

is an intermediate stage of a tapeworm, the other host of which is the dog tribe. The carcass was in poor condition for critical work but some microfilaria (microscopic worms) were found in the blood and some indication of the presence of protozoa." No further details concerning the microfilariae found in rabbits are given in Harken's brief report.

A species of microfilaria from a rabbit in Algeria, probably *Lepus sefranus*, specifically distinct from the worm discussed in this paper, was described by Foley, Catanei and Vialatte (1926), and regarded by these writers as probably identical with a microfilaria described by Balfour (1911) from a rabbit, probably *Lepus hawkeri*, from the Anglo-Egyptian Soudan, and also apparently identical with the larvae of *Filaria numidica* Seurat, 1917, from the abdominal cavity of *Lepus pallidor* and *L. kabylicus* of Algeria.

Considering the medical importance of filariasis and the need for further investigations on the therapeusis and other aspects of this disease, the occurrence of microfilariae in rabbits in North America, definitely established by the data presented in this paper, opens up the possibility of transmitting filariasis to domestic rabbits experimentally. In the event that this can be accomplished, it will facilitate investigations on the treatment and on various phases of the biology of filarial infections.

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ENTOMOLOGY.—*Three new Braconidae parasitic on bark beetles.*¹

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The three new species described below have all been reared in connection with studies of certain bark beetles, carried on by agents of the Bureau of Entomology. Of particular interest is the *Meteorus*, since most of the species of this genus are parasitic on lepidopterous larvae.

¹ Received May 19, 1931.

Meterous hypophloeï, new species.

In Muesebeck's key to North American species² this species runs best to *fumipennis* Muesebeck. From that species it may be immediately distinguished by its stouter thorax, coarsely sculptured hind coxae, more slender subapical flagellar joints, and generally darker color, and by other details. Specimens with the wings less distinctly infumate will run to *humilis* (Cresson), differing in the longer malar space, much longer and more slender antennae, thicker head, smaller ocelli, and shorter ovipositor.

Female.—Length 3.5 mm. Head thick, not or barely twice as broad as thick medially, full behind the eyes; ocelli placed well in front of posterior tangent of eyes, very minute, the diameter of a lateral ocellus only about one-sixth the length of the ocell-ocular line; face nearly twice as broad as long, its shortest breadth subequal to the length of the eye; malar space fully as long as basal width of mandible; clypeus nearly twice as broad as long, arcuately emarginate at apex; vertex and temples polished, frons laterally punctate, face minutely rugulose opaque; antennae very nearly as long as body, slender, about 28-jointed, all flagellar joints longer than thick. Thorax hardly two and a half times as long as broad; notauli strong and meeting behind in a coarsely sculptured depression, prescutum densely punctate, lateral lobes polished; scutellum small, triangular, strongly convex, smooth and polished; propodeum irregularly reticulate rugose with more or less distinct median and basal carinae, posterior face impressed but only obsoletely outlined; thorax laterally, except small polished areas on mesopleurum, rugulose opaque; second abscissa of radius about twice as long as first; cubitus originating very close to parastigma; lower abscissa of basella about as long as nervellus; legs slender; hind coxae roughened and opaque. Abdomen about two and one-half times as long as broad; first tergite less than twice as long as broad at apex, obscurely longitudinally striate, with deep pits dorsally, the lateral edges nearly parallel; sheath a little more than half as long as abdomen, very slender, ovipositor slightly decurved.

Piceous black, with head and legs largely, pronotum and middle and extreme base of abdomen more reddish, the face and lower part of head and mandibles ferruginous; coxae sometimes nearly black; wings faintly infumate, more strongly so about junction of basal and median carinae and about base of radius, stigma blackish, pale at base, tegulae reddish.

Male.—Head even thicker than in female with temples and cheeks more strongly rounded; face distinctly broader than length of eye; abdomen about three times as long as broad; otherwise like female.

Host.—*Hypophloeus* sp.

Type-locality.—Metaline Falls, Wash.

Type.—Cat. No. 43,634, U.S.N.M.

Described from 13 females and 5 males reared April 25 to July 30, 1930, by Donald DeLeon under Hopkins U. S. No. 19758 from the larvae of the host species in western white pine trees killed by *Dendroctonus monticolae* Hopk.

² Proc. U. S. Nat. Mus., vol. 63, art. 2, 1923.

Coeloides dendroctoni, new species.

Female.—Length 4 mm. or less. Head nearly as broad behind eyes as at eyes, the temples strongly convex, the width from front to back about equal to that of eye; the so-called "mouth opening" much narrower than its distance from the eye and about as broad as length of malar space; malar space about half as long as eye; face minutely punctate; clypeal groove distinct medially; antennae slender, third joint of flagellum hardly concave below, very nearly as long as fourth, the latter fully twice as long as thick. Thorax weakly depressed, polished and virtually unsculptured throughout, only the metapleurum sparsely punctate; scutellar fovea minutely foveolate; stigma broad, radius slightly before middle; second cubital cell long, the second abscissa of radius much longer than first intercubitus and parallel with second abscissa of cubitus. First tergite much longer than broad, finely rugulose, the lateral furrows foveolate, the median area about three times as broad as the lateral rims; second tergite shorter than third, more or less emarginate in apical middle, more or less rugose medially and with a more or less distinct raised area in basal middle; sheath about three-fourths as long as body (relatively longer in small specimens).

