

A REVISION OF THE NORTH AMERICAN SPECIES OF
THE GENUS ARGYRA MACQUART, TWO-WINGED
FLIES OF THE FAMILY DOLICHOPODIDAE

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The present paper is a review of the North American species of the genus *Argyra* and contains descriptions of 26 new species as well as a more or less complete redescription of the species previously described.

The association of the females with the males is in some cases subject to doubt; but with the large amount of material in my hands I have felt little uncertainty in placing them.

Measurements of the tarsal joints are given for all the species; these were made with an eyepiece micrometer, and each unit is very nearly one-fiftieth of a millimeter.

I am greatly indebted to Dr. J. M. Aldrich for the loan of his material (since donated to the National Museum); to C. W. Johnson, who sent me his material and that of the Boston Society of Natural History, and started me at work on the genus; also to C. H. Curran, of the Entomological Branch, Ottawa, Canada, who sent me three very interesting forms, new to me.

Genus ARGYRA Macquart

Argyra MACQUART, Hist. Nat. Dipt., vol. 1, 1834, p. 456.—LOEW, Smiths. Misc. Colls., No. 171, 1864, pp. 123-132.—BECKER, Nova Acta, vol. 104, pt. 2, 1918, pp. 61-74.

Leucostola LOEW, Neue Beiträge, vol. 5, p. 39, 1857; vol. 8, p. 63, 1861; Smiths. Misc. Colls., No. 171, p. 151.—BECKER, Nova Acta, vol. 104, pt. 2, p. 74, as subgenus.

Macquart included seven species in 1834, of which Rondani designated *Musca diaphana* Fabricius as type.¹ The type of *Leucostola* is *Dolichopus vestitus* Wiedemann, the only species originally included.

Since the publication of Loew's Monograph in 1864 only three species have been described—*aldrichi* and *robusta* by Johnson, and *ciliata* by me.

¹ Prod. Dipt. Ital., vol. 1, 1856, p. 141.

Following Becker² I recognize two subgenera, *Argyra* and *Leucostola*. The former has the first antennal joint hairy above, while it is bare in the latter. The character dwindles in value, until in several species there is only one hair on the joint. All our species of *Leucostola* have the thorax polished green with more or less silvery white pollen, as in typical *Argyras*; the abdomen in all has considerable yellow on the basal segments; the antennae, venation, and hypopygial structures are alike in both groups.

KEYS TO THE NORTH AMERICAN SPECIES OF THE GENUS ARGYRA

A. Subgenus *Argyra*—Males

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 1. Abdomen without yellow on the sides, or very nearly so..... | 2 |
| Abdomen with distinct yellow ground color on some of the segments--- | 13 |
| 2. Anterior coxae wholly black, or nearly so..... | 3 |
| Anterior coxae yellow, at least on apical half..... | 10 |
| 3. Hind basitarsus with long bristles..... | 4 |
| Hind basitarsus with only the usual short hairs..... | 5 |
| 4. All femora black with their tips narrowly yellow (Washington), | |
| 8, <i>nigriventris</i> , new species. | |
| All femora yellow, except apical half of posterior pair (California), | |
| 9, <i>argentiventris</i> , new species. | |
| 5. Middle femora widened below near basal third, so as to form an obtuse angle; their tibiae with a brush of hairs near the middle (California), | |
| 10, <i>femoralis</i> , new species. | |
| Middle femora nearly evenly rounded or straight below..... | 6 |
| 6. All femora yellow, their base may be slightly blackened (Oregon), | |
| 7, <i>scutellaris</i> , new species. | |
| Fore and middle femora black; posterior pair yellow with apical third black (New England)..... | 31, <i>obscura</i> , new species. |
| All femora black, their tips may be yellow..... | 7 |
| 7. Face and front velvety black (Alaska; California; Washington; Idaho), | |
| 1, <i>nigripes</i> Loew. | |
| Face white or grayish white; front metallic green with more or less gray pollen..... | 8 |
| 8. Anterior tibiae with long hair on their posterior surface and the usual bristles above (California)..... | 6, <i>barbipes</i> , new species. |
| Anterior tibiae without long hair..... | 9 |
| 9. Hind tibiae wholly black; scutellum bare on the disk (Colorado), | |
| 2, <i>hirta</i> , new species. | |
| Hind tibiae partly yellow; scutellum with numerous hairs on the disk (Canada)..... | 14, <i>bimaculata</i> , new species. |
| 10. Hind femora not at all infuscated at tip; fore coxae with only pale hairs and bristles (Wisconsin; Maine; New York)--- | 4, <i>angustata</i> , new species. |
| Tips of hind femora and the bristles of the fore coxae black..... | 11 |
| 11. Hind basitarsus with long bristles (California), | |
| 9, <i>argentiventris</i> , new species. | |
| Hind basitarsus with only the usual short hair..... | 12 |
| 12. Arista three or four times as long as the third antennal joint; black hair and bristles of fore coxae conspicuous (California)--- | 3, <i>cylindrica</i> Loew. |
| Arista not as long as third antennal joint; fore coxae nearly bare, except the bristles at tip (Louisiana)..... | 5, <i>brevipes</i> , new species. |

² Nova Acta, vol. 104, pt. 2, p. 74.

13. One pair of femora more than half black or green..... 14
 All femora yellow, tips of posterior pair may be broadly black..... 19
14. All femora black or green, their tips may be yellow..... 15
 One or two pairs of femora largely yellow..... 18
15. Face velvety black..... 15, *velutina*, new species.
 Face silvery white..... 16
16. Cilia of the calypters black (Alaska; Oregon; Washington; Idaho),
 11, *albiventris* Loew.
 Cilia of the calypters pale yellow..... 17
17. Second and third abdominal segments largely yellow (New England; New
 Jersey; Montana; Idaho; Canada)..... 12, *robusta* Johnson.
 Abdomen with very indistinct yellow spots on second segment (Canada),
 14, *bimaculata*, new species.
18. Fore femora black on upper and most of posterior surface; middle ones
 yellowish; hind pair blackened on apical half above (California),
 16, *splendida*, new species.
 Fore and middle femora black with yellow tips; hind ones with apical third
 black (New England)..... 31, *obscura*, new species.
 Fore femora black on basal half; middle ones on basal half of posterior
 surface; hind femora black on more than apical third (Alaska),
 13, *ciliata* Van Duzee.
19. Tips of hind femora black, at least distinctly infuscated..... 20
 Hind femora not, or scarcely darkened at tip..... 31
20. Fore coxae almost wholly black..... 21
 Fore coxae yellow, sometimes considerably blackened at base..... 22
21. Middle femora with a row of long black hairs on both anterior and pos-
 terior edges of lower surface (California)--- 21, *californica*, new species.
 Middle femora with one row of black bristles on the anterior edge of lower
 surface, none on posterior edge (Ohio)..... 20, *nigricoxa*, new species.
22. Second joint of hind tarsi not very much shorter than first, which has only
 the usual short hair..... 23
 Second joint of hind tarsi not, or scarcely half as long, as the first, which is
 furnished with long bristles..... 29
23. Fore and middle femora with conspicuously longer yellow hairs below
 (Middle and Eastern States; Canada)..... 23, *calceata* Loew.
 Fore femora and sometimes the middle ones also, with long black hairs or
 bristles below, if they have yellow hairs below, then the hairs are
 scarcely longer than those on upper surface..... 24
24. Hind tarsi wholly yellow..... 25
 Hind tarsi wholly black..... 26
25. Posterior surface of fore femora with long black hair; posterior edge of
 pleurae black as usual (District of Columbia; New Jersey; New York;
 Pennsylvania; Massachusetts)..... 28, *minuta* Loew.
 Fore femora with only short black hair; posterior edge of pleurae yellow
 (Maryland; Indiana)..... 29, *flavipes*, new species.
26. Hind tibiae wholly black, still sometimes yellowish brown at base (New
 York; Canada)..... 18, *thoracica*, new species.
 Hind tibiae yellow with a black tip..... 27
27. Scutellum with a few small black hairs on its disk; hind femora broadly
 black at tip (Virginia to Canada)..... 17, *albicans* Loew.
 Hind femora wholly yellow or very narrowly black or brown at tip; scutel-
 lum bare on its disk..... 28

29. Fore coxae distinctly blackened at base and with conspicuous black hairs (Maine; Massachusetts; Canada)----- 22, *sericata*, new species.
Fore coxae wholly yellow, almost bare except for the bristles near the tip (Quebec)----- 24, *albicoxa*, new species.
20. Hind basitarsus wholly black (California)-- 9, *argentiventris*, new species.
Hind basitarsus mostly yellow----- 30
30. Hind tarsus with its joints as 32-13-13-10-9, first joint much thickened and with numerous bristles (Virginia to Canada)----- 25, *calcitrans* Loew.
Joints of hind tarsi as 50-20-18-11-8, their first joint scarcely thickened and with a few bristles on each edge, of lower surface (Vermont; New York; New Jersey; Ontario)----- 26, *setipes*, new species.
31. Antennae yellow, third joint very narrowly black on upper edge (Kansas; Louisiana)----- 30, *flavicornis*, new species.
Antennae black or brown----- 32
32. Hind basitarsi with numerous bristles (Virginia to Canada),
25, *calcitrans* Loew.
Hind basitarsi with only the usual short hair----- 33
33. Hind basitarsi wholly black or nearly so----- 34
Hind tarsi wholly yellow, or slightly darkened at tip----- 39
34. Hypopygium large, contracted in the middle (fig. 19), its lamellae long and curved (New Jersey; Connecticut; Rhode Island)-- 27, *aldrichi* Johnson.
Hypopygium not large or contracted, normal----- 35
35. Posterior edge of pleurae and first abdominal segment yellow----- 36
Posterior edge of pleurae and first abdominal segment blackish----- 37
36. Second and third abdominal segments with a longitudinal black or green stripe (Middle and Eastern States; Canada)----- 23, *calceata* Loew.
Second and third abdominal segments wholly yellow, except the narrow hind margins (New York; Canada)----- 24, *albicoxa*, new species.
37. Fore coxae wholly pale yellow with silvery pollen; middle femora with only short hairs below (Ontario; Quebec)----- 19, *currani*, new species.
Fore coxae blackened at base, or wholly black; middle femora with long black or brown bristles below----- 38
38. Fore coxae wholly black (Ohio)----- 20, *nigricoxa*, new species.
Fore coxae yellow, blackened at base (Maine; Massachusetts; Canada),
22, *sericata*, new species.
39. Arista inserted before apical third of third antennal joint (Maryland; Indiana)----- 29, *flavipes*, new species.
Arista inserted close to the tip of third antennal joint as usual (Eastern States)----- 28, *minuta* Loew.

Females

1. Abdomen without yellow on the dorsum, at most with indistinct lateral spots on second segment----- 2
Abdomen with distinct yellow ground color on some of the segments--- 15
2. Scutellum with hairs on its disk----- 3
Scutellum bare, except the marginal bristles----- 6
3. All femora wholly yellow, except sometimes at tip----- 4
Fore and middle femora more or less blackened at base----- 5
4. Hind femora wholly yellow----- 7, *scutellaris*, new species.
Hind femora broadly black at tip----- 14, *bimaculata*, new species.
5. Cilia of the calypters yellowish----- 12, *robusta* Johnson.
Cilia of the calypters black----- 15, *velutina*, new species.
6. Fore and middle femora black on basal half or more- 13, *ciliata* Van Duzee.
All femora yellow, the tips of posterior pair may be black----- 7

7. Hind femora without black at tip, at most the tip is only slightly brownish above ----- 8
Hind femora distinctly blackened at tip, at least above ----- 12
8. Hind tarsi almost wholly yellow; first joint distinctly longer than second ----- 9
Hind tarsi partly or wholly black, first and second joints of nearly equal length ----- 10
9. Second joint of hind tarsi about two-thirds as long as first.
25, *calcitrans* Loew.
Second joint of hind tarsi less than half as long as first.
4, *angustata*, new species.
10. First joint of hind tarsus blackish at tip only, second usually yellowish at base ----- 21, *californica*, new species.
Hind tarsus almost wholly black ----- 11
11. The portion of the face below the suture nearly as long as wide.
3, *cylindrica* Loew.
Portion of face below the suture about half as long as wide.
14, *bimaculata*, new species.
12. First joint of hind tarsus nearly twice as long as second.
8, *nigriventris*, new species.
First and second joints of hind tarsus of nearly equal length ----- 13
13. Abdomen bright shining green, almost without pollen.
6, *barbipes*, new species.
Abdomen dulled with grayish pollen, at least on the sides ----- 14
14. Apical third or more of hind tibiae black ----- 1, *nigripes* Loew.
Not over apical fourth of hind tibiae infuscated, and only brown, not black.
10, *femoralis*, new species.
15. Scutellum with hairs on its disk ----- 16
Scutellum bare, except for the usual marginal bristles ----- 17
16. Thorax with a little snow-white pollen; scutellum with only a few hairs on its disk; yellow spots on second abdominal segment distinct.
17, *albicans* Loew.
Thorax with thick brownish pollen; disk of scutellum with many conspicuous hairs; yellow spots on the second abdominal segment very indistinct.
12, *robusta* Johnson.
17. Antennae yellow, third joint very narrowly black above.
30, *flavicornis*, new species.
Antennae wholly black or brown ----- 18
18. Hind tarsi wholly black, or very nearly so ----- 19
Hind tarsi wholly yellow, or only slightly darker at tip ----- 23
First joint of hind tarsus yellow with a black tip ----- 25
19. Second joint of hind tarsus considerably longer than the first.
27, *aldrichi* Johnson.
First and second joints of hind tarsi of nearly equal length ----- 20
20. Hind margin of the pleurae yellow ----- 23, *calceata* Loew.
Hind margin of the pleurae blackish ----- 21
21. Second and third abdominal segments yellow with their hind margins black.
18, *thoracica*, new species.
Yellow of the abdomen confined to a rather small spot on each side of the second segment; sometimes there are indistinct spots on the sides of the third segment also ----- 22
22. Tip of hind tibiae narrowly blackened ----- 19, *currani*, new species.
Hind tibiae black at tip for one-fourth their length.
22, *sericata*, new species.

