of the eyes, ocelli situated in a blackish spot; antennæ flavous with dark tips, scape large, as long as pedicel and first flagellar joint together, last four joints of flagellum bead-like; thorax finely shagreened and clothed with short, fine, silvery pubescence; propodeum with an irregular transverse carina and an indistinct triangular areola, the posterior face irregularly, longitudinally striate; wings hyaline, veins brown except in middle of wing, where they are pale, stigma and parastigma pale more or less infuscated behind; coxæ, trochanters, tibiæ basally, and anterior femora whitish, apical tarsal joints blackish, apex of posterior tibiæ somewhat infuscated, legs otherwise concolorous with the body; carapace except apically on the third tergite distinctly, coarsely, longitudinally striate, apically and between the striæ shagreened, deeply, roundly emarginate at apex, venter whitish.

Male: Differs from the female prinicipally in having the scape relatively shorter, the flagellar joints beyond the middle longer, and the emargination of the carapace less pronounced.

Type: Cat. U. S. Nat. Mus. No. 18417.
Type-locality: Benton Harbor, Michigan.
Host: Recurvaria nanella Hübn.
Described from four females and four males reared June 24, 1913 by J. H. Paine of the Bureau of Entomology, under Quaintance No. 10602.

Dr. J. M. Aldrich addressed the Society informally on the use by Indians of the west of larvæ of a species of the genus *Coloradia* as food, and exhibited specimens.

CONCERNING SOME APHELININÆ.[1]

By L. O. Howard.

Genus Mesidia Foerster.

Mesidia Foerster. Hymenopterologische Studien, Heft. 2, 1856, p. 30.

The genus *Mesidia* was founded by Foerster on page 30 of his Hymenopterological Studies, second part (1856) but he mentioned no species. Kirchner, in his Catalogue of the Hymenoptera of Europe (1867) lists, on page 143, *Mesidia pallida* Kirch., and in a footnote states that as Foerster founded the genus and kept his species in manuscript which was never published he takes the liberty of giving a specific name to help establish the genus. In this condition the genus rested until 1904, when Gustav Mayr

[1] Presented at the meeting of April 2, 1914.

described *Mesidia pumila* in the third number of his Hymenopterological Miscellanies from a specimen taken by Doctor Foerster, and this may have been the type of the genus for all we know to the contrary. Mayr does not mention whether the club of the antenna is solid or is jointed. Ashmead, in his Classification of the Chalcid Flies, assumes that it is solid and gives the antennæ of *Mesidia* as six-jointed. In Technical Series No. 12, part IV, New Genera and Species of Aphelininæ, the writer described *Mesidia mexicana* n. sp., and erroneously, in his table of genera, stated that the antennæ are seven-jointed; the same error was perpetuated in the figure. Reexamination of the type shows that the antennæ are really eight-jointed, the club being distinctly three-jointed.

The matter now becomes complicated from the finding of a single slide of a Mesidia-like form bred by Prof. C. P. Gillette at Fort Collins, Colorado, from *Brachycolus tritici*, which possesses all of the characters of *Mesidia* with the exception that the club is solid.

Inasmuch as Mayr did not state in so many words that the antennal club of *M. pumila* is solid, although the presumption would be in favor of solidity, the writer by letter begged his friend, Dr. Anton Handlirsch of the Vienna Museum, to which institution Mayr's collection went after his lamented death, to examine the type, with the result that Handlirsch found the club to be solid. Therefore the species named by Gillette is a true *Mesidia* (and is described below), while the writer's *Mesidia mexicana* becomes the type of a new genus which is also here described under the name *Dirphys*.

Mesidia gillettei n. sp.

Female: Length 1.02 mm.; expanse 2.77 mm.; greatest width of fore-wing 0.44 mm. General color dull honey-yellow, legs and antennæ concolorous with body or perhaps a little lighter, the 2 terminal tarsal sclerites of each leg darker. Pedicel and first and second funicle joints subequal in length, third funicle joint somewhat shorter; club about as long as second and third funicle joints together, somewhat laterally pointed at apex when seen at side; eyes hairy. Wings broad, veins distinctly honey-yellow, stigmal vein very short; oblique hairless streak broad and distinct, widening somewhat towards base. Abdomen ovate, a trifle broader than thorax and about as long; ovipositor not exserted.

