. Cabima, May, 1911 (Busck).

LENTAGENA AUDARIA Schaus.

2. Paraiso, Canal Zone, January, 1911 (Busck); Taboga Island, February, 1912 (Busck).

GIVIRA JUTURNA Schaus.

1. Porto Bello, March, 1911 (Busck).

TORONIA ADOLESCENS, new species.

Fore wing gray, mottled and streaked with white, in end of cell, around submedian vein and densely over discal venules; reticulations suffused; a black line with dull orange scales adjoining, across cell from subcosta to vein 1; a similar submarginal line from costa, broadly sinuate, ending on margin at vein 2; several less distinct and broken streaks between these and the apex. Hind wing pale gray. Expanse, 36 mm.

Type.—Female, No. 16436, U.S.N.M.; Taboga Island, February, 1912 (Busck).

This may prove to be the female of *T. infantilis* Schaus (*Cossus infantilis* Schaus)¹, though very dissimilar in appearance.

ARBELA NECREROS, new species.

Soft dark brown; a broader, darker blackish shade band, oblique from costa before apex to inner margin before middle; reticulations obsolete; a narrow gray line on angle of inner margin at base. Hind wing sooty blackish, subtranslucent, the veins appearing darker. Beneath, all blackish, reticulations only faintly shown. Expanse, 27 mm.

Type.—Female, No. 16437, U.S.N.M.; Trinidad River, March, 1912 (Busck).

Family HEPIALIDÆ.

HEPIALUS MOMUS Druce.

1. La Chorrera, May, 1912 (Busck).

DALACA ASSA Druce.

1. Trinidad River, March, 1912 (Busck).

¹ Ann. Mag. Nat. Hist., (8), vol. 7, 1911, p. 632.