23. Fourth, fifth, and most of third abdominal segments black or green.
 28, *minuta* Loew.
 Abdomen yellow with the last segment and narrow hind margins of the
 others black or green----- 24
24. Palpi black or brown----- 29, *flavipes*, new species.
 Palpi yellow----- 26, *setipes*, new species.
25. Abdomen black with yellow spots on the sides of second, third, and some-
 times the fourth segments----- 11, *albiventris* Loew.
 Abdomen yellow with the last segment and narrow hind margins of the
 others black or green----- 26, *setipes*, new species.

B. Subgenus *Leucostola*—Males

1. Hind femora black or brown at tip, at least above----- 2
 Hind femora wholly yellow----- 4
2. Hind tibiae and tarsi almost wholly blackish----- 34, *involuta*, new species.
 Hind tibiae wholly yellow----- 3
3. Hind tarsus with its joints in the proportion of 23-17-12-8-6 (Indiana).
 36, *inaequalis*, new species.
 Hind tarsus with its joints as 24-23-16-9-7 (Indiana).
 37, *spina*, new species.
4. Hairs of fore coxae yellow, their bristles black (Florida).
 35, *flavicoxa*, new species.
 Hairs and bristles of fore coxae wholly yellow----- 5
5. Tip of hind basitarsus slightly enlarged and with close-set little hairs
 which make it appear even larger (District of Columbia; Virginia; New
 York; New Jersey; Indiana; Louisiana)----- 32, *cingulata* Loew.
 Hind basitarsus not at all enlarged at tip, but with a row of equally spaced,
 stiff, little hairs below, which are continued on the following joints (New
 Jersey; Pennsylvania)----- 33, *johnsoni*, new species.

1. ARGYRA NIGRIPES Loew

Argyra nigripes LOEW, Smiths. Misc. Coll., No. 171, p. 127, 1864.

Male.—Length, 3.5-4.5 mm. Front and face velvety black, the latter moderately narrow. Proboscis and palpi black, with black hairs. Antennae black; first joint with conspicuous hairs above; third joint about as long as the first, rounded at tip; arista inserted before the tip, as long as the antenna. Lower orbital cilia vary in color from brownish gray to grayish white; the minute black upper orbital cilia reach to about the middle of the eye height.

Dorsum of thorax shining green with coppery reflections, its silvery pollen confined to the sides; sometimes the scutellum and posterior part of the thorax are a beautiful blue color; scutellum with two pair of marginal bristles, the outer about half as long as the median pair; pleurae black, with white pollen. Abdomen black, with two first segments more or less green, thickly covered with silvery white pollen; its hairs and bristles rather long, wholly black. Hypopygium (fig. 1) and its appendages black, penis yellow; the outer lamellae are broad, obtusely pointed at tip, fringed with long black hairs.

Coxae black, anterior and posterior pairs sometimes yellowish on apical half; fore and middle pairs with long black bristlelike hairs; hind ones with two bristles on outer surface. All femora black, sometimes a little yellow at base. Fore femora and tibiae with long, slender, black hairs on posterior surface, which are longer than the width of the femora; middle femora with a row of stout hairs on lower anterior edge of apical two-thirds, not as long as the width of the femora and shorter toward the tip; hind femora with a row of hairs on lower outer edge which are about as long as the upper row on outer edge. All tibiae yellow, the posterior ones black at tip for one-fifth their length, still the black is not sharply defined and sometimes reaches the middle of the tibiae; middle tibiae rather stout, with long bristles above and a few long hairs below, the longest being near apical third and about as long as the thickness of the tibia. Fore and middle tarsi blackened from the tip of the first joint; anterior pair with their joints as 48-19-12-8-8, first joint with a few slender hairs below; middle basitarsus with numerous bristly hairs below on basal half, which are nearly as long as the diameter of the joint. Hind tarsi wholly black, its joints as 37-30-21-12-8. Calypters brown, with broadly black tips and black cilia; knobs of halteres yellow, with a small brown spot near the base, their stem brownish.

Wings tinged with brownish gray: third vein considerably bent back at tip; last section of fourth vein bent at its middle, parallel with third near the tip; last section of fifth vein twice as long as the cross vein.

Female.—Face broad, gray or yellowish gray: third antennal joint about as long as wide, arista nearly twice as long as the antenna; fore coxae mostly black; all femora and tibiae yellow, with short hair, posterior femora and tibiae usually broadly black at tip. Wings about as in the male.

Redescribed from 29 males and 3 females. I took many in California from March 21 to June 7; Doctor Aldrich took it in Idaho, June 7, and in Washington, June 7 and July 6. It was described from Sitka, Alaska.

2. ARGYRA HIRTA, new species

Male.—Length, 4 mm. Face rather wide, grayish, almost black. Front greenish with gray pollen. Antennae black (fig. 3); first joint with stiff hairs above; third joint but little longer than wide; arista three times as long as the antenna. Palpi black with long black hairs. The minute black orbital cilia scarcely reach down to the middle of the eye, below these the beard is black or brown, not abundant.

Thorax green on the dorsum, its posterior portion and the scutellum with deep blue reflections, the latter with two pairs of marginal bristles. its disk bare; the pollen on the dorsum of the thorax gray and confined to the anterior portion; pleurae black with white pollen. Abdomen wholly green, with coppery reflections and white pollen, which is not silvery. Hypopygium and its appendages (fig. 4) black; outer lamellae rounded at apex and slightly clubbed; inner appendages small.

All coxae and femora black; fore and middle coxae with stiff black hair. Posterior surface of fore femora and lower anterior surface of middle ones with abundant black hair, which is as long as the width of the femora. Fore and middle tibiae yellow, the former with two rows of rather long slender bristles, otherwise with only short hair; middle ones with two rows of bristles above and several smaller ones below. Hind tibiae wholly black, with a row of five moderately long bristles on upper outer edge. Fore and middle tarsi blackish, a little longer than their tibiae; fore tarsi with its joints as 36-9-7-5-7, the first joint with the hairs on its lower edge as long as its diameter. Middle tarsi with the first joint as long as the remaining four taken together; fourth and fifth of equal length. Hind tarsi wholly black, the joints as 40-26-17-12-10, the first joint a little arched. Calypters brown with black tips and cilia; halteres yellow.

Wings a little tinged with brown; third vein only a little bent back at its tip; last section of fourth vein bent at its middle, parallel with third beyond this bend, ending in the apex of the wing; last section of fifth vein about twice as long as the crossvein.

Described from one male taken by Dr. J. M. Aldrich at Tennessee Pass, Colorado, July 24, 1917.

Type.—Male, Cat. No. 27034, U.S.N.M.

This differs from both *nigripes* Loew and *barbipes*, new species, in having the hypopygial lamellae broadly rounded at tip, the third antennal joint shorter and in the proportional length of the joints of fore and hind tarsi.

3. ARGYRA CYLINDRICA Loew

Argyra cylindrica LOEW, Smiths. Misc. Coll., No. 171, p. 132, 1864.

Male.—Length, 4.5 mm. Face moderately wide, silvery white. Front green with white pollen: palpi and proboscis black. Antennae (fig. 2) black; first joint with four stiff hairs above; third joint scarcely longer than the two basal joints together; arista fully three times as long as the antenna. Lower orbital cilia and the beard sordid white; the small black upper cilia reach down nearly to the middle of the eye.

Dorsum of thorax green with gray pollen in front and on the sides; scutellum with two pair of marginal bristles. Abdomen dark green, dulled with gray pollen, which is scarcely thicker on the sides and leaves a median blackish stripe in certain lights. Hypopygium (fig. 6) and its lamellae black, the latter rather long and narrow, fringed with pale hairs; the tip of the hypopygium is cleft, rounded and yellowish toward the end; inner appendages yellow, small, rounded at tip; they are not visible in the California specimen.

Fore coxae yellow, blackened at extreme base; middle and hind pairs black; all the hair and bristles of the coxae are black. Fore and middle femora and tibiae wholly yellow; fore femora with long black hair on the posterior surface; middle ones with long black hair on the lower edge of both anterior and posterior surfaces; these are scarcely as long as the width of the femora. Hind femora yellow, their tip black for one-third their length, still the yellow extends to the tip on the lower edge; they have a row of moderately long, delicate hairs on lower outer edge and a few longer black bristles near the tip. Hind tibiae yellow, with the tip becoming brown. Fore and middle tarsi with the first joint brownish, their tips and the following joints black; joints of fore tarsi as 39-16-11-7-7. Hind tarsi wholly black, with the first joint a little longer than the second. Calypters broadly black at tip, their cilia yellowish. Halteres yellow.

Wings tinged with brownish-gray; third vein bent backward at tip; last section of fourth vein bent near its middle, considerably arched, so that it is farther from third vein at tip than at the bend, ending just back of the apex of the wing; last section of fifth vein nearly twice as long as the cross vein.

Female.—Face and front covered with grayish-white pollen; third antennal joint not as long as wide; arista nearly apical, more than three times as long as the antenna; fore coxae yellow; femora yellow with short hair, posterior pair more or less blackened at tip, sometimes almost wholly yellow; all tarsi yellow at base; hind tibiae infuscated at extreme tip only. Wings with the third and fourth veins parallel toward their tips; last section of fifth vein twice as long as the cross vein. Cilia of the calypters black. The pollen of the thorax and abdomen is more white, not gray as in the male; that of the abdomen is confined to the sides.

Redescribed from 4 males and 10 females. Doctor Aldrich took 2 males and 4 females in Washington, May 13, to July 6; all the rest were taken by him and myself in California from April 13 to May 16. This was described from Alaska.

4. ARGYRA ANGUSTATA, new species

Male.—Length, 4 mm. Slender, wholly dark green, with little white pollen, and wholly yellow tibiae, femora, and fore coxae.

Face and front silvery white, the former quite wide. Palpi and proboscis black. Antennae (fig. 5) black; first joint short: I can see only one hair on its upper edge; third joint nearly three times as long as the two basal joints together; arista nearly apical, scarcely as long as the antenna. Orbital cilia wholly pale, except two or three very small black hairs at the top of the eye.

Dorsum of the thorax and the slender abdomen dark shining green, fore part of the thorax with a little white pollen; scutellum with four large marginal bristles; pleurae blackish with white pollen; hairs on the sides of the first four abdominal segments yellowish. Hypopygium (fig. 7) black or testaceous, the apical half shining and cleft at the apex; outer lamellae yellow and fringed with hair above; I do not see any inner appendages, except the long black central filament and its yellow sheath.

Fore coxae wholly pale yellow; middle and hind coxae yellow, the latter a little, the former largely, infuscated on outer surface. All femora and tibiae wholly yellow. Fore and middle femora with long, delicate, yellow hairs below. All tarsi infuscated from the tip of the first joint; first joint of posterior pair brownish-yellow, as long as the second joint. Fore tarsi one and a half, middle ones one and a fourth times as long as their tibiae; joints of anterior pair as 54-20-13-13-9. Middle basitarsus as long as the three following joints taken together. Calypters and halteres yellow, the former with a brown tip and yellow cilia.

Wings nearly hyaline; third vein bent backward at tip; last section of fourth vein a little bent at its middle, parallel with third beyond this bend, ending just back of the tip of the wing; last section of fifth vein not quite one and a half times as long as the cross vein.

Female.—Color of the thorax, abdomen, legs, and tarsi as in the male: face very narrow for a female, about as wide as in the male; face and front silvery white; hairs of the abdomen black, but appearing reddish in certain lights. Those of the male also appear to have a reddish cast. The coxae are yellow with black bristles, the anterior pair a little blackened at extreme base; hairs on the lower surface of all femora yellow, those on anterior pair quite long, those on middle and hind pairs very short. Wings as in the male, except that the bend on the last section of fourth vein is a little nearer the crossvein and the fourth vein ends in the apex of the wing. Joints of fore tarsi as 39-28-18-9-7; middle ones 50-22-15-9-6; hind pair 42-15-10-6-7.

