

for investigating the subject of introduction of insects was Messrs. LeConte, Horn, and Riley at Philadelphia in 1876. Many things of interest were found in packing-straw used by the various exhibitors. Dr. Ashmead reported that a peculiar sawfly belonging apparently to the genus *Cimbex* was recently bred from an orchid received at London from Ceylon.

—Mr. Marlatt spoke a few minutes on his recent trip to Cuba, Florida, and Porto Ricó. He said that the value to one studying the insects injuring any group of plants, by a trip through the region where those plants are cultivated, can scarcely be estimated.

The following papers by members of the Society have been accepted by the Publication Committee during the summer:

DESCRIPTIONS OF SOME NEW MITES.

BY NATHAN BANKS.

In my "Treatise on the Acarina or Mites,"¹ several mites, mostly of genera previously unknown in this country, were referred to, and figures were given of them. I had not then the time for their descriptions, and these are now furnished, together with those of a few other interesting forms that have recently come to my attention. References are given to those figured in the "Treatise." One new genus and twenty new species are added to the fauna of the United States.

Neophyllobius americanus n. sp.

Pale yellowish, body about once and one-third longer than wide. Legs large and long, and arranged in a radiate manner, the creature looking like a minute Phalangid, since leg iv is about as near to tip of body as leg i is to front of body. Above with a submedian row of six stout, simple bristles, and from anterior margin to humeral region an irregular submarginal row of six bristles; two more bristles each side at tip. Legs very long and slender as is usual in the genus. When seen under high power they are minutely, transversely annulate. The tarsal joint is distinctly swollen before the middle. All legs with a few long stout bristles, one from the patellar joint is especially long and prominent; no clavate bristles on tarsi or elsewhere. Last joint of palpus reclinate, much smaller than other joints and slender, with two long bristles near base and about

¹ Proc. U. S. Nat. Mus., xxviii, No. 1382, pp. 1-114, 1904.

three shorter ones on tip. Venter with a few long bristles on sides and shorter ones on the disc; the genital opening, a transverse slit, not far behind mouth parts; anus at apex of body.

Body length .12 mm.

Three specimens on oak leaves at Orchard, Mobile Co., Alabama. Figured on page 28 of "Treatise on Acarina."

Gekobia texana n. sp.

Body over once and a half as long as broad, constricted rather beyond middle, rounded in front; beak very small, and not projecting far in front of body. Palpus rather slender, last joint acute, next to last showing a hairy elevation on the side; a long clavate hair each side at base of beak above. Dorsum with many capitate hairs, all of one height; four longer, simple hairs on posterior margin near tip; hairs on venter and legs are simple. Legs slender, in two widely separate groups; all subequal in size, the hind pair scarcely reaching behind tip of abdomen. Mandibles slender, with a triangular apophysis near tip. Tarsi ending in two claws.

Length 1.2 mm.

Several specimens from Austin, Texas, May; taken from a lizard, *Sceloporus floridanus*. I have figured this species on page 22 of my "Treatise on Acarina." It differs much from the other species of the genus in general appearance, but the essential characters, especially the nature of the mandibles, are the same.

Cheyletus feròx n. sp.

Body about twice as long as broad, tapering each way; much narrowed just behind hind coxæ, from thence the posterior sides are parallel, apex truncate. Beak rather short, acute; palpi very heavy, first joint with two simple hairs above, second joint with one above; the papilla bears a comb and two pectinate bristles; at the base of the claw there is a stout tooth. Cephalothorax with a simple bristle in each posterior corner; abdomen with an irregular submarginal row of about eight simple bristles, one on each shoulder, and three each side at tip. Legs quite long and slender; provided with simple bristles; leg i more slender but about as long as leg iv; penultimate joint of leg i is very slender, terminated by two long bristles, and two others near base; the last joint of leg i is short and slender, and furnished with two fine claws.

Length .45 mm.

Specimens from Marblehead, Mass. (M. J. J. Gregory) found feeding on *Tyroglyphus* among cabbage seed. This species is figured on p. 18 of my "Treatise" as *C. audax*, a preoccupied name.

Cheyletus pyriformis n. sp.