Male: Unknown.

Type: No. 18322, U. S. N. M.

Described from a single female reared by C. P. Gillette, October 13, 1908, from *Brachycolus tritici*, presumably at Fort Collins, Colorado.

Dirphys new genus.

Type: Mesidia mexicana How. Tech. Ser. No. 12, pt. IV, Bureau of Ent., U. S. Dept. of Agr., p. 74, 1907.

Female: Antennæ eight-jointed, markedly clavate, club distinctly three-jointed; the three funicle joints about equal in length, but increasing in width from one to three. Eyes hairy. Mesoscutellum transverse, broader than long. Fore-wings broad, with a broad distinct oblique hairless line; submarginal vein unusually broad, stigmal very short and without knob. Hind femora somewhat swollen. Abdomen triangular in shape seen from above, ovipositor well exserted.

It should be explained that the figure accompanying the original description of *D.* (*Mesidia*) *mexicana*, the artist, working without supervision, being confused by the presence on the same slide of fragments of what appears to be a *Coccophagus*, the antennæ in particular are entirely erroneous. The description of the antennæ is also obviously that of the other insect. In the true *Dirphys mexicana* the antennæ are pallid with the club faintly yellowish.

Genus Paraphelinus Perkins.

Paraphelinus Perkins. Bull. 1, part 6, Report of Work of the Experiment Station of the Hawaiian Sugar Planters Assoc., Honolulu, January, 1906, p. 264.

Type: *P. xiphidii* Perk. Loc. cit.

Perkins's *P. xiphidii* was reared from the eggs of *Xiphidium varipenne* Swezey. The only other species so far discovered, viz.: *P. speciosissimus* Girault (Journ. N. Y. Ent. Soc., 1911, p. 181) and *P. australiensis* Girault (Archiv für Naturgeschichte, 1913, pp. 74–75, Ab. A. 6 heft), were both described from single captured specimens, so that their host relations are unknown. The receipt of the new species here described from Mr. P. L. Guppy of Trinidad, who reared it from the eggs of the sugar cane leaf-hopper, *Tomaspis varia*, makes it probable that all species of this interesting genus are parasites in the eggs of Orthoptera and Homoptera that are inserted in twigs or canes. This would be an unique feature in Aphelinine biology (the other forms all ovipositing only in Coccidæ, Aphididæ and Aleyrodidæ) were it not for the old disputed species *Agonioneurus locustarum* Giraud (placed in *Aphelinus* by Dalla Torre) and which was described by Dr. J. Giraud in his Memoir on the insects which live upon the common rose (Verh. d. Zool.-Bot. ges. Wien., vol. 18, 1863, pp. 1278–1279) and which he reared from the eggs of *Xiphidium fuscum* F. It seems to me quite possible that in the old *A. locustarum* we may have another species of *Paraphelinus*. There is

nothing in the original description which would seriously deny this guess, except the absence of the hairless discal streak on the primaries, and this is obscure in the species about to be described.

Paraphelinus tomaspidis n. sp.

Female: Length 0.57 mm.; expanse 1.15 mm.; greatest width of fore-wing 0.153 mm. General color dull honey-yellow, legs and antennæ pallid. Pedicel longer than third funicle joint; first and second funicle joints together equaling length of third, and both set somewhat obliquely when seen from side; club longer than the three funicle joints and slightly hooked at tip, as indicated in Perkins's figure of the antenna of *P. xiphidii*. Wings hyaline; oblique hairless streak below stigma indistinct and incomplete. Ovipositor well exserted.

Male: Unknown.

Described from two female specimens reared from eggs of *Tomaspis varia* by P. L. Guppy, Trinidad.