Described from five males and one female. Holotype, male was taken at Echo Lake, Mount Desert, Maine, July 17, 1918, by C. W. Johnson and is in the museum of the Boston Society of Natural History; two males were taken at Lake Tear, Essex County, New York, 4,500 feet elevation, July 21, 1920; two males were taken in Polk County, Wisconsin, by C. F. Baker; allotype, female was taken at Olean, New York, August 5, 1917.

Allotype and paratype.—Female and male, Cat. No. 27035, U.S.N.M.

5. ARGYRA BREVIPES, new species

Male.—Length, 3.5 mm. Face not very narrow, silvery white. Front covered with white pollen. Proboscis and palpi black, with black hairs. Antennae black; first joint with a few small hairs above; third nearly as long as the face; arista apical, two-thirds as long as the third joint. Lateral and inferior orbital cilia white.

Thorax greenish-black; when viewed from in front it is opaque with white pollen; scrutellum with one pair of large marginal bristles, disk bare. Abdomen black, covered with silvery white pollen; the hind margins of the segments are narrowly white.

Hypopygium black, quite shining; its appendages almost concealed, but there appear to be small, conical, black, outer lamellae.

Fore coxae wholly yellow, nearly bare, except two or three black bristles near the tip; middle and hind coxae grayish, their bristles black. All femora and tibiae yellow. All femora with only short hair; still there are a few delicate hairs on the posterior surface of the anterior ones which are a little longer; hind femora nearly black at tip. Fore tibiae with two minute bristles; posterior tibiae a little brown at tip. Fore and middle tarsi yellow, a little darker at tip, joints of fore tarsi as 40–12–8–5–6. Hind tarsi wholly black, their joints as 22–20–15–10–10. Calypters pale yellow with a brown tip and yellow cilia; halteres yellow.

Wings grayish; third and fourth veins nearly parallel, the last section of fourth being scarcely at all bent; last section of fifth vein twice as long as the crossvein.

Described from one male taken at Opelousas, Louisiana, April, 1897, by G. R. Pilate.

Type.—Male, Cat. No. 27036, U.S.N.M.

6. ARGYRA BARBIPES, new species

Male.—Length, 3.5 mm. Face wide, covered with whitish pollen. Front green with a little white pollen. Palpi and proboscis black with black hairs. Antennae black; first joint with strong hairs above; third joint as long as the two first taken together, rounded at tip; arista nearly apical, rather thick, scarcely as long as the

antenna. Lower orbital cilia whitish, the minute upper cilia black and descending to about upper third of the eye.

Thorax dark, shining green, its silvery white pollen confined to a spot on each side near the humeri; pleurae more black, with white pollen. Abdomen with the two first and part of the third segment green, the remainder dark coppery, last segment short, black. Hypopygium (fig. 8) black; the outer lamellae triangular, yellowish-brown; inner appendages small.

All coxae and femora black. Fore and middle coxae with black hair and bristles. Fore femora and tibiae with long, fine hair on posterior surface, the hairs as long as the basitarsus; these hairs appear black or reddish according to the light in which they are viewed. Middle femora with a row of stout hairs below, which are longest in the middle, still none are as long as the width of the femora; they do not reach the base but extend to the tip; hind femora nearly bare below. Fore and middle tibiae yellow, rather short and stout, of nearly equal length, middle ones with a row of short, stout hairs below, which are longer near the tip. Hind tibiae black, still they are a little yellow above at base, and sometimes the yellow extends nearly to their middle; their hair short. Fore and middle tarsi brown, a little yellowish at base and black at tip, the front ones longer than their tibiae and with their joints as 24-10-8-6-5. Middle tibia and tarsus with the joints as tibia, 56, tarsi, 44-19-12-6-7. Hind tarsus with its joints as 25-22-16-10-8. Calypters brown, their edge and cilia yellowish. Halteres yellow.

Wings a little tinged with brown; third vein slightly bent back at tip; last section of fourth vein only a little bent at its middle, parallel with third near the tip, ending in the apex of the wing; last section of fifth vein nearly twice as long as the crossvein.

Female.—Face wide, gray; first antennal joint rather long, equal to third in length; arista a little longer than the antenna; fore coxae a little yellowish at tip. All femora and tibiae yellow, the posterior femora and tibiae rather broadly black at tip; fore tarsi almost wholly yellow, hind tarsi wholly black, with the first and second joints of nearly equal length. Abdomen bright shining green; last section of fourth vein more bent than in the male.

Described from one pair taken by Dr. J. M. Aldrich at Redwood City, California, April 7, 1906, and two males which I took at Berkeley, California, May 16 and 18, 1915.

Type and allotype.—Cat. No. 27037, U.S.N.M., from Redwood City.

7. ARGYRA SCUTELLARIS, new species

Male.—Length, 5.6 mm. Face, front, and palpi velvety black; face wide; palpi with black hair. Antennae (fig. 10) black; first joint with numerous hairs on upper edge and four below; third

joint not longer than the two first taken together, rounded at tip; arista inserted above the tip, about as long as the antenna. Orbital cilia black; still, some of the lower ones more brownish in certain lights.

Dorsum of thorax green, dulled with brownish pollen, which leaves a brown stripe on each side of the acrostichal bristles; humeri with numerous bristlelike hairs; scutellum with two pairs of marginal bristles and conspicuous, rather long, black hair on its disk. Abdomen green, covered with silvery white pollen, except the first segment, which has long, black hair on the sides; second segment with even longer black hairs or bristles on the sides of the hind margin; all the hair on the abdomen long and black. Hypopygium (fig. 9) black; its outer lamellae black, more or less yellow at base, and with long black hairs; inner appendages are a pair of rather small, black, nearly straight organs and a pair of large yellow lamellae with a yellow hair at tip; these are much larger than the narrow outer lamellae.

All coxae black, tips of the anterior pair yellow; fore and middle pairs with long, stiff, black hairs, which are as long as their thickness; posterior pair with two bristles and several hairs on outer surface. All femora yellow; in one specimen all the femora are a little blackened at extreme base, in another the fore femora are blackened at base on lower posterior edge for more than one-third their length, the other femora being wholly yellow. All femora with long black hair, that on the fore pair on the lower and posterior surfaces and that on the others on the anterior surface, especially below. All tibiae wholly yellow, with strong bristles. All tarsi black from the second joint, first joint of fore tarsi with minute bristles or stiff hairs below, its joints as 58-16-10-8-11. Middle tarsi with its joints as 59-26-18-10-10. Joints of hind tarsi as 49-35-23-10-11. Calypters whitish at base, apical half black, their cilia long and black. Halteres yellow.

Wings grayish; third vein bent backward at tip; last section of fourth vein quite abruptly bent before its middle, parallel with third at tip; last section of fifth vein scarcely one and a half times as long as the crossvein.

Female.—Face wide, its suture nearly straight, pollen of the face yellowish-gray; lower line of the face a little pointed in the middle; third antennal joint about as long as wide; arista longer than the antenna; hairs on the scutellum conspicuous; pollen of the thorax rather thick, gray; all femora and tibiae wholly yellow. First joint of hind tarsi yellow with a black tip, longer than the second joint.

Described from two males taken by F. R. Cole at Forest Grove, Oregon, May 5, 1918; and one female taken at Grangeville, Idaho, by Dr. J. M. Aldrich.

This species is remarkable for the conspicuous hair on the disk of the scutellum, the long, bristle-like hair on the coxae and femora, and the large, lamella-like inner appendages of the hypopygium of the male.

Type and allotype.—Male and female, Cat. No. 27038, U.S.N.M.

8. ARGYRA NIGRIVENTRIS, new species

Type and allotype.—Male and female, Cat. No. 27038, U.S.N.M. former moderately wide. Palpi and proboscis black, with black hairs. Antennae black; first joint with about four hairs above; third joint a little longer than the two first taken together, pointed at tip; arista inserted a little before the tip, about as long as the antenna. Lower orbital cilia white; the minute black upper cilia descend to the middle of the eye.

Dorsum of thorax dark shining green, or blue green, covered with quite abundant silvery white pollen, especially on the anterior half; pleurae more black with white pollen; scutellum with two pair of large marginal bristles. Abdomen black; all but the first segment covered with thick silvery white pollen; first segment and sides of the others with green reflections; hairs and bristles on the abdomen black, those on the last two segments appear reddish in certain lights. Hypopygium (fig. 11) black, small; its outer lamellae black, somewhat triangular, fringed with reddish hairs; the inner appendages are a central yellow organ, a pair of lamella-like organs with several hairs, and a pair of rather slender organs tipped with a minute bristle.

All coxae black, with black hairs and bristles; anterior pair with a row of long slender bristles besides those at tip; these are longer than the thickness of the coxa. Fore femora black with yellowish tips; they have moderately abundant, long, black hair on posterior surface. Middle femora with long hairs on the lower surface, not as long as the width of the femora. Fore and middle tibiae and basitarsi yellow; joints of fore tarsi as 38-10-8-5-6. Posterior femora, tibiae, and tarsi wholly black; lower surface of hind tibiae clothed with long, delicate hairs, which are about as long as the small bristles on upper surface; these hairs are black but appear reddish in certain lights; joints of hind tarsi as 59-18-15-7-8. Hind basitarsus a little thickened at base, fringed on each side of lower surface with long bristly hairs, the longest of which near the base are longer than the second joint and appear reddish in certain lights. Calypters dark yellow with black tips, their cilia black or reddish. Knobs of halteres yellow, stems brown.

Wings grayish, slightly tinged with brown in front of third vein; third vein bent backward a little at tip; last section of fourth vein

a little bent just before its middle, parallel with third at tip; last section of fifth vein one and a half times as long as the crossvein.

Female.—Face and front moderately wide, silvery white; third antennal joint longer than wide, arista nearly apical; lower orbital cilia yellowish, reaching to the middle of the eye; thorax and scutellum as in the male, except that the former has less pollen; abdomen wholly black with slight bronze reflections, its hair as in the male; fore coxae black with apical half a little yellowish, its hairs and bristles black; all femora and tibiae yellow, the posterior femora and tibiae blackened at tip; middle femora with a preapical brown spot above; fore and middle tarsi black from the tip of the first joint, which is half or more than half as long as their tibiae; hind tarsi black, first joint twice as long as second and with minute bristles below, especially at base. Calypters, their cilia and the wings as in the male, except that the wings are more brownish, and last section of fifth vein is fully twice as long as the crossvein.

Described from one pair taken at Lake Cushman, Mason County, Washington, July 15, 1919, by F. M. Gaige; one male (the type, in my collection) taken by E. P. Van Duzee, at Forks, Clallam County, Washington, July 4, 1920; two females taken by J. M. Aldrich, Funday Harbor, Washington, May 30, 1906, and Longmires Springs, Washington, August 2, 1905.

Paratype.—Female; Cat. No. 27039, U.S.N.M.

9. ARGYRA ARGENTIVENTRIS, new species

Male.—Length, 4.2 mm. Face and front silvery white; face quite narrow. Palpi brown, more or less yellow on apical half and with yellow hairs. Antennae black; first joint with several hairs above; third joint as long as first two together, its point obtuse; arista inserted a little before the tip of third joint, as long as the antenna; lower orbital cilia yellowish.

Thorax green with abundant silvery pollen; acrostichal bristles large; in front they are in two rows, but the three posterior bristles are in a single row. Abdomen blackish with green reflections, wholly covered with silvery pollen; the sides of the second segment, except the hind margin and the extreme base of first and third segments, are slightly yellowish. Hypopygium (fig. 24) black, small, its outer lamellae yellowish-brown, rounded at tip; inner appendages black, rounded, with a minute spine at tip.

Fore coxae yellowish, brown on outer surface; they have a few short black hairs on anterior surface and four black bristles near the tip; middle and hind coxae blackish. Femora yellow, a little more than apical third of posterior pair black; fore femora with black hairs on posterior surface, which are as long as the thickness of the femora; middle femora with the hairs near the lower edge

becoming longer and with three small bristles on lower anterior edge near the tip. Fore and middle tibiae yellow, with short hair and small bristles. Hind tibiae brown with long hair, especially below. Fore and middle tarsi yellow, darkened toward their tips; joints of fore pair as 66-22-18-12-10. Hind tarsi brownish; first joint thickened, especially at base, with two rows of long bristles below; joints of hind tarsi as 105-40-30-19-18. Calypters and halteres yellow, the former with their tips slightly brown and their cilia black.

Wings dark grayish; third vein bent backward at tip; last section of fourth vein bent before its middle, parallel with third beyond the bend; last section of fifth vein nearly twice as long as the crossvein.

Described from two males taken by Dr. J. M. Aldrich, at Mono Lake, California, July 22, 1911.

This is the fourth species to be described from America that has the first joint of hind tarsi much longer than the second and furnished with long bristles.

Type.—Male, Cat. No. 27040, U.S.N.M.