Body nearly twice as long as broad, broadest at shoulders, broadly rounded at tip. Cephalothorax with a pair of feathered bristles in front, and a pair of broad scales, three similar scales on each side, and a long feathered bristle near each hind angle, four scales forming a square in middle. On dorsum of abdomen are four rows each of three broad scales, and four rather more slender ones at the tip. The basal joints of the legs have each one or two scales and one or two feathered bristles; the bristles near the tips of legs are more simple. The palpus is moderately heavy; the femur is almost angularly swollen on outer side, with a long plumose bristle above on middle; the next joint is fully twice as broad as long, with a long plumose hair near outer edge; the third joint has a simple hair on inner side; the fourth ends in a large claw, with a row of hairs on inner side; the fifth, or papilla, bears two long curved claws, and a long comb below, with a simple bristle arising near base of comb. The beak has a pair of long plumose bristles above. Leg i ends in two long bristles, the longer is twice as long as the tarsus.

Length .35 mm.

Several specimens taken under the grape-vine scale, *Aspidiotus wvæ*, from material collected by Prof. Webster at Lafayette, Indiana, in December. Figured on page 17 of my "Treatise."

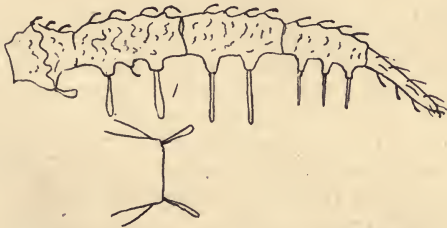


FIG. 15.—*Cæculus clavatus*: leg i, and tip of cephalothorax.

Sarcopterus longipilis n. sp.

Body subquadrate, shoulders not prominent. Dorsum with a broad shield, with sub-parallel sides, and broadly rounded behind, not reaching tip. This shield has each side in front an oblique row of three bristles, and a sub-lateral pair just before, and one just behind the middle. Dorsum outside of shield striate; two long bristles near each shoulder, one near tip each side, and a longer one in front near base of beak. Legs short and robust; i and ii with a few simple bristles, and ending in two claws; leg iii ends in four very long bristles, three of them about as long as the body; leg iv ends in five long bristles, four of them about as long as body. Mandibles with the usual row of serrate teeth above.

Length .3 mm.

Specimens taken from a tumor under the wing of a cross-bill at Washington, D. C., by Dr. A. K. Fisher. Readily separated from the European species by the much longer bristles on legs iii and iv. The adult and larvæ have been figured in my "Treatise on Mites," p. 20.

Cæculus clavatus n. sp.

Yellow-brown, legs dark brown, tarsi iii and iv black. Body with a median shield on front part, the posterior shields less distinct. The hard parts are roughened, and behind are the clavate hairs as in *C. americanus*; in front the cephalothorax has a clavate hair each side, which is longer than the clavate hair on trochaner i. Legs of the size and roughened as in *C. americanus*, all with short curved white clavate hairs, mostly in rows; on leg i, however, there are spines on inner side of femur, tibia, and metatarsus, each upon an elevation; two on femur with clavate tips, two on tibia barely pointed at tips, and three on metatarsus with acute tips; on the outer side below are three similar spines; one on the tibia, and two on the metatarsus. On leg ii on the outer side below are also three of these spines; one on tibia, and two on metatarsus

Length 1. mm.

Taken among dead leaves, near Washington, D. C. Differs from *C. americanus* in number of spines on leg i, and in that several have clavate tips.

Oribata angustipes n. sp.

Body dark red-brown, legs yellowish. Abdomen subglobose, above with a submedian row each side of eight short, curved bristles, seen under high power these are finely serrate; a pair of similar bristles on base of cephalothorax; pseudostigmatic organ simple, very long and fine, its tip wavy; two pairs of simple bristles on cephalothorax in front. Legs very slender; anterior femora nearly as long as width of body; all with a few hairs, the tibiæ with a longer bristle at tip, and a very long one on each hind femur; genital and anal apertures touching. One claw to each tarsus.

Length .6 mm.

Taken near Mt. Vernon, Virginia, among dead leaves. It is near *O. nodipes* Koch, but has longer bristles on femur iv, the tibia iv is longer, and the hairs on abdomen are thicker. I have figured it on page 69 of my "Treatise on Acarina" under the name of *O. gracilipes*, which name I now find is preoccupied.

Liponyssus americanus n. sp.