Type: No. 18321, U. S. N. M.

Mr. Guppy writes that only three specimens were reared, and that the species is extremely active, "running backwards and forwards all the time."

Genus Physcus Howard.

TABLE OF SPECIES.

1. Mesoscutellum much longer than wide ..... *gracilis* n. sp.
   Mesoscutellum at least as wide as long 2
2. Antennal club concolorous with two preceding sclerites... *stanfordi* n. sp.
   Club dark brown, preceding sclerites yellow or white 3
3. Mesoscutum with minute punctures ..... *testaceus* Masi
   Mesoscutum longitudinally shagreened 4
4. Light yellow in color with cross banded abdomen ..... *flavidus* Zehnt.
   Thorax dark brown, abdomen yellow with brown sides. *flaviventris* How.
   Dark in general color 5
5. Scutellum with 2 light round spots surrounded with a rosette of shagreenings ..... *fijiensis* n. sp.
   Such spots not evident 6
6. Marginal vein distinctly yellow ..... *townsendi* n. sp.
   Marginal vein slightly dusky, not yellow ..... *varicornis* How.

Genus Physcus Howard.

Physcus Howard. Tech. Ser. 1, U. S. Dept. Agr., Div. of Ent., 1895, p. 43.
Type: *Physcus varicornis* (How.), *Coccophagus varicornis* How. Ann. Rept. Dept. Agr., 1880, p. 360.

Physcus fijiensis n. sp.

Female: Length 1.1 mm.; expanse 2.17 mm.; greatest width of fore-wing 0.374 mm. Body rather stout, two and one-half times longer than broad; head nearly half as long as thorax, abdomen slightly longer than thorax, wings reaching well behind tip of abdomen, and about as broad as thorax. Mesoscutellum about as long as broad, well rounded caudad and roundly constricted cephalad. Mesoscutum and scutellum strongly longitudinally shagreened, scutellum with two round spots from each of which the shagreen cells radiate like a rosette. Stigmal vein slender with only a slight knob. General color dark brown, metanotum and center of abdomen dark yellowish, funicle joints two and three of the antennæ white, tip of club whitish, remainder of antennæ nearly black; middle legs yellowish, hind legs light yellowish; front femora and tibiæ brown. Wings hyaline.

Described from seven female specimens reared by Albert Koebele, October 24, 1899, Sava, Fiji, from an *Aspidiotus* on a semi-climbing rutaceous vine.

Type: No. 18317, U. S. N. M.

This species will probably, in large series, be found to vary in thoracic coloration since in two of the specimens the mesoscutellum has a central longitudinal yellowish stripe, while the mesoscutum has two such stripes parallel the one to the other.

Physcus gracilis n. sp.

Female: Length 0.918 mm.; expanse 1.97 mm.; greatest width of fore-wing 0.289 mm. Body slender, thorax more than twice as long as broad; mesoscutellum elongate, longer than broad, scapula impinging on a straight line; fore-wings long, extending when closed very considerably beyond the tip of the abdomen, the stigmal vein just about reaching the abdomen tip. Mesoscutum very faintly longitudinally shagreened; stigmal vein very slightly enlarged at tip. General color reddish yellow, lighter at tip of abdomen and deeper and darker at front border of mesoscutum; legs concolorous with body; scape, pedicel and funicle joints 2 and 3 of the antennæ white, first funicle joint and club dark brown.

Described from seven females from Perth, West Australia, Geo. Compere (Compere's No. 981) and one from Swan River, West Australia (Compere's No. 810). Apparently reared from a Lepidosaphes.

Type: No. 18318, U. S. N. M.

Physcus townsendi n. sp.

Female: Length 0.986 mm.; expanse 2.07 mm.; greatest width of fore-wing 0.374 mm. A stout-bodied form with ovipositor well extruded. Mesoscutellum wider than long, sharply angled against scapulæ and scutum. Mesonotum faintly longitudinally shagreened. Stigmal club larger than

with preceding species, no trace of a postmarginal. General color dark brown, nearly black, opaque; hind coxae whitish; all femora and tibiæ dark brown, light at extremities, except middle tibiæ of which the apical half is yellowish; all tarsi yellowish except the brown terminal segments. Wings hyaline, marginal vein distinctly yellow; antennæ white with first funicle joint and club black.