10. ARGYRA FEMORALIS, new species

Male.—Length, 3.5 mm. Face, front, palpi, and proboscis black; still in certain lights they show a little brownish-gray pollen; face rather wide for a male. Antennae black, first joint with conspicuous hairs above; third joint about as long as the basal two taken together, obtusely pointed; arista inserted just above the point, scarcely as long as the antenna. Lower orbital cilia grayish; the small, black, upper cilia reach down about one-fourth the eye height.

Dorsum of the thorax dark, shining green, its silvery pollen confined to a band extending from below the humeri to, and a little above, the root of the wing; scutellum with two pairs of marginal bristles, the outer pair about half as large as the median ones. Abdomen metallic green with the third and following segments covered with abundant silvery pollen, its hairs and bristles wholly black. Hypopygium small, black; outer lamellae small, black, obtuse at tip and fringed with hairs; inner appendages are a pair of yellow, slightly clubbed, short organs, with two or three short hairs at tip.

Coxae black with black hairs and bristles, fore coxae yellow at tip and with a row of slender bristles on apical half of outer anterior edge, which are longest above, where they are as long as the thickness of the coxa. All femora and tarsi black, extreme tips of femora yellow; anterior femora with long, black hair on the posterior surface; middle pair (fig. 12) with a protuberance below, where there are a few close-set, short spines; hind femora with long, black hair

on lower, outer edge, which is not as long as their width. Fore and middle tibiae yellow, the latter slightly swollen on anterior surface near the middle and again at tip; on the middle swelling are about 10 hairs, which are much longer than the thickness of the tibia. Hind tibiae with basal half yellowish, apical half black, sometimes the basal half is darker below. Fore tarsus with its joints as 39-14-10-7-7, first joint with a few bristles below; middle tarsus with its joints as 50-19-17-9-8; joints of hind tarsus as 32-28-20-12-8. Calypters brown with a black border and long, black cilia. Halteres yellow.

Wings grayish; third vein bent backward at tip; last section of fourth vein a little bent before its middle, parallel with third beyond this bend, ending in the apex of the wing; last section of the fifth vein one and a half times as long as the crossvein.

Female.—Face wide, its suture below the middle; lower edge of face rounded; face, front, palpi, and proboscis covered with gray (some might call it yellowish-gray) pollen. Third antennal joint scarcely as long as wide; arista subapical, longer than the antenna. Coxae as in the male; all femora and tibiae yellow; posterior femora and tibiae with apical fourth to apical half black; femora with only short hair; middle femora and tibiae plain.

Abdomen with the white pollen confined to the lower part of the sides.

Wings as in the male.

Described from two males and three females which I took in California; one male at Los Angeles, April 30; one male and two females at Alpine, San Diego County, April 8 and 10; and one female at Los Cerritos, Los Angeles County, April 3.

Type.—Male, Cat. No. 27041, U.S.N.M.

11. ARGYRA ALBIVENTRIS Loew

Argyra albiventris LOEW, Smiths. Misc. Coll., No. 171, p. 128, 1864.

Joints of front tarsi, measured from a small specimen (4.5 mm.) as 40-16-10-7-7; measured from a large specimen (6 mm.) are as 43-20-12-8-8; joints of the posterior tarsi from a small specimen as 36-33-20-12-9, measured from a large specimen they are as 40-35-25-15-11. There are only very small bristles on the lower surface of the first joint of anterior pair, not much more than hairs. Calypters mostly black, their cilia black.

Described from Sitka, Alaska. Have seen specimens from the following locations: Hood River, Oregon, September 28, taken by F. R. Cole; Seattle and Dewatto, Washington, June 7. J. M. Aldrich took it in the following places in Idaho: Juliaetta, June 16; Viola, June 29; Bovill, July 15; and in Craigs Mountain.

12. ARGYRA ROBUSTA Johnson

Argyra robusta JOHNSON, Psyche, vol. 13, p. 59, June, 1906.

Male.—Length, 6–7 mm. Face wide; silvery white. Palpi black, with black hairs. Front covered with white pollen. Antennae black; first joint with stiff hairs above; third joint about twice as long as wide; arista subapical, as long as the antenna. Beard grayish-white, abundant.

Thorax dark green with considerable grayish-white pollen; scutellum with many long, black hairs on the disk and four large, marginal bristles. Abdomen black, second and third segments with large yellow spots on the sides, those on second only leave a narrow black margin on anterior and posterior edges and a wide median stripe. Abdomen covered with silvery white pollen, all its hairs black. Hypopygial lamellae rather narrow and curved, yellow at base, more or less black at tip, fringed with black hairs; back of these is a long yellowish portion of the hypopygium.

All coxae black with black hair and bristles. All femora black with their tips narrowly yellow, anterior pair with long black hair on the posterior surface; middle pair with moderately long hair below; posterior pair with several bristlelike hairs near the tip. All tibiae yellow, extreme tips of hind pair brownish. Fore and middle tarsi infuscated from the tip of the first joint, still the other joints paler at base; hind tarsi black with the first joint yellowish at base. Joints of fore tarsi as 50–17–15–8–10; first joint with conspicuous bristles below, which are as long as the diameter of the joint; middle tarsi with the joints as 62–24–19–10–12; those of hind tarsi as 49–35–27–20–14. Calypters white with a black border and yellowish cilia. Halteres yellow.

Wings grayish, slightly tinged with brown in front and along the veins; third vein bent back at tip; last section of fourth vein bent at its middle, parallel with third at tip; last section of fifth vein one and a half times as long as the cross vein.

Female.—Differs from the male in having the pollen of the thorax and abdomen more brownish; the face wide and more gray, or grayish-yellow; its suture far below the middle, sinuous; lower edge of the face rounded; third antennal joint about as long as wide, arista apical. Fore and middle femora more or less blackened at base, sometimes largely black, their hair shorter than in the male; hind femora wholly yellow. All tibiae yellow. Hind tarsi usually wholly black; still sometimes the first joint is yellow with a black tip.

This species differs from *albiventris* Loew chiefly in having hair on the scutellum and in the proportionate length of the joints of the tarsi and the bristles on the lower surface of the fore tarsi; in

robusta these bristles are as long as the diameter of the joint and very conspicuous, while in *albiventris* there are only very small bristles, if indeed they could be called bristles, they are but little longer than the hairs on other portions of the joint. *A. robusta* is a much larger species and the female is much stouter than that of *albiventris*.

Redescribed from many males and females taken at Hull, Quebec, where the type specimen was taken. Have seen specimens taken by Doctor Aldrich at Craigs Mountain, Idaho, May 24, 1902. One male taken at Algonquin, Illinois, June 6, 1895. Two males taken in South Dakota; one male taken at Bozeman, Montana, June 20, 1911; and one male taken at Portage, New York, July 1, 1917.

13. ARGYRA CILIATA Van Duzee

Argyra ciliata VAN DUZEE, Proc. U. S. Nat. Mus., vol. 63, art. 21, p. 5, 1923.

This was described from one pair taken by Doctor Aldrich at Fairbanks, Alaska.

Type.—Male, Cat. No. 25958, U.S.N.M.

14. ARGYRA BIMACULATA, new species

Male.—Length, 4.7–5 mm. Face rather wide, silvery white. Front thickly covered with white pollen. Antennae black; first joint with numerous stiff hairs above; third joint nearly three times as long as broad; arista apical, about as long as third joint. The small black orbital cilia do not reach down to the middle of the eye. Beard yellowish, not abundant.

Dorsum of the thorax green with rather thick yellowish-white pollen; pleurae black with white pollen; scutellum with four large marginal bristles, and with a few conspicuous black hairs on its disk. Abdomen green with its hair and bristles black; second segment with a rather large, third with a small yellowish spot on each side; still, these spots are not conspicuous; abdomen with a narrow line of white pollen at the base of each segment, and some yellowish-brown pollen visible in certain lights on the dorsum. Hypopygium (fig. 14) black; outer lamellae small, black, somewhat triangular; inner appendages testaceous, large, shining, nearly bare, still having several small hairs.

Coxae black, fore and middle ones with numerous black, bristly hairs. All femora black, fore and middle ones narrowly yellow at tip; anterior pair with long black hair on posterior surface, which is about as long as the thickness of the femora; middle pair with a row of black bristly hairs on lower anterior edge, which are not as long as the width of the femora. All tibiae yellow, posterior pair black at tip, this black shading into the yellow. Fore

and middle tarsi black from the tip of the first joint, hind ones wholly black. Joints of fore tarsi as 44-14-10-8-10; those of middle ones as 53-22-15-8-8; of hind tarsi as 36-29-12-11-9. Calypters yellow with broad black tips and yellowish cilia. Halteres yellow.

Wings very slightly tinged with brown in front; third vein very gently arched; last section of fourth vein bent a little beyond its basal third, parallel with third beyond the bend; last section of fifth vein nearly twice as long as the cross vein.

Female.—What is no doubt the female of this species has the face wide, silvery white, its suture low down, making the lower part of the face about half as long as wide, with the lower edge a little rounded. Front covered with white pollen. Scutellum with a few minute, black hairs on the disk; abdomen green, sometimes purple, venter yellow at base. All coxae black. Fore and middle femora largely black, hind pair yellow with apical third black. Hind tibiae broadly black at tip; fore tibiae with strong bristles above, none below.

Described from eight males and three females taken at Hull, Quebec, June 11-15, by C. H. Curran; two females taken by Doctor Aldrich in South Dakota, and one female at Algonquin, Illinois, May 15, 1894.

Holotype male and allotype female were taken at Hull, Quebec, and are in the Canadian National Museum.

Paratypes.—Male and female, Cat. No. 27042, U.S.N.M.

15. ARGYRA VELUTINA, new species

Male.—Length, 6 mm. Face, palpi, front and occiput velvety black, the latter with a white sheen when viewed in certain lights; face moderately narrow, the sides parallel; palpi with conspicuous black hairs. Antennae black; third joint about as long as the basal two taken together, somewhat triangular, pointed at tip; first joint with numerous hairs above; arista apical, as long as the antenna. Orbital cilia and beard wholly black.

Thorax blackish, somewhat shining, dorsum with thin brown pollen; scutellum with four large marginal bristles and numerous black hairs on its disk. Abdomen and its hairs black; first and second segments with large yellow spots on each side, which leave only narrow anterior, posterior, and median lines of black; fourth segment with a yellow spot on each side on anterior margin. Hypopygium and its appendages black, its outer lamellae and inner appendages somewhat like those of *bimaculata* (fig. 14), except that the lamellae are more angulated in the middle and there is a slender somewhat clubbed organ inside of the large ones shown in the figure.

All coxae and femora black; fore and middle coxae with long black hair; fore femora with long black hair on the posterior and lower surfaces; middle pair with long black hair below, which is as long as their width. All tibiae and basitarsi yellow, all tarsi black from the extreme tip of first joint; joints of fore tarsi as 50-14-10-9-7; of middle tarsi as 56-25-15-8-10; joints of posterior pair as 44-35-22-15-8. Calypters whitish with black tips and cilia. Halteres yellow.

Wings grayish; third vein bent backward at tip, parallel with fourth beyond the bend in the last section of the latter; last section of fifth vein nearly one and three-fourths times as long as the crossvein and fully as long as from the crossvein to the bend of the fourth, which is quite abrupt.

Female.—Front and face wide, thickly covered with grayish yellow pollen, the latter with the suture far down so that the lower portion is scarcely half as long as wide; arista apical. Coxae and their hairs wholly black; femora and tibiae yellow; fore and middle femora a little darkened at base, the former also blackened on upper surface; hind femora slightly blackened above at tip. Hind tibiae wholly yellow; fore and middle tarsi black from the tip of first joint; first joint of hind tarsi yellowish-brown. Cilia of the calypters long and black. Hairs on the surface of the scutellum conspicuous, but not as long as in the male.

Described from one pair taken by C. H. Curran at Hull, Quebec, June 4, 1923.

Type and allotype.—In Canadian National Collection.

16. ARGYRA SPLENDIDA, new species

Male.—Length, 5 mm. Face and front silvery white, the former rather narrow; palpi and proboscis black with black hairs. Antennae black; first joint with conspicuous hairs above; third joint as long as the first two taken together, obtusely pointed at tip; arista above the point, a little longer than the antenna. The minute, black, orbital cilia descend to the middle of the eye; below them the beard is white or yellowish-white, and quite abundant.

Dorsum of the thorax green with brown reflections and a violet stripe on each side of the long acrostichal bristles; these stripes do not reach either the front of the thorax or the scutellum; the dorsum dulled with gray pollen, which is most abundant on the anterior half and on the violet stripes; the pollen on the sides is more silvery white; scutellum with two pairs of marginal bristles, outer pair not more than half as long as the median ones; there are several small, pale hairs above the fore coxae; pleurae black with white pollen. Abdomen black, wholly covered with silvery white pollen; there are large yellow spots on the sides of the second and third segments and

the first is a little yellow on the sides at the posterior margin; fourth segment with a rather small yellow spot on each side at the anterior margin; hairs and bristles of the abdomen wholly black. Hypopygium (fig. 21) and its appendages wholly black, except two small pointed appendages below the outer lamellae and a central filament, which are yellow; outer lamellae rather small.