Very pale yellowish. Body rather elliptical, but truncate at tip, and slightly pointed in front. Surface minutely and obliquely striate. Dorsum with a broad elongate shield, broadest before middle near shoulders,

tapering behind to narrowly truncate tip; with about 60 to 70 stout bristles above, those near tip longer than others; a submedian and a marginal row of these on the shield. Legs quite short, with many short hairs and bristles. Anal shield elongate, broad and broadly rounded in front, tapering and pointed behind, a pair of short bristles in front and three larger ones behind. Sternal shield between coxæ ii broad, sub-quadrangular, straight behind, convex in front, a bristle near each corner.

Length .45 mm.

Several specimens taken from the arm of a person in Washington, D. C. This species is figured on page 53 of the "Treatise."

Hæmagamasus americanus n. sp.

Pale reddish, or yellowish. Body elongate oval; dorsum with many short stiff hairs. Legs moderately slender, tarsi long and slender, tarsus iv but little longer than i; all legs thickly strewn with short, stiff spine-like hairs or bristles. Leg ii (♀) very slightly thicker than other legs. Anal shield elongate oval, rounded behind, somewhat pointed in front, fully three times as long as anal opening, a pair of bristles near front, one each side of the aperture, and three in a curved row behind. Peritreme very long and but slightly curved.

Length .9 mm.

In nest of a mouse (*Peromyscus eremicus*), in the Santa Rita Mts., Arizona (Hubbard). It is figured on page 54 of the "Treatise."

Macrocheles carolinensis n. sp.

Body reddish, legs yellowish; soft parts white. Body one and two-thirds as long as broad, much narrowed in front, broadly rounded behind. Dorsum smooth, without hairs, nor any on the hind margin. Leg i slender; leg ii noticeably thicker even in female, in the male the lower side of femur ii has two or three rows of several rounded tubercles; at tip of patella below is a sharp projection. The female has the anal plate very broad near base, narrower at base and narrowly rounded behind. The legs bear a few simple hairs.

Length 1.6 mm.

Several specimens from Black Mts., N. Carolina (W. Beutenmüller). I have figured the species on pages 59 and 60 of my "Treatise on Acarina."

Celænopsis americana n. sp.

Body one and a half as long as broad, narrowed in front, broadly rounded behind. Above and below smooth and shining; yellowish. Dorsum with many short fine hairs, two longer hairs each side on posterior margin near tip; two pairs above these on dorsum, one near middle,

the other toward tip; one long hair on each shoulder; on the anterior part of dorsum above second legs is an oblique dark mark. Venter with a groove each side reaching from stigmata obliquely backward and uniting behind anal opening and just before tip. The genital area of female is between the second and third pairs of legs; it is longer than broad, pointed on each side, rounded behind, almost truncate in front, and contains a diamond-shaped opening. There is a transverse ridge between coxæ ii. Leg i slender, ending in a number of stiff hairs; other legs larger and subequal in size. Palpi rather short.

Length .75 mm.

Taken from an Histerid beetle (*Hololepta* sp.) at Washington, D. C., and Indianapolis, Indiana (Blatchley). This species is figured on page 61 of my "Treatise on Acarina."

Seius quadripilis n. sp.

Pale yellowish. Body broadly oval. Dorsum smooth, with four long bristles, one on each shoulder, and a submedian pair behind, also a pair of much smaller bristles on the anterior margin over the mouth-parts. Each long bristle about one-third the length of the body. Legs short and well forward, with only a few hairs, tarsi very slender. Peritreme long, reaching forward in front of coxæ ii. Sternal shield in male very broad, in fact as broad as long, and united behind to the large ventral shield; in the female there is a quadrate genital shield, about as broad as the sternal, and just behind it is the large subtriangular anal shield, also as broad as sternal shield. Behind coxa iv there are on each side two elongate metapodia.

Length .4 mm.

On orange leaves, Eustis, Florida (Swingle). It is figured on page 58 of the "Treatise."

Laelaps mexicanus n. sp.

Pale yellowish. Body elliptical, a little narrowed in front, barely tapering behind. Dorsum smooth, with about sixty stout short bristles, rather broader at tip than on base, and serrate on the apical half of one side. These bristles are arranged in about six longitudinal rows; the two terminal bristles are longer than the others. The legs are quite short leg iv about as long as the body, the others shorter, all with short, simple hairs. Peritreme long and slender. Ventral plate of female broken, only at coxæ iv. On the anal plate are three bristles each side of the anus, a pair behind, and a median one at tip.

