

Descriptions of Six New Species of *Microphylellus* (Hemip.: Miridae).*

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Microphylellus adustus n. sp.

Pale yellowish and darkened with brownish and fuscous; rather suggestive of *Plagiognathus delicatus* Uhler but lacking the fuscous spots on femora and tibiae.

♀. Length 3.4 mm., width 1.3 mm. Head: width .696 mm., vertex .38 mm.; fuscous brown above, tylus blackish. Rostrum, length 1.12 mm., extending to near hind margins of middle coxae, yellowish, apex blackish. Antennae: segment I, length .21 mm.; II, .74 mm.; III, .41 mm.; IV, .36 mm.; dusky brown, last two segments more fuscous. Pronotum: length .52 mm., width at base 1.11 mm.

Clothed with simple, fine yellowish pubescence. Pale yellowish to brownish, more or less behind each callus, scutellum except for lighter streak each side of median line, inner half of clavus and inner half of corium, triangular central area of propleura, and sides of venter, dark brown to fuscous. Cuneus uniformly pale yellowish brown. Membrane rather uniformly fusco-brownish, but darker within areoles. Legs yellowish, apical half of femora, and the tibiae, dark brownish.

Holotype: ♀, August 11, 1925, Ute Creek Ranch, Ft. Garland, COLORADO (H. H. Knight); author's collection. *Paratypes*: 2 ♀, taken with the type. ♀ July 24, 1900, Salida, Colorado (E. D. Ball).

MICROPHYLELLUS ADUSTUS binotatus n. var.

Differs from *adustus* in the paler color and distinct black spots, one behind each callus; pale, tylus, vertex, spot behind each callus, lateral margins of scutellum, inner margin of clavus, inner half of corium, and the membrane fuscous to black. Sternum, propleura except margins, epimera, ostiolar peritreme, and venter, blackish.

♂. Length 3.7 mm., width 1.24 mm. Head: width .71 mm., vertex .326 mm. Rostrum, length 1 mm., reaching upon middle of intermediate coxae. Antennae: segment I, length .24 mm.; II, 1.03 mm., equal in thickness to segment I; III, .53 mm.; IV, .37 mm. Pronotum: length .50 mm., width at base 1.03 mm.

*Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.

Holotype: ♂ June 29, 1927, Montesano, WASHINGTON (Wm. W. Baker); author's collection. *Paratypes*: 2 ♂, taken with the type. ♀ July 23, 1924, Saanich District; ♀ Sept. 8, 1922, Victoria, BRITISH COLUMBIA (W. Downes), "on cottonwood".

***Microphylellus brevicornis* n. sp.**

Allied to *adustus* but smaller and of paler color; distinguished by the short second antennal segment which is not equal to width of head.

♀. Length 3.1 mm., width 1.3 mm. Head: width .66 mm., vertex .38 mm. Rostrum, length .47 mm., reaching to middle of intermediate coxae. Antennae: segment I, length .16 mm.; II, .61 mm., gradually thickened apically but not attaining thickness of segment I; III, .25 mm.; IV, .28 mm.; combined length of last two segments not equal to segment II. Pronotum: length .49 mm., width at base 1.08 mm.

Color pale, tinged with yellowish and dusky; apical half of clavus, inner half of corium, spot behind coxal cleft, more or less on sternum and sides of venter near base, dusky to fuscous. Clothed with short, fine, pale to yellowish pubescence, tibial spines yellowish brown. Membrane pale, dusky brown within and between areoles, also a small cloud just behind apex of areoles.

Holotype: ♀ April 20, 1926, Santa Cruz River, Pima Co., ARIZONA (A. A. Nichol); author's collection. *Paratypes*: 3 ♀, taken with the type on "cotton weed" by Mr. Nichol.

***Microphylellus mineus* n. sp.**

Distinguished by the small size and light red color.

♀. Length 2.8 mm., width 1.23 mm. Head: width .62 mm., vertex .31 mm. Rostrum, length 1.09 mm., reaching to near hind margins of posterior coxae. Antennae: segment I, length .21 mm.; II, .68 mm.; III, .32 mm.; IV, .30 mm.; yellowish, last two segments dusky.

Color light reddish, scutellum, embolium, base and outer margin of cuneus, more yellowish. Legs pale to yellowish, tibial spines blackish. Tylus, lora, and tip of rostrum blackish. Membrane pale, anal area, within and between areoles, and more or less bordering apical margin of areoles, dusky to fuscous. Clothed with moderately prominent, simple, yellowish pubescence.

Holotype: ♀, Gainesville, FLORIDA (J. R. Watson); author's collection.

Microphylellus nicholi n. sp.

Allied to *bicinctus* Van D., but differs somewhat in color characters; hind femora blackish on distal half only, the pale band across clavus curving forward and involving basal one-fourth of corium.