Coxae black almost to their tips, their hair and bristles wholly black, anterior pair with a row of long slender bristles or hairs from their tips almost to the base. Fore femora black with base, tip and apical half of lower surface yellow; middle pair yellow with basal third slightly brownish below; posterior pair yellow, blackened above on apical half or more, posterior surface of fore femora with abundant long, black hair; middle femora with two rows of long black hairs on lower anterior surface and one row of still longer black or brown hairs on lower posterior surface. All tibiae yellow, tips of posterior pair slightly darker. Fore and middle tarsi blackened from the second joint; fore tarsi with its joints as 37-15-12-9-9; joints of middle tarsi as 59-27-18-11-10. Hind tarsi wholly black, its joints as 40-39-22-13-9. Calypters yellow with broad black tips and black cilia.

Wings grayish, veins slightly bordered with brown; third vein considerably bent backward at tip; last section of fourth vein bent before its middle; parallel with third at tip, ending nearly as far back of the apex of the wing as the third vein does before that point; last section of fifth vein one and one-third times as long as the crossvein.

Described from one male which I took at Berkeley, California, May 15, 1915. Type in the author's collection.

This form is very much like *californica*, new species, in the form of the hypopygium and its appendages and in general color. It differs in being larger, in the color of the femora, in the proportionate length of the joints of the tarsi; the fore coxae are not at all yellow, except at tip; the first abdominal segment has a little yellow on its sides, and the last section of the fourth vein of the wings is a little more bent, the bend is also a little nearer the crossvein.

17. ARGYRA ALBICANS Loew

Argyra albicans LOEW, Neue Beitr., vol. 8, p. 45, 1861; Smiths. Misc. Coll., No. 171, p. 125, 1864.

The joints of the fore tarsi in this species are as 58-16-10-7-9; those of middle tarsi are as 62-26-19-10-9; and those of posterior tarsi as 35-37-25-12-10.

This is an abundant species in the Eastern States; it was described from Washington, District of Columbia. I have seen specimens from Cohasset, Massachusetts, taken May 29; Blue Hills, Massachusetts, July 16; Auburndale, Massachusetts, August 13; Middletown, Con-

necticut, June 7; Falls Church, Virginia, May 16; Erie County, New York, June to August; Portage, New York, July 4; Lake Pipin, Ohio, September 1; Philadelphia, Pennsylvania, September 5; Polk County, Wisconsin, July; Lafayette, Indiana, May to July; Lawrence, Kansas, May 12; Opelousas, Louisiana, March; and Niagara Falls, Ontario, October 10.

This species has a few distinct, but small hairs on the disk of the scutellum; *robusta* Johnson has even more hair on the disk of the scutellum and the hairs are longer; in *scutellaris*, new species, the hair on the disk is still longer and more abundant. The male of *bimaculata*, new species, has more conspicuous hair on the disk of the scutellum than this species has, but the female has only a few small hairs as in the female of *albicans*. The male of *nigricoxa*, new species, has a few small hairs on the disk of the scutellum, about as in the male of *albicans*. The male of *sericata* also has a very few minute black hairs on the disk of the scutellum.

18. ARGYRA THORACICA, new species

Male.—Length, 5–6 mm. Face and front wide, silvery white. Palpi and proboscis black, with a little white pollen. Antennae black; first joint with conspicuous hairs above; third joint not quite as long as the face, rounded at tip; arista nearly apical, scarcely as long as the third joint. Lower orbital cilia and the beard white, about 10 of the small upper cilia on each side black.

Dorsum of the thorax so thickly covered with silvery white pollen as to conceal the ground color, except a large spot of shining green before the scutellum; scutellum more blue, dulled with white pollen, with two pairs of large marginal bristles. Abdomen with the second and third segments yellow, with narrow black hind margins; first segment yellowish with a black apical border, sometimes wholly black, and with long black bristles on the whole hind margin and a cluster of moderately long black hair on each side; fourth segment black with a yellowish basal spot on each side; fifth and sixth segments wholly black; abdomen from near the base of second segment covered with silvery white pollen, which is thickest on sixth; all hairs and bristles on the abdomen black, extreme edges of all segments white. Hypopygium (fig. 16) more or less yellowish at base, black on outer surface, sometimes wholly black; outer lamellae yellow, rather slender, abruptly tapering into a point from apical third; inner appendages are a pair of yellow organs of nearly equal width throughout and a little obliquely cut off at tip, inside of these is a blackish organ which is a little notched at tip.

Fore coxae yellow, usually with a brown spot at base on outer side; middle and hind coxae black, their tips and inner surface yel-

low; fore and middle coxae with a row of black bristles on outer anterior edge, their hairs black. All femora yellow, posterior pair with their tips more or less blackened for one-fourth their length and with a preapical bristle; fore femora with a fringe of reddish hair on lower posterior edge, the longest being on apical half, where the hairs are nearly as long as the width of the femora. All tibiae yellow, posterior pair often brownish-yellow, their tips black, the black shading into the yellow and usually reaching nearly to the base below. Fore and middle tarsi almost wholly yellow; joints of fore tarsi as 52-24-10-9-8; of middle tarsi as 64-32-25-13-8. Hind tarsi wholly black, their joints as 38-42-31-17-12. Calypters whitish with a narrow black edge and yellow cilia. Halteres yellow.

Wings grayish, veins yellowish-brown; third vein scarcely bent backward at tip; last section of fourth vein bent distinctly before its middle, parallel with third at tip; last section of fifth vein not quite one and a half times as long as the cross vein.

Female.—Agrees with the male in the characters of the head, abdomen, and wings, except that the third antennal joint is only a little longer than wide, the second joint extends over the upper edge of third nearly to its tip; arista almost as long as the face; the abdomen has very little white pollen; the first segment is wholly black; second, yellow with the posterior margin very narrowly black; third, yellow with broad hind margin and median line black; fourth segment with only a small yellowish spot on each side at lower anterior corner.

Thorax and scutellum green, considerably dulled with silvery white pollen. Coxae as in the male; hind femora wholly yellow; hind tibiae yellow with apical third black; fore and middle tarsi blackened toward their tips.

Described from seven males and four females. Two males were taken at Kearney, Ontario, July 3, 1909; one at Lewiston, New York, June 17, 1917; one at Gowanda, New York, June 8, 1913; one at Colden, Erie County, New York, June 7, 1908; one at Kiamasha, New York; and one from Speculator, New York, June 13. One female was taken at Protection, Erie County, New York, June 16, 1918, and one from Newport, New York, June 22.

Type.—Male, Cat. No. 27043, U.S.N.M., Kearney, Ontario.

19. ARGYRA CURRANI, new species

Male.—Length, 5 mm. Face and front silvery white, the former moderately wide, narrowed a little below. Palpi black, covered with white pollen. Antennae black, first joint nearly as long as third, and with conspicuous hairs above; third joint about twice as long as wide, obtusely pointed at tip; arista nearly apical, as

long as second and third antennal joints taken together. The black upper orbital cilia do not reach down to the middle of the eye; beard snow white.

Dorsum of thorax green, anterior half with considerable white pollen; pleurae wholly blackish with white pollen, its posterior edge not at all yellow; scutellum with four marginal bristles, without hairs on the disk. Abdomen dark metallic coppery; second and third segments yellow, except narrow hind margins and a wider median line, which are of a blackish-coppery color; fourth segment with a yellowish spot on each side; hairs of the abdomen wholly black. Hypopygium and its appendages wholly black, the former with numerous long, black, bristly hairs on posterior surface; outer lamellae small, acute, triangular.

Fore coxae pale yellow, covered with silvery white pollen, their anterior surface with a few minute black hairs and several long slender bristles near the tip; middle and hind coxae black, narrowly yellow at tip. Femora and tibiae yellow, tips of posterior tibiae narrowly but sharply black. Fore femora with a few long black hairs on upper posterior surface of apical half, otherwise the hairs on all femora are short and black. Fore and middle tarsi blackened from the tip of the first joint, hind tarsi wholly black; joints of fore tarsi as 45-18-12-8-8; of middle pair as 55-25-16-9-8; those of hind tarsi as 39-34-23-13-11. Calypters and halteres yellow, the former with a small brown spot at tip and whitish cilia.

Wings grayish; third vein only a little bent back at tip; last section of fourth vein bent just beyond its basal third, parallel with third beyond this bend; last section of fifth vein twice as long as the cross vein.

Female.—Face wide, its sides parallel, silvery white, the suture near the third fifth, making the upper portion longer than the lower part. First antennal joint slightly longer than the second and third taken together; arista a little longer than the antenna; palpi and front black, quite thickly covered with white pollen. Coxae, femora, tibiae, and tarsi colored as in the male, black hairs on the fore coxae about as in the male.

Abdomen shining green or coppery, its sides with white pollen; second abdominal segment with quite large and distinct yellow spots on each side.

Described from eleven males and twelve females, taken at Hull, Quebec, June 6-15, 1923; one female taken at Orillia, Ontario, July 15; and one female taken at Seabright, Ontario, July 16. All taken by C. H. Curran.

Paratypes.—Male and female, Cat. No. 27044, U.S.N.M.

20. ARGYRA NIGRICOXA, new species

Male.—Length 5 mm. Face not very narrow, silvery white. Palpi velvety black with black hairs. Front black with white pollen, which is very thick next to the antennae. Antennae black; first joint hairy above; third twice as long as wide, slightly hollowed below in outline, obtusely pointed; arista as long as the antenna, inserted above the point of third joint. Lateral and inferior orbital cilia white, the small upper cilia black.

Dorsum of thorax green, considerably dulled with white pollen; scutellum with four large marginal bristles and a few small black hairs on its disk; pleurae more black with abundant white pollen. Abdomen with considerable white pollen; first segment green, a little yellowish at extreme base; second and third mostly yellow with the median line and narrow hind margins green; remaining segments green with a narrow line of white pollen at posterior edge; all hairs and bristles of the abdomen, even on the yellow venter, black. Hypopygium (fig. 13) and its appendages testaceous; outer lamellae rather narrow, bent, blackish; inner appendages large, yellowish, tipped with a minute bristle.

All coxae almost wholly black; fore coxae with black hair on anterior surface and black bristles at tip and on outer edge of apical half. All femora yellow, posterior brown at tip and with a few longer hairs on lower outer edge near the tip; middle pair with a row of long black bristles on lower posterior edge, which are a little longer than the width of the femora; fore femora with abundant long, black hair on the posterior surface. All tibiae yellow, posterior pair indefinitely blackened at tip. Fore tarsi yellow, darker at tip, their joints as 50-15-11-8-10; first joint with a row of little bristles below, which are about as long as the thickness of the joint. Middle tarsi infuscated from the tip of the first joint. Hind tarsi wholly black, the joints as 39-33-25-12-10. Calypters white with a brown border and white cilia. Halteres pale yellow.

Wings grayish; third vein bent backward at tip; fourth vein bent back slightly to meet the crossvein, last section distinctly bent before its middle, parallel with third beyond this bend, ending in the apex of the wing; last section of fifth vein nearly straight, longer than the crossvein.

Described from one male taken at Sugar Grove, Ohio, May 19.
Type.—Male, Cat. No. 27045, U.S.N.M.

21. ARGYRA CALIFORNICA, new species

Male.—Length, 4 mm. Face and front silvery white, the former rather narrow. Palpi and proboscis black, with black hairs. Antennae black; first joint with conspicuous hairs above; third joint

as long as the first two joints taken together, somewhat rounded at tip; arista inserted above the tip, as long as the antenna. The minute black orbital cilia descend about one-third of the eye height; beard yellowish-white, quite abundant.

Dorsum of the thorax bright green, with bronze reflections, the posterior slope, a more or less distinct line each side of the acrostichal bristles, and sometimes the scutellum more blue, or even violet; acrostichal bristles very long posteriorly, in two distinct rows; scutellum with two pairs of marginal bristles; in the best-preserved specimen there is another small pair between the large median ones; dorsum of thorax with considerable silvery white pollen, which forms four stripes when viewed from in front. Dorsum of abdomen black, wholly covered with silvery white pollen, except the first segment; second and third segments with a large yellow spot on each side, which leaves only narrow margins of black on anterior and posterior edges and a narrow median line; fourth segment also with yellow spots on the sides, but they are smaller and less distinct: venter yellow, except on apical segments; hairs and bristles of the abdomen wholly black, even on the venter. Hypopygium (fig. 23) black, its appendages black, except the base of outer lamellae, two small, pointed appendages back of the lamellae and the central filament.

Fore coxae blackish, still more or less yellowish, especially on inner surface and toward the tip; they have long black hair on anterior surface. Middle and hind coxae and their trochanters black. All femora yellow; anterior pair more or less blackened on posterior surface, and posterior pair black above for one-third of their length; fore femora with long black hair on the posterior surface; middle ones with long black hair on the lower portion of both anterior and posterior surfaces, leaving the lower edge glabrous. All tibiae yellow; posterior pair darkened toward their tips, which are narrowly blackish. Fore and middle tarsi yellow, darkened toward their tips, especially the tips of the joints; fore tarsi with their joints as 38-13-9-6-9; middle ones as 45-21-14-8-7. Hind tarsi wholly deep black, their joints as 33-32-20-12-8. Calypters yellow, with a narrow black border and long black cilia. Halteres yellow.