Length .5 mm.

From Guanajuato, Mexico (Dugès); with some Coccid material; 12 Aug., 1889. This species is figured on page 58 of the "Treatise."

Laelaps macropilis n. sp.

Pale yellowish. Body elliptical, rather bluntly rounded behind, not narrowed in front. Dorsum irregularly pitted and roughened; provided in the cephalic part with about twelve bristles, short, and not very conspicuous, four in a sub-median row each side; behind with ten very large and long bristles, as long as half the width of body, four pairs of them sub-marginal, the other pair sub-central. Legs rather slender, the hind pair longer than the body, the fore pair nearly as long, the tarsi very slender; all legs provided with quite long fine hairs. Ventral shield of male almost covering entire venter, much broadened behind hind coxæ.

Length .4 mm.

On water hyacinth, Eustis, Florida (Webber). It is figured on page 59 of the "Treatise."

Dinychus americanus n. sp.

Color yellowish, legs paler. Body sub-pyriform. Dorsum densely strewn with sub-circular pits, those in the median area smaller than the others, those on the sides plainly larger than in the European *D. inermis*. Epistoma rather broader at tip than at base, and broadly rounded. Seen from above there is on each side a slight projection between legs i and ii. The peritreme at first runs nearly straight, then bends back on inner side, then curves forward some distance parallel to coxæ ii. Legs slender, short, tarsi long, and ending in a long caroncle. The nymph has a slender sternum, even more slender than in *D. inermis*.

Length .5 mm.

College Station, Texas, in cotton-seed meal. It is figured on page 63 of the "Treatise."

Pigmephorus americanus n. sp.

Pale yellowish. Body sub-oval, almost truncate behind. Dorsum smooth; about 8 long stiff bristles on each side margin, somewhat imbricated; posterior part of dorsum with a sub-marginal row of three long bristles on each side, also a dorso-humeral bristle, and a pair in front, rather widely separate. Segmentation of abdomen quite distinct in middle, not seen on margins. Legs rather slender, but short; with many hairs. The claws of leg i sunken under an apical projection of the tarsus other claws exerted.

Length .25 mm.

Several specimens taken from a fly (*Platycnemis imperfecta*) in the District of Columbia (No. 6984). It is figured on page 77 of the "Treatise."

Disparipes americanus n. sp.

Pale yellowish, anterior border of body hyaline. Anterior part of body semi-circular, posterior part rather more elongate but broadly rounded behind. A long, stout humeral bristle, and four on each posterior side-margin. Legs short and stout, pair iv stouter than others, the

upper edge of femur iv concave, tarsus iv tipped with four long bristles, a longer bristle on the preceding joint above, also one below, and one on tibia above; other tarsi with two claws and a stout branched hair below.

Length .15 mm.

One specimen from a bee (*Halictus venablesii*) from Vernon, British Columbia, September, given me by Mr. E. S. G. Titus. It is figured on page 77 of the "Treatise."

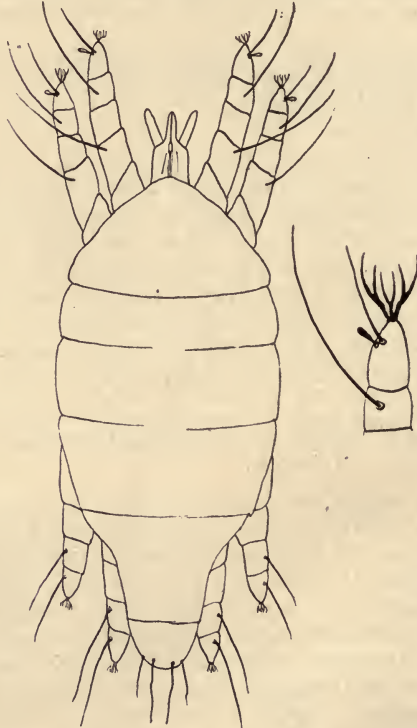


FIG. 16.—*Siteroptes carnea*: dorsal view, and tip of leg.