Described from one female, reared by C. H. T. Townsend at Lima, Peru (Townsend's No. 1145 degree 3a), December 31, 1909. *Type:* No. 18319, U. S. N. M.

Physcus stanfordi n. sp.

Female: Length 1.1 mm.; expanse 2.07 mm.; greatest width of fore-wing 0.289 mm. A rather slender, elongate form with mesoscutellum rather longer than broad and with the line of impingement of scapulæ on scutellum rounded at anal angle. Mesoscutum and mesoscutellum faintly longitudinally reticulate. General color brown, the abdomen cross-banded with darker brown. Antennal scape brown, pedicel brown above at base, light yellow below; funicle joint one brown, remainder of flagellum, including club somewhat dusky (no contrast between segments two and three and the club such as occurs with other species). Legs colored as with preceding species. Wings hyaline, veins slightly dusky, stigmal vein very slightly enlarged at tip.

Described from one female specimen reared March 22, 1902, by G. A. Coleman of Stanford University from his *Leucaspis kelloggi*. *Type:* No. 18320, U. S. N. M.

Genus Azotus Howard.

Azotus Howard. Proc. Ent. Soc. Washington, IV, 2, 1898, p. 138.
Type: *A. marchali* How., loc. cit., p. 139.

Since I described the genus *Azotus* in the Proceedings of this Society in 1898, four species in addition to the type have been found and described, viz.: *A. capensis* How., *A. pinifoliæ* Mercet, *A. pulchriceps* Zehntner, and *A. speciosissimus* Gir. All have been reared from Coccidæ except the last which was captured. The recorded distribution of the genus is France, Spain, Australia, Java, South Africa and Japan. It is probably of oriental origin and imported into Europe. Specimens of *A. marchali* have been reared in the Bureau of Entomology by Mr. J. F. Zimmer from *Aspidiotus uvæ* Comst. collected in the District of Columbia, so that this species has probably become widely spread.

In a lot of reared parasites received a few years ago from Mr. S. I. Kuwana, of Tokio, the following new species was found.

Fig. 1. *Azotus chionaspidis*, right fore-wing, greatly enlarged.

Azotus chionaspidis n. sp.

Female: Length, exclusive of ovipositor, 0.61 mm.; expanse 1.19 mm.; greatest width of fore-wing 0.136 mm. General color dull light brown; mesoscutum and scutellum lustrous metallic green, shagreened; head from above lighter than rest of body; eyes bright red; funicle joints two and four silvery white, rest of antennæ dark brown; all legs brown, lighter at knees, middle tibiæ lighter towards tip, tarsi white with terminal joint dusky. Fore-wings irregularly infuscated as in accompanying figure which also shows the distribution of bristles and discal cilia; hind-wings slightly infuscated for basal half.

Male: Unknown.

Described from a single female reared by Prof. S. I. Kuwana, Tokio, Japan, August 17, 1909, from *Chionaspis difficilis*.

Type: No. 18323, U. S. N. M.

NEW PARASITIC HYMENOPTERA FROM BRITISH GUIANA.

By J. C. Crawford, *U. S. National Museum.*

(Telenomus) Prophanurus minutissimus Ashmead.

A large series of this species was bred from the eggs of *Lycophotia infecta*, in British Guiana, by Mr. G. E. Bodkin. When the species was originally described the host was given as *Dactylopius* species; this record is very probably erroneous as the species of this group, so far as they have been bred, are egg parasites.

Prophanurus alecto n. sp.

Female: Length about 0.7 mm. Black, with flattened form, the vertex horizontal, posterior orbits broad, not carinate; antennæ reddish-testaceous, the pedicel about as long as the first two joints of the funicle combined,