Wings grayish, sometimes very slightly but uniformly tinged with brown; third vein bent backward a little at tip; last section of fourth vein bent near its middle, parallel with third at tip; last section of fifth vein twice as long as the crossvein.

Female.—Face and front wide, covered with grayish-white pollen. Third antennal joint about as long as wide; arista subapical. Thorax without or with but little blue color. Fore coxae yellow, with silvery white pollen and long black hair on the anterior surface. Abdomen green, with bronze reflections, sometimes more purple, covered with

white pollen. All femora and tibiae yellow; posterior femora a little blackened above at tip and hind tibiae only a very little darker at extreme tip; hind basitarsus mostly yellow, even the base of second joint a little yellowish. Wings about as in the male.

Described from three males and four females which I took in California in 1915—one female at Los Cerritos, Los Angeles County, April 3; one male and two females at Los Angeles, April 29; two males at Los Angeles, May 3-4; and one female at Berkeley, May 8.

Type.—Male, Cat. No. 27046, U.S.N.M.

22. ARGYRA SERICATA, new species

Male.—Length, 4 mm. Face wide; face, front, and occiput covered with silvery white pollen. Palpi velvety black, with a little white pollen. Antennae black, first joint with conspicuous hairs above; second joint as long as wide; third joint as long as the basal two taken together, obtuse at tip; arista subapical, scarcely as long as the antenna. Lower orbital cilia and beard white, longer below, the short upper cilia black.

Dorsum of thorax and the scutellum bright blue-green, with silvery white pollen, which is dense along the front and on the sides of the dorsum; scutellum with two pairs of large marginal bristles and a few small black hairs on the disk; pleurae more black, with dense white pollen. Abdomen black, with bright green reflections, especially on the anterior segments, the apical segment more purple; second segment with a large yellow spot on each side, which leaves a rather broad hind margin and median stripe green; third with a small, less distinct, yellow spot on each side in front; all hairs and bristles on the abdomen black. Hypopygium (fig. 17) shining black, the apical portion more testaceous; outer lamellae black, pointed at tip, fringed with pale hairs; the yellow inner appendages are one clavate organ with two hairs and a pair of smooth, pointed ones.

Fore coxae yellow, with a blackish spot at base, their hairs and bristles black; middle and hind coxae colored like the pleurae, their tips yellow, each with two bristles on outer surface and a few black hairs. Femora and tibiae yellow, with black hair; middle femora with a row of moderately long black hairs below; posterior femora with extreme tips brown, especially on upper surface; hind tibiae black at tip for one-fifth their length; all the tibiae with only short hair. Fore tarsi about one and one-fourth times as long as their tibiae, their joints as 48-18-12-7-9; they are yellow, darker apically; middle tarsi black from the tip of the first joint, their joints as 62-28-19-10-8; hind tarsi wholly black, their joints as 40-35-21-12-10. Calypters yellow, with apical edge black and long yellow cilia. Halteres yellow.

Wings grayish; third vein bent backward a little at tip; last section of fourth vein quite abruptly bent before its middle, parallel with third at tip, ending in the apex of the wing; last section of fifth vein more than twice as long as the cross vein.

Female.—Face and front wide, wholly silvery white. Antennae black; third joint about as long as wide, somewhat round in outline, still the tip is pointed; arista nearly twice as long as the antenna. Thorax shining green, with abundant silvery white pollen on front and along the sides, extending to the scutellum, which is also dulled with white pollen; pleurae more black, with silvery white pollen, its posterior edge narrowly and obscurely yellowish. Abdomen black; second and third segments yellow, with narrow hind margins of black, each segment with a conspicuous spot of silvery white pollen on each side at base. Fore coxae yellow, with a blackish spot at base on outer surface; middle and hind coxae largely black. Hind femora a little blackened at extreme tip above; hind tibiae black at tip for nearly one-fourth their length; still, the black is not sharply defined, but shades into the yellow. Hind tarsi wholly black; fore and middle tarsi only a little darkened toward their tips.

Described from three males and two females; two males (one is the type, in the Boston Society of Natural History) were taken at Machias, Maine, July 22, and one male at Brookline, Massachusetts, May 23; these were taken by C. W. Johnson. The two females were taken in Quebec by C. H. Curran, one the allotype (in Canadian National Collection) at Hull, June 6, 1923, and the other at Rigaud, June 26, 1906.

Paratype.—Male, Cat. No. 27047, U.S.N.M., from Machias, Maine.

23. ARGYRA CALCEATA Loew

Argyra calceata LOEW, Smiths. Misc. Coll., No. 171, p. 131, 1864.

Third antennal joint about twice as long as wide, rounded at tip, the first joint with about three hairs above near the tip; hypopygium with its outer lamellae somewhat triangular, quite pointed at tip, blackish; there are two pairs of inner appendages, the outer pair the largest, broadly rounded and with two minute bristles at tip. Joints of fore tarsi as 49-17-9-7-7; those of middle tarsi as 57-31-15-9-7; hind tarsi wholly black, or nearly so, the joints as 38-43-23-14-8.

This was described from "Middle States." I have seen it from the following locations: Philadelphia, Pennsylvania; Lafayette, Indiana, July 27; Erie County, New York, July 3 to September 3; Summit County, Ohio; Auburndale, Massachusetts, August 28; Cornish, New Hampshire, July 13; Mount Ascutney, Vermont, July 11, at 2,000 feet elevation; Bar Harbor, Maine, July 19; Emsdale, Ontario, July 30.

24. ARGYRA ALBICOXA, new species

Male.—Length, 4.5 mm. Face silvery white, rather wide. Front almost wholly covered with silvery pollen. Palpi yellowish. Antennae black; first joint with numerous hairs above; third joint broad, rounded at tip, scarcely as long as the basal two taken together; arista inserted near the tip, scarcely as long as the antenna. The black orbital cilia rather strong, but only reaching down a little way on the sides; beard whitish, quite abundant.

Thorax shining green with considerable white pollen on the sides; scutellum with four large marginal bristles, without hairs on the surface; posterior margin of pleurae pale yellow. First four abdominal segments yellow with narrow black hind margins, apical segments black; the abdomen is shining, with very little white pollen, its hairs black. Hypopygium and its appendages black with extreme base of outer lamellae a very little yellowish, small, somewhat triangular.

All coxae, femora and tibiae yellow, middle coxae a little darkened on outer surface; fore coxae with silvery pollen, their anterior surface nearly bare, still there are a few minute yellow hairs at base and large black bristles at tip, which reach to their middle on outer edge. Fore femora with the black hair on the posterior surface longer than that on the remaining portions and with a row or two of minute yellow hairs below; middle femora with only short hair, a few of those on lower surface pale yellow. Hind femora and tibiae scarcely darkened at tip, the former with only short black hair. Bristles on all tibiae rather short. Fore and middle tarsi yellow, blackened towards their tips; hind tarsi wholly black; joints of fore tarsi as 51-18-10-6-6; of middle ones as 63-27-18-8-7; those of hind tarsi as 37-37-20-13-10. Calypters yellow with narrow brown tips, their cilia yellow but appearing nearly black in certain lights. Halteres pale yellow.

Wings grayish; third vein bent backward a little at tip; bend in last section of fourth vein at the length of the crossvein from that vein, fourth vein parallel with third beyond this bend; last section of fifth vein nearly twice as long as the crossvein.

Described from one male taken at Hull, Quebec, July 23, 1923, by C. H. Curran.

Type.—In Canadian National Collection.

25. ARGYRA CALCITRANS Loew

Argyra calcitrans LOEW, Smiths. Misc. Coll., No. 171, p. 130, 1864.

A rather abundant eastern form with silvery face, velvety black palpi, third antennal joint only a little shorter than the face, arista

about equal to the third joint in length; legs and feet wholly yellow, middle and hind coxae a little blackened at base; middle femora with rather long brown hair on lower anterior edge; posterior femora with long black bristle-like hairs on lower edge; hind basitarsus with many long bristles; joints of fore tarsi as 36-9-8-5-6; those of middle tarsi as 32-16-12-8-8; joints of hind tarsi as 32-13-13-10-9.

This was described from New York State. I have seen specimens from Auburndale, Massachusetts, June 7; Sharon, Massachusetts, July 7; Apponaug and Buttonwoods, Rhode Island, June 21; Rowayton, Connecticut, June 15; Clementon, New Jersey, May 30; Westville, New Jersey, June 27; Erie County, New York, June 7 to July 1; Lafayette, Indiana, June 17; Dyke, Virginia, May 28; and Orillia, Ontario, July 18.

The female of this, or what I take to be the female, has the abdomen wholly green; fore coxae, femora, tibiae, and tarsi wholly yellow; middle and hind coxae yellow, more or less blackened on outer surface. The joints of the tarsi vary in length, but the second joint of hind tarsi is about two-thirds as long as the first; in the average specimens the joints of the tarsi are about as follows: Fore tarsi 29-9-8-5-5; middle tarsi, 31-16-12-8-7; hind tarsi, 29-17-8-4-5. In one large specimen the joints of fore tarsi are as 40-15-10-7-7, and hind tarsi as 40-26-18-10-7.

If this is not the female of *calcitrans*, there do not seem to be any other females in my hands that would belong to that species and no male to go with these females. We have these females from Lafayette, Indiana, June and July; Wellesley, Massachusetts, July 18; Colden, New York, August 9; Portage, New York, July 1; and Orillia, Ontario, July 18.

26. ARGYRA SETIPES, new species

Male.—Length, 4-4.7 mm. Face and front silvery white, the former narrow. Palpi and proboscis black, the former with yellowish hairs. Antenna (fig. 22) black; first joint with several stout hairs above; third joint brown, three times as long as the first two taken together; arista scarcely as long as the third joint. Lateral and inferior orbital cilia whitish, the minute black upper cilia reach down one-third the eye height.

Dorsum of thorax and the scutellum dark shining green, the former with abundant silvery white pollen on the anterior two-thirds; scutellum with one pair of large marginal bristles. Abdomen covered with silvery white pollen; first segment black; second yellow with anterior and posterior margins and a connecting

median stripe, black; hind margins of three apical segments black; hind margins of second to fifth segments narrowly white; hairs of the abdomen black, a few long ones on the sides of first, second, and third segments yellow. Hypopygium (fig. 20) small, black; its outer lamellae yellow, truncate at tip, fringed with long hairs; inner appendages black, not conspicuous.

All coxae yellow, middle and hind ones more or less blackened on outer surface; the hairs and bristles of the coxae are mostly black. All femora and tibiae yellow, posterior pair brown or black at tip. Fore and middle femora with quite long, hind ones with very short yellow hairs below; fore femora with long hairs on the posterior surface, which appear black when seen from above and yellow when viewed from below; sometimes they are wholly black except the lower row; middle and hind femora with a few black bristle-like hairs near the tip on anterior surface. Fore tarsi yellow with fifth joint black, their joints as 45-17-11-7-7; those of middle tarsi as 46-17-15-9-7; hind tarsi yellow, a little darker at tip, their joints as 50-20-18-11-8, first joint with two rows of long bristles on the anterior and posterior edges of the lower surface, the longest of which are about as long as the third joint of the tarsi. Calypters and halteres yellow, the former with brown tips and long yellow cilia.

Wings grayish; third vein only slightly bent backward at tip; last section of fourth vein bent before its middle, parallel with third, ending near the apex of the wing; last section of fifth vein scarcely one and a half times as long as the crossvein.

Female.—Face not very wide, silvery white, suture near apical fourth, palpi yellow with a few black hairs near the tip. Third antennal joint nearly round, still a little pointed at tip, arista sub-apical. Abdomen yellow, a blackish spot at the middle of the dorsum on the first segment; a line on the hind margin of second, third, and fourth and the whole of fifth segment black. Femora, tibiae, and tarsi yellow, tips of middle and hind tarsi darker; posterior basitarsus with distinct but minute bristles below.

Described from 23 males and 3 females. Three males were taken at Colden, Erie County, New York, August 5 and 23; one at Hamburg, Erie County, New York, July 9; one at Delaware Water Gap, New Jersey, July 11; one at Brattleboro, Vermont, July 15; and one at Chester, Massachusetts, July 25; two females were taken at Little Valley, New York, July 4 and 18; and one female at Colden, Erie County, New York, July 23. Sixteen males were taken by C. H. Curran at Orillia, Ontario, July 13-18, 1923.

Type.—Male, Cat. No. 27048, U.S.N.M., from Colden, New York.

27. ARGYRA ALDRICHI Johnson

Argyra aldrichi JOHNSON, Psyche, vol. 10, p. 18, 1904; also a note in Psyche, vol. 13, p. 60.