Siteroptes carnea n. sp.

Bright red. Body about two and one-half times as long as broad sides subparallel; beak moderately long and slender; palpi reaching to tip of beak. Dorsum with about five transverse divisions; the first, separating the cephalothorax, the most distinct; posterior part of abdomen much narrowed and tapering to a rounded tip. No bristles visible above, except two each side at tip of body. Legs stout; hind pairs

remote from front pairs; i and ii rather longer than the others; each with a few long bristles, mostly toward tip; tarsi ending in three forked claws; tarsi i and ii with a short clavate hair above near tip.

Length .28 mm.

Occurs in enormous numbers in the deformed heads of certain grasses (*Spirobolus*) in New Mexico and Utah, and doubtless elsewhere in the West.

Phyllocoptes cornutus n. sp.

Color reddish. Body broad, scarcely two and one-half times as long as broad at base of abdomen, moderately convex. Cephalothorax apparently smooth, produced forward in a broad, median plate, with an acuminate point; this plate when seen in side view looks like a frontal horn.



FIG. 17.—*Phyllocoptes cornutus*, and leg i enlarged.

Near the posterior margin of cephalothorax there is a sub-median pair of bristles, not one-half as long as the cephalothorax. Abdomen with about 32 dorsal rings, and fully twice as many ventral ones. Terminal bristles about one-fourth as long as body; three pairs of ventral bristles; one near tip, one before, and one behind middle, first pair longest; also a long pair from coxæ ii. Legs as usual; the long tarsal bristle arises near the base of that joint, but not at extreme base.

Length .13 mm.

On leaves of peach, Washington, D. C. This species lives free on either surface of peach leaves in various parts of the Eastern States. When in numbers it produces a sort of silvery sheen upon the leaf, readily discernible when the light is shining upon it.

Cecidobia n. gen.

An Eriophyid. Dorsal abdominal rings numerous and deeply cut; ventral segmentation almost obliterated; cephalothorax pointed in front, and from the lower median surface there extends downward a curved, black, stiff, rod-like bristle; tarsi ending in a stiff branched hair. Venter with four pairs of bristles, besides longer apical bristles.

Type: *C. salicicola* n. sp.

Differs from all known Eriophyidæ by the prominent median black bristle in front; a most remarkable character, and I know of no explanation of its use. In some species of Epi-trimerus the beak is greatly elongated, but this genus can be distinguished at once from Cecidobia by having the dorsal rings as numerous as ventral ones.

Cecidobia salicicola n. sp.

Dull yellowish. Body broad and short, not three times as long as broad at shoulders. Cephalothorax smooth, triangularly produced in front, a pair of short porrect bristles in front, and a pair of very large and long bristles behind, one near each posterior corner of cephalothorax, and each nearly as long as the body; abdomen with about 35 or 40 deep

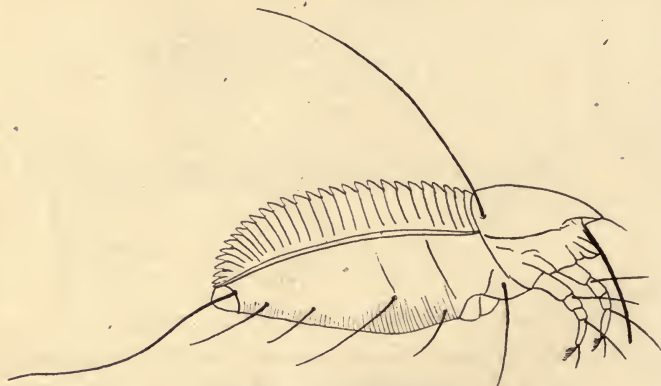


FIG. 18.—*Cecidobia salicicola*.

rings above, extending down but a little way on sides; the telson short; apical bristles fully one-half the length of body. Ventral segmentation obscure, a few fine lines in certain lights, no indentations of margin; four pairs of moderately long bristles below; the second and fourth pairs longer than others, and the second more widely apart at base; a pair of still longer bristles from coxæ ii; dorsal tarsal bristle long, and arising from base of the joint.

Length .10 mm.

Many specimens found in groups of 3 to 10 within recesses of a gall on willow from Ward, Colorado (Cockerell). The gall extends above both surfaces of the leaf, yet not very high.