Head black, orbits, cheeks, malar space, mandibles, and clypeus testaceous; labium, maxillae, palpi, and antennae black; thorax and legs black, trochanters and apices of front femur and tibia more or less reddish, postscutellum and a median streak on propodeum also more or less reddish; abdomen usually testaceous with only the first tergite black, in small specimens more or less blackish with tergites 2 and 3 pale or largely brownish black.

Male.—Essentially like female, but more frequently with abdomen largely blackish and often with apex and lateral areas of scutellum stramineous.

Type-locality.—Sula, Montana.

Type.—Cat. No. 43,635, U.S.N.M.

Hosts.—*Dendroctonus monticolae* Hopk.; *Ips oregoni* (Eich.).

Described from 32 females and 21 males reared by D. DeLeon of the Bureau of Entomology, United States Department of Agriculture, at type-locality (Hopkins U. S. Nos. 19676 [type], 19677, 19654, 19669 [allotype], 19607, 19653, 19679, 19673, 19675, 19660, 19661, 19668, 19670, 17269, 17270, 17271, 17272, 17273); Troy (Hopkins U. S. No. 19665) and Anaconda (Hopkins U. S. No. 19684), Montana; Spencer (Hopkins U. S. No. 19682), Idaho, and Meteline Falls (Hopkins U. S. No. 19801), Washington; and by J. E. Patterson, also of the Bureau of Entomology, at Crater Lake Park, Dugon (Hopkins U. S. Nos. 16266a and 16258a). The specimens under Nos. 17269 to 17273 from Sula, Montana, are labelled as having doubtfully been reared from *Ips oregoni*.

Coeloides scolyti, new species.

Very closely related to *brunneri* Viereck and perhaps only a variant of that species. Structurally the two species form an almost unbroken variation series, *scolyti* on the average having the thorax a little less depressed, the face a little broader, the head a little longer behind the eyes, the first tergite a little broader, the second a little more deeply emarginate in the middle, the ovipositor a little shorter, and the second abscissa of radius a little shorter as compared with the first intercubitus.

In color the two species are very similar, the head and abdomen being ferruginous and the thorax, legs, and antennae black or piceous. But whereas *brunneri* has the thorax and legs piceous, and the first tergite ferruginous and a diffusion of dark color about the ocellar spot especially in the male, in which sex nearly the entire vertex and frons are piceous, *scolyti* has the thorax and legs black or very nearly so, the first tergite largely blackish, and the black of the head in both sexes confined within the ocellar triangle.

Female.—Head in dorsal view nearly as long as broad, nearly as broad behind eyes as at eyes, temples very strongly convex, antero-posterior width distinctly greater than that of eye; "mouth opening" narrower than malar space, the latter half as long as eye; face minutely punctate, nearly a half broader than length of eye; clypeal groove distinct and punctiform medially; antennae slender, third joint of flagellum slightly concave ventrally and distinctly shorter than fourth, which is more than twice as long as thick. Thorax hardly depressed, polished, with only metapleurum sparsely punctate; scutellar groove minutely foveolate; stigma broad with radius far before middle; second cubital cell rather short, the second abscissa of radius at most only a little longer than first intercubitus. First tergite about a half longer than broad, its sides beyond the spiracles a little bulging, median area obscurely longitudinally striate; second tergite much shorter than third, deeply emarginate in apical middle, with a longitudinal elevation in basal middle, more or less distinctly rugulose medially, and with an oblique groove laterally terminating near the posterior margin in a distinct lunule; abdomen otherwise polished; sheath usually a little longer than body.

Head and abdomen bright ferruginous, with ocellar spot and first tergite except apex black; thorax, legs, and antennae black with legs apically and thoracic sutures more or less piceous, apex and lateral areas of scutellum sometimes pale; wings weakly infumate, venation blackish.

Male.—Essentially like female.

Host.—*Scolytus* spp.

Type-locality.—Metaline Falls, Wash.

Type.—Cat. No. 43,636, U.S.N.M.

Described from 9 females and 2 males as follows: two females including type, Hopkins U. S. No. 19899-1, from the type-locality, reared July 9, 1930, by Donald DeLeon from bark of white fir infested by *Scolytus* sp.; one female and one male, including allotype, Hopkins U. S. No. 19972, taken August 5 and 6, 1930, by D. DeLeon on *Abies grandis* infested by *Scolytus ventralis* at the type-locality; one male, Hopkins U. S. No. 19809-1, reared from *Scolytus* (?) in *Tsuga* August 16, 1930, by same collector and at same locality; three females, Hopkins U. S. No. 18146d, taken by F. P. Keen on *Abies concolor* at Pinehurst, Oregon; one female, Pyramid Ranger Station, Calif., July 22, 1915, F. B. Herbert; one female, Fallen Leaf, Calif., July 28, 1925, F. B. Herbert; and one female, Easton, Wash., Albert Koebele.



1931. "Three new Braconidae parasitic on bark-beetles." *Journal of the Washington Academy of Sciences* 21, 301–304.

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