Male.—Length, 4.5 mm. Face and front silvery white, the former moderately wide. Palpi and proboscis yellow. Antennae black; first joint conspicuously bristly above; third joint only slightly longer than the basal two taken together; arista apical, about as long as third joint. Lateral and inferior orbital cilia white, the small black upper cilia white; the small black upper cilia reach down only to the upper fourth of the eye height.

Dorsum of thorax dark shining green, without white pollen, except on the humeral angles, which are thickly covered with the silvery white pollen; scutellum with two pairs of marginal bristles. First three abdominal segments yellow, first widely black in the center above, second and third narrowly black on hind margin; fourth segment with a little more than basal half yellow, remainder of fourth and the whole of fifth and sixth black; all segments with extreme apical margin white; the hairs on the abdomen small and black; still they appear yellowish in certain lights, long bristles on upper portion of first segment black, but there are long yellow hairs on the lower part of the sides. Hypopygium (fig. 19) with upper part testaceous, lower portion shining black, it is constricted in the middle, the apical part being nearly globular; its outer lamellae long, curved, brown, fringed with hairs.

All coxae, posterior margin of pleurae, femora, and tibiae wholly yellow. Bristles of coxae black. Fore and middle femora with short yellow hairs below. Fore tarsi mostly yellow, lower edge of second joint a little hollowed out and with a bunch of short spines at base; joints of fore tarsi as 50-17-14-15-12; joints of middle tarsi as 58-30-20-13-10; hind tarsi wholly black, their joints as 40-43-29-17-10. Calypters, their cilia and the halteres pale yellow.

Wings gray; last section of fourth vein bent near its middle; it is nearly parallel with third and ends just back of the apex of the wing; last section of fifth vein not quite twice as long as the cross-vein.

Female.—Face about twice as wide as in the male; palpi large, yellow; third antennal joint not quite as long as the basal two together. Thorax, coxae, legs, and feet colored as in the male; abdomen yellow with narrow black margins on the first four segments, fifth wholly black. Wings as in the male.

Redescribed from two males and one female taken by C. W. Johnson, the males were taken at Buttonwoods, Rhode Island, June, 1912; the female at Bristol, Rhode Island, June 21, 1918. The type

locality is Goose Neck, New Jersey. C. W. Johnson reports it from New Haven, Connecticut, June 8. One male from Buttonwoods, Rhode Island, is deposited in the United States National Museum.

28. ARGYRA MINUTA Loew

Argyra minuta LOEW, Smiths. Misc. Coll., No. 171, p. 129, 1864.

A small species with the legs and feet wholly yellow, palpi and antennae black. The outer hypopygial lamellae are narrow, rather short, yellowish; inner appendages somewhat conical with a bristle at apical point. The male has the joints of fore tarsi as 33-12-8-5-5, their tibiae as 54; the joints of hind tarsi are as 30-24-15-8-6. The female has the joints of fore tarsi as 22-13-9-6-6; those of hind tarsi as 28-22-18-9-8.

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It is difficult to separate the female of this from that of *calcitrans* Loew and *setipes* new species. I give below the length of the joints of fore and hind tarsi of the females of the last two named species as I separate them, for comparison with those of *minuta*.

The joints of fore tarsi of the female of *calcitrans* are as 33-14-9-6-7, those on hind tarsi as 32-25-18-17-16. The joints of the fore tarsi of *setipes* are as 42-19-15-9-7, those of hind tarsi as 35-35-23-15-9. The palpi in *setipes* are yellow and large; while in both the other species the palpi are smaller and blackish.

29. ARGYRA FLAVIPES, new species

Male.—Length, 3 mm. Face and front silvery white. Palpi covered with silvery pollen. Proboscis yellowish. Antennae (fig. 15) black; I can see but one hair on the upper edge of first joint; third joint more brown, longer than the basal two taken together, rounded at tip; arista inserted a little beyond its middle.

Dorsum of thorax shining green with but little silvery white pollen: pleurae more black with its posterior edge yellow. First abdominal segment black; second, third, and fourth yellow, their posterior margins rather widely black; fifth and sixth black with green reflections. Hypopygium (fig. 18) black; its appendages yellowish; outer lamellae somewhat triangular, fringed with long hairs; inner appendages a little clavate.

All coxae, femora, tibiae and tarsi wholly yellow, tips of tarsi only a little darker and sometimes the tips of hind femora are brownish; middle femora with one preapical bristle, nearly bare below; posterior pair with a row of slender bristles on anterior surface, several of which are longer than the width of the femora. Fore tarsi with their joints as 28-15-9-7-10; joints of hind tarsi as 29-20-15-10-6. Calypters, their cilia and the halteres yellow.

Wings grayish; third vein straight; fourth vein nearly straight; parallel with third; last section of fifth vein twice as long as the crossvein.

Female.—Face wider; palpi yellow, blackened on basal half; first antennal joint with several hairs above; first abdominal segment yellow, otherwise the abdomen as in the male; pleurae, coxae, legs, feet and wings about as in the male.

Described from one pair taken near Plummer Island, Maryland, the male on May 21 and the female on June 2; nine males and three females taken by Dr. J. M. Aldrich, at Lafayette, Indiana, June 9 to July 19; and one female taken by him at Turkey Run, Indiana, August 20.

Paratypes.—Both sexes, 12, Cat. No. 27049, U.S.N.M.

30. ARGYRA FLAVICORNIS, new species

Male.—Length, 3 mm. Face rather narrow, silvery white. Front covered with white pollen, still the green ground color shows through. Palpi and proboscis reddish-yellow. Antennae (fig. 25) yellow; first joint with three or more hairs above and a few minute ones below near the tip; third joint narrowly black above, longer than the basal two taken together, rounded at tip; arista black, scarcely as long as the antenna, inserted near apical third of third joint. Lower orbital cilia short and sparse, yellowish.

Dorsum of thorax and the scutellum dark shining green, with a little pollen along the front; the scutellum with one pair of widely separated marginal bristles. First four segments of the abdomen yellow with their hind margins black; apical segments black with green reflections, still the fifth is narrowly yellow on its sides at base; hairs of the abdomen yellow, a few of the bristles on the sides of the hind margin of first segment are black. Hypopygium (fig. 26) more testaceous than black, its appendages yellow; the outer lamellae broad, somewhat triangular in outline, yellow with black dots at the root of the hairs on its disk; inner appendages are a pair of large clavate organs and a pair of slender shorter ones, the central filament is conspicuous in the type specimens.

Coxae, legs and feet wholly yellow, coxae with only short yellow hair and no bristles, except one erect black one on hind coxae and several very small black ones near the tip of fore coxae; femora and tibiae with very short black hair. Joints of fore tarsi as 37-10-8-5-7. Joints of posterior tarsi are as 30-28-17-11-8. Calypters yellow with a small brown spot at tip and black cilia. Halteres yellow.

Wings slightly grayish; veins yellow; third vein bent backward at tip; last section of fourth vein only a little bent before its middle,

parallel with third at tip; last section of fifth vein one and a half times as long as the crossvein.

Female.—Differs from the male only in having the face wide; third antennal joint small, about as long as wide and the cilia of the calypters are yellow, not black as in the male.

Described from three males and four females (including type and allotype) taken by Dr. J. M. Aldrich at Lawrence, Kansas; eight males and three females taken by C. F. Adams at Atherton, Missouri, in May and June; and one male and two females taken by G. R. Pilate at Opelousas, Louisiana, in May.

This species is remarkable for its yellow antennae, the third joint of which has a black line above, and the yellow lamellae with black dots on their surface where hairs are inserted.

Type, allotype, and 6 paratypes.—Male and female, Cat. No. 27050, U.S.N.M., from Kansas and Louisiana.

31. ARGYRA OBSCURA, new species

Male.—Length, 4.7 mm. Face rather wide, with silvery white pollen; still it appears black and a little shining when seen from in front. Palpi and proboscis black with black hair. Front greenish black with white pollen, which is thick near the antennae. Antennae black, first joint with conspicuous hairs above; third joint about as long as the basal two taken together, arista apical, equal to the antenna in length. The small black orbital cilia reaching down nearly to the middle of the eye; below these there is a quite abundant white beard.

Dorsum of thorax and the scutellum blue-green, the former with considerable white pollen, which is thick on the humeri and along the sides to the root of the wings; humeri with several small bristles; there are four black bristles above the fore coxae; scutellum with four marginal bristles, and many black hairs on its disk. Abdomen dark green, all its hairs and bristles black; it has rather dense white pollen on the base of the segments; second segment with a rather large but obscure yellow spot at base on each side; there is also a small indistinct yellowish spot on each side of third segment at base. Hypopygium black, its tip and the large sheath or inner appendage testaceous; outer lamellae black with pale hairs and black bristles.

Coxae wholly black; trochanters yellowish; fore and middle coxae with long, bristly, black hairs; hind coxae with two bristles and several hairs on outer surface. Fore and middle femora black with narrow yellow tips; hind femora with basal two-thirds yellow, apical third black; fore femora with black hair on posterior surface, which is scarcely as long as their thickness; middle femora with a

row of stiff black hairs on lower anterior edge, which are not as long as their width. All tibiae pale yellow, posterior pair with nearly apical fourth black. Fore and middle tarsi yellow at base, black from the tip of the first joint; joints of anterior pair as 57-23-17-9-10; joints of middle tarsi as 62-23-17-9-6; those of hind ones as 40-35-26-14-13. Calypters pale yellow with broad black tips and yellow cilia. Halteres yellow.

Wings slightly tinged with yellowish-brown; third vein bent backward at tip; last section of fourth vein bent before its middle, parallel with third toward the tip; last section of fifth vein one and a third times as long as the cross vein.

Described from two males, taken at Mount Washington, New Hampshire, July 24, by C. W. Johnson.

Holotype.—In the author's collection.

32. ARGYRA (LEUCOSTOLA) CINGULATA Loew

Leucostola cingulata LOEW, Neue Beitr., vol. 8, 1861, p. 53; Smiths. Misc. Colls., No. 171, p. 157, 1864.

Described from the District of Columbia. I have taken it in Erie County, New York, June 16 and July 4. Nathan Banks took it at Falls Church, Virginia, May 24 and July 19. Dr. J. M. Aldrich took it at Lawrence, Kansas, and Lafayette, Indiana, June 5 and July 13; and in his collection I found it from Opelousas, Louisiana, taken by G. R. Pilate in May (fig. 28).

33. ARGYRA (LEUCOSTOLA) JOHNSONI, new species

Male.—Length, 4.5 mm. Face and front silvery white, the former very narrow. Palpi yellow with silvery pollen. Proboscis brown. Antennae black; first joint short, bare above; third joint longer than the two basal joints taken together, obtuse at tip; arista inserted a little above the tip, a little longer than the antenna. Lower orbital cilia yellow, these scarcely reach to the middle of the eye, and I can not see any black cilia above them.

Dorsum of thorax dark but bright green, dulled a little with silvery white pollen, especially in front and on the lateral sides; pleurae more black with white pollen. Abdomen thickly covered with silvery white pollen, its hairs black, those of the sides being yellow; first segment mostly black; second and third yellow with very narrow hind margin of second and anterior and posterior margins of third brown; fourth black, still showing a slight yellowish color, especially on the sides; apical segments black, the extreme apical edges of all segments appear white. Hypopygium (fig. 29) black; its appendages yellow; they consist of a pair of lamellae fringed with long hairs. a

small hairy protuberance, a pair of horn-like and a pair of inner narrow lamellae-like appendages, which have a few hairs on their edges.

All coxae and their hairs and bristles yellow. All femora, tibiae, and tarsi yellow. All femora with rather long, delicate, yellow hair on lower posterior edge. Middle tibiae with three, hind ones with several, small, black bristles; the hairs of the legs appear black in certain lights, while in other lights they appear largely yellow. The comparative length of the legs and feet are as follows: Fore femora 45, tibiae 60, tarsi as 44-14-8-6-6; middle femora 80, tibiae 90, tarsi as 52-28-16-10-8; hind femora 67, tibiae 100, tarsi as 36-29-22-13-8. First and second joints of hind tarsi fringed below with stiff little hairs of nearly equal length. Calypters pale yellow with a brown margin and pale yellow cilia. Halteres dark yellow.

Wings slightly tinged with brown in front of fourth vein; last section of fourth vein a little bent at its middle, parallel with third at tip; last section of fifth vein twice as long as the crossvein.

Described from one male (type) taken at Shark River, New Jersey, July 12, 1897, by C. W. Johnson; two males from Philadelphia and one from Montgomery County, Pennsylvania. Type in the collection of C. W. Johnson.

Paratypes.—Male, Cat. No. 27051, U.S.N.M.

This differs from *cingulata* Loew in the comparative lengths of the tarsal joints, especially those of hind tarsi. The joints of the tarsi of *cingulata* are as follows: Fore tarsi, 42-15-11-6-6; middle tarsi, 47-20-15-7-7; those of hind tarsi, 26-33-20-12-7. The appendages of the hypopygium also differ somewhat.