♂. Length 3.3 mm., width 1.12 mm. Head: width .68 mm., vertex .266 mm. Rostrum, length 1.11 mm., reaching to middle of hind coxae, pale, segments one and four blackish. Antennae: segment I, length .19 mm.; II, .92 mm.; III, .55 mm.; IV, .31 mm.; yellowish, last two segments fuscous, segment II becoming dusky, darker apically. Pronotum: length .50 mm., width at base .98 mm.; lateral margins of disk sinuate sulcate, pale on middle third.

Color dark fuscous to black, basal one-third of cuneus white, an arcuate pale area across clavus behind scutellum, curving forward and involving the basal one-third of corium. Legs pale, distal half of hind femora blackish, hind tibiae and the tarsi fuscous. Tibial spines pale to brownish. Membrane rather uniformly dusky, darker along veins. Clothed with fine, recumbent, pale yellowish pubescence, becoming fuscous on dark part of cuneus.

♀. Length 2.8 mm., width 1.15 mm. Head: width .65 mm., vertex .33 mm. Antennae: segment I, length .18 mm., II, .70 mm.; III, .43 mm.; IV, .27 mm. Pronotum: length .47 mm., width at base .99 mm. Pubescence similar to the male but coloration much lighter; head black, pronotum yellowish, calli fuscous, propleura reddish; median line of scutellum yellowish, hemelytra more broadly pale than in the male, cuneus with basal half white. Venter reddish to brown; legs nearly as in the male.

Holotype: ♂ April 25, 1926, alt. 3200 ft., Santa Catalina Mts., ARIZONA (A. A. Nichol); author's collection. *Allotype*: taken with the type. *Paratypes*: 7 ♂ 12 ♀, taken with the types on *Quercus hypoleuca* by Mr. Nichol.

Microphylellus minor n. sp.

Very similar to *bicinctus* Van D., but size smaller, distinguished by the more porrect head, the tylus projecting distinctly forward, this difference more prominent in the female, the vertex also somewhat wider.

♂. Length 2.6 mm., width .95 mm. Head: width .61 mm., vertex .27 mm. Rostrum, length .93 mm., reaching to near hind margins of posterior coxae. Antennae: segment I, length .13 mm.; II, .65 mm.; III, broken; yellowish to dusky. Pronotum: length .38 mm., width at base .78 mm.

Color dark chestnut brown to blackish, basal one-third of cuneus white, a transverse pale band across clavus and corium beginning just behind scutellum; antennae and legs pale yellowish, hind femora chestnut brown except for pale base and apex. Pubescence pale to yellowish, tibial spines pale.

♀. Length 2.4 mm., width .95 mm. Head: width .59 mm., vertex .296 mm. Antennae: segment I, length .13 mm.; II, .58 mm.; III, .31 mm.; IV, .21 mm. Pronotum: length .37 mm., width at base .80 mm. Very similar to the male in coloration and pubescence.

Holotype: ♂ June 20, 1926, Fresno, CALIFORNIA (C. J. Drake); author's collection. *Allotype*: same data as the type. *Paratypes*: 4 ♀, taken with the types. Dr. Drake found this species on one host and *bicinctus* Van D. on a different host in the same locality, altho the plants were not identified. The small size of this species and the different host plant observed, indicates a biological difference between this and *bicinctus*, which taken with the differences noted in head, antennae and pubescence, further substantiates the view that we are dealing with distinct species.

***Microphylellus flavicollis* n. sp.**

Allied to *bicinctus* Van D., but distinguished by the pale band across pronotum, by the broader head and distinctly tumid frons.

♀. Length 3.4 mm., width 1.36 mm. Head: width .78 mm., vertex .37 mm.; vertex and frons strongly tumid, tylus slightly angulate, the apical half sloping posteriorly. Rostrum, length 1.24 mm., reaching to middle of hind coxae. Antennae: segment I, length .21 mm.; II, .83 mm.; III, broken; yellow. Pronotum: length .56 mm., width at base 1.14 mm.

Black, basal one-third of cuneus white; a transverse pale band across middle of clavus, more narrowly across corium and extending to include basal third of embolium; scutellum pale to yellowish, apex fuscous; pronotal disk with broad pale to yellowish band, leaving only narrow basal margin and the calli black, also extending over on the propleura. Legs pale yellowish, distal half of hind femora blackish. Membrane pale fuscous. Clothed with very fine pale to yellowish pubescence; tibial spines yellowish.

Holotype: ♀ May 10, 1926, Tampico, WASHINGTON (E. W. Davis); author's collection. ♀ May 15, 1911, Humboldt Co., CALIFORNIA (F. W. Nunenmacher). ♀ May 21, 1893, Hood River, OREGON.



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