34. ARGYRA (LEUCOSTOLA) INVOLUTA, new species

Male.—Length, 3.5-4 mm. Face rather wide for a male, silvery white. Palpi yellow with silvery pollen and several hairs and one bristle at tip, which last appears pale against a dark background and is almost as long as the palpus. Front dark green, dulled with white pollen. Antennae black; first joint bare above; third joint about as long as the basal two taken together, subtriangular; arista nearly apical, as long as the antenna.

Dorsum of thorax bright green, shining, with a little white pollen in front; pleurae more blackish. Abdomen shining green with some coppery reflections; second segment with a large yellow spot on each side, these spots only leave a median stripe, widening posteriorly, and a narrow hind margin, which is green. Hypopygium (fig. 31) small, greenish-black; the outer lamellae of nearly equal width throughout and oblique at tip, fringed with pale hairs; there appear

to be three pairs of inner appendages which are yellowish-brown and a central filament extending back about as far as the lamellae.

Coxae yellow with all their hairs and bristles yellow; middle and hind pairs a little brownish on outer surface. Femora yellow: fore and middle pairs with yellow hairs below; posterior pair brown above for nearly one-third their length and with several black hairs near the tip on lower outer edge. Fore and middle tibiae yellow: hind tibiae blackish, except extreme base; middle tibiae without a bristle below. Fore and middle tarsi yellow, darkened at their tips, the former as long as their tibiae, their joints as 28-10-8-5-6; hind tarsi wholly black, their joints as 24-22-20-7-7. Calypters yellow with extreme tip brown, their cilia yellow. Halteres yellow.

Wings grayish; last section of fourth vein a little bent at its middle, parallel with third at tip; crossvein distinctly oblique, not at right angles with fourth vein; last section of fifth vein a little longer than the first section, nearly straight, one and a half times as long as the crossvein; anal angle of wing prominent.

Described from two males taken by Dr. J. M. Aldrich; the type was taken at Lafayette, Indiana, June, 1908; the other was taken at Erwin, South Dakota, June 2. Both specimens are in the United States National Museum.

Type.—Male, Cat. No. 27052, U.S.N.M.

35. ARGYRA (LEUCOSTOLA) FLAVICOXA, new species

Male.—Length, 5 mm. Face and front silvery white, the former moderately narrow. Occiput green with thin white pollen. Palpi yellow with silvery white pollen and a black bristle at tip. Antennae black: first joint bare above: second not as long as wide; third joint slightly longer than the basal two taken together, obtuse at tip; arista subapical, slightly longer than the antenna. Lower orbital cilia yellowish white and short, the very short, black, upper cilia reach down to the middle of the eye height.

Dorsum of thorax bright green with bronze reflections and abundant silvery white pollen; scutellum with one pair of large marginal bristles. Abdomen black, but so thickly covered with silvery pollen as to conceal the ground color when viewed from in front: second segment pale yellow, except a broad median stripe which expands along the hind margin of the segment; third and fourth segments each with a large yellow spot on either side, which reach the posterior edge, but leave a black basal margin on each side; venter yellow with the last segment brown. Hairs of the abdomen black, except those on the yellow portion of second segment and on the venter, which are yellow. Hypopygium (fig. 27) black, the small apical portion and the appendages yellow, these consist of a pair of outer lamellae

which are fringed with yellow hairs, a pair of curved hornlike organs and a pair of flattened appendages, which are obliquely truncate at tip, ending in a small bristle.

All coxae, femora, fore and middle tibiae pale yellow; hairs of fore coxae yellow, one or two of their bristles black; hairs and bristles of middle and hind coxae black. Hind femora slightly darkened at tip and with the lower hairs on outer side near the tip longer. Fore and middle femora fringed on lower surface with delicate yellow hairs, which are scarcely as long as the width of the femora, the middle pair with one small preapical bristle and about five delicate black hairs on posterior side at tip; bristles of the tibiae small. Hind tibiae brownish-yellow, not darker at tip. Fore and middle tarsi yellow, darker apically; joints of fore tarsi are as 47-18-10-6-6; those of middle tarsi as 58-22-18-10-9. Hind tarsi wholly black with the first and second joints as 37-33. Calypters and halteres pale yellow, the former with a black tip and long pale cilia.

Wings grayish, tinged with yellowish-brown; third vein slightly bent backward at tip; last section of fourth vein a little bent just before its middle, parallel with third at tip; last section of fifth vein scarcely twice as long as the crossvein.

Described from one male taken by C. W. Johnson, at Daytona, Florida, April 8, 1917. Type in the collection of C. W. Johnson.

36. ARGYRA (LEUCOSTOLA) INAEQUALIS, new species

Male.—Length, 3 mm. Face narrow, silvery white. Palpi yellow with white pollen. Front nearly opaque with white pollen. Antennae black; first joint bare above; third joint longer than the basal two taken together, sometimes twice as long as wide, obtuse at tip; arista inserted above the point, scarcely as long as the antenna. Lower orbital cilia white, inconspicuous.

Dorsum of thorax shining green with white pollen on the anterior portion; scutellum with one pair of large marginal bristles; pleurae dull green with white pollen. Abdomen shining green, venter, posterior edge of first segment at the sides, all of second segment, except a median stripe, which is widened at anterior and posterior margins, and a spot on each side of third segment, yellow; hairs on the green portion black, those on the yellow part mostly yellowish. Hypopygium (fig. 30) black or greenish; its appendages mostly yellowish; outer lamellae elongate, triangular, with delicate hairs on the edges and one long one at tip.

All coxae and their hairs and bristles yellow, middle and hind pairs a little infuscated at base on outer surface. All femora and tibiae together with their hairs, yellow; tips of posterior femora brown above; all femora with delicate yellow hairs below, which

are scarcely longer than those on the upper edge, the middle and hind pairs also have a few black bristle-like hairs near the tip on lower anterior edge; the black bristles on middle and hind tibiae very small. Fore and middle tarsi yellow, a little darker at tip; the joints of fore tarsi as 27-10-6-4-6. Hind tarsi (fig. 34) black from the tip of the first joint, their joints as 23-17-12-8-6, the first joint slightly enlarged at tip and with a projection which bears a cluster of hairs, these usually form a thorn-like tip to the joint, but sometimes they are a little more separated. Calypters and halteres pale yellow, the former with white cilia.

Wings slightly grayish, veins brown; last section of fourth vein a little bent at its basal third, nearly parallel with third beyond this bend, ending in the apex of the wing; last section of fifth vein twice as long as the crossvein.

Described from five males taken by Dr. J. M. Aldrich at Lafayette, Indiana, June 9 to July 31.

Type.—Male. Cat. No. 27053, U.S.N.M.

There is quite a variation in the length of the third antennal joint, the extent of the brown at tip of hind femora, the yellow of hind tarsi and in the color of the hairs on the legs, still I think there can be no doubt of their all being one species.

37. ARGYRA (LEUCOSTOLA) SPINA, new species

Male.—Length, 3.5 mm. Face narrow, silvery white. Palpi yellow with white pollen and one black hair at tip. Front opaque with white pollen. Antennae black; first joint bare above; third joint a little longer than the two basal ones taken together, but little longer than wide, rounded at tip; arista a little longer than the antenna, inserted a little before the tip of the third antennal joint. Lower orbital cilia white and rather short.

Thorax shining green with white pollen on anterior portion, especially at the sides; scutellum with one pair of large marginal bristles. Abdomen with the first segment green with black bristles on the hind margin and a few yellow hairs on the lower edge at the sides; second segment yellow with a median green stripe, which widens at fore and hind margins, it has long yellow hairs on the lower edge of the sides; third segment black with a large yellow spot on each side; fourth, fifth, and sixth segments black; last four segments thickly covered with silvery white pollen. Hypopygium (fig. 32) black, its appendages yellow; outer lamellae short, triangular, with delicate hairs above and a long one at tip; there are two pairs of inner appendages.

Coxae yellow, with yellow hairs, their bristles black in certain lights, viewed in other lights they are yellow. Femora and tibiae

yellow. All femora with a row of yellow hairs below which are a little longer than those above; hind pair black at tip above and with a few slender black bristles on apical third of outer surface, which are about as long as width of the femora. Middle tibiae with rather long bristles above. All tarsi almost wholly yellow; fore and middle tarsi longer than their tibiae; joints of the anterior tarsi as 30-12-6-5-6. Hind tarsi (fig. 33) with their joints as 24-23-16-9-7, their first joint with a thornlike projection at tip; fifth joint contracted in the middle. Calypters yellow with a narrow black tip and white cilia. Halteres yellow.

Wings a little grayish; last section of fourth vein a little bent just before its middle, parallel with third beyond this bend, ending in the apex of the wing; all veins rather widely separated, as the wing seems wide; last section of fifth vein one and a half times as long as the crossvein.

Described from one male taken by Doctor Aldrich at Lafayette, Indiana, July 25.

Type.—Male, Cat. No. 27054, U.S.N.M.

This is very much like the preceding species; it differs in the proportionate lengths of the first and second joints of hind tarsi: length of the arista, length of the bristles on the middle tibiae, length of the outer hypopygial lamellae and in other minor points.

EXPLANATION OF PLATE

(Drawings by the author)

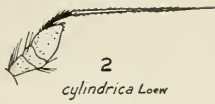
- FIG. 1. *Argyra nigripes* Loew. Hypopygium of male.
2. *cylindrica* Loew. Antenna.
3. *hirta*, new species. Antenna of male.
4. *hirta*, new species. Hypopygium.
5. *angustata*, new species. Antenna of male.
6. *cylindrica* Loew. Hypopygium.
7. *angustata*, new species. Hypopygium.
8. *barbipes*, new species. Hypopygium.
9. *scutellaris*, new species. Hypopygium.
10. *scutellaris*, new species. Antenna of male.
11. *nigricentris*, new species. Hypopygium.
12. *femoratis*, new species. Middle femur of male.
13. *nigricoxa*, new species. Hypopygium.
14. *binaculata*, new species. Hypopygium.
15. *flavipes*, new species. Antenna of male.
16. *thoracica*, new species. Hypopygium.
17. *sericata*, new species. Hypopygium.
18. *flavipes*, new species. Hypopygium.
19. *aldrichi* Johnson. Hypopygium.
20. *setipes*, new species. Hypopygium.
21. *splendida*, new species. Hypopygium.
22. *setipes*, new species. Antenna of male.
23. *californica*, new species. Hypopygium.
24. *argentiventris*, new species. Hypopygium.
25. *flavicornis*, new species. Antenna of male.
26. *flavicornis*, new species. Hypopygium.
27. *flavicoxa*, new species. Hypopygium.
28. *cingulata* Loew. Hypopygium.
29. *johnsoni*, new species. Hypopygium.
30. *inaequalis*, new species. Hypopygium.
31. *involuta*, new species. Hypopygium.
32. *spina*, new species. Hypopygium.
33. *spina*, new species. Hind tarsus of male.
34. *inaequalis*, new species. Hind tarsus of male.







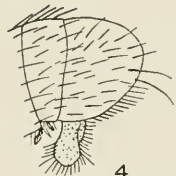
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2
cylindrica Loew



3
hirta Van Duzee



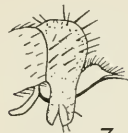
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hirta Van Duzee



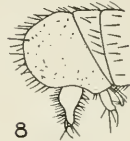
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angustata Van Duzee



6
cylindrica Loew



7
angustata Van Duzee



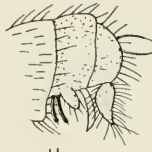
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barbipes Van Duzee



9
scutellaris Van Duzee



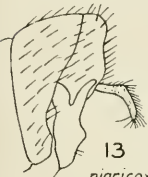
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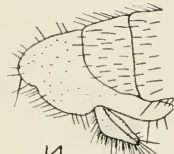
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12
femoralis Van Duzee



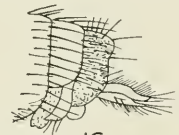
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nigricoxa Van Duzee



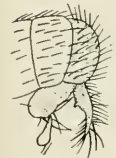
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bimaculata Van Duzee



15
flavipes Van Duzee



16
thoracalis Van Duzee



17
sericata Van Duzee



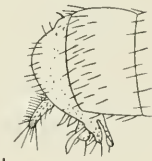
18
flavipes Van Duzee



19
aldrichi Johnson



20
setipes Van Duzee



21
splendida Van Duzee



22
setipes Van Duzee



23
californica Van Duzee



24
argentiventris Van Duzee



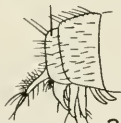
25
flavicornis Van Duzee



26
flavicornis Van Duzee



27
flavicoxa Van Duzee



28
cingulata Loew



29
johnsoni Van Duzee



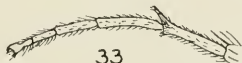
30
inaequalis Van Duzee



31
involuta Van Duzee



32
spina Van Duzee



33
spina Van Duzee



34
inaequalis Van Duzee

NORTH AMERICAN SPECIES OF THE GENUS ARGYRA

FOR EXPLANATION OF PLATE SEE PAGE 43