

DESCRIPTIONS OF ELEVEN NEW SPECIES OF
PHYTOCORIS FROM EASTERN NORTH
AMERICA (HEMIPTERA, MIRIDAE).¹

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Phytocoris borealis n. sp.

This species runs to *dimidiatus* Kirschbaum in my key (Hem. Conn., 1923, p. 630), but is distinguished by the longer antennal segment I, heavy coating of sericeous pale pubescence on dorsum, white lower half of face, and blackish ray through the pale color on propleura, as well as by the distinct male genitalia.

♂. Length 6.8 mm., width 2.3 mm. Head: width 1.17 mm., vertex .37 mm.; lower half of face white, bucculae except lower margin, spot on dorsal margin of lora, base of juga, base of tylus and indistinct mark across middle, fuscous to black; frons with oblique lines of black over paler, lower margin black; vertex with two large glabrous pale areas, separated from a large median pale spot on base of frons by a narrow blackish line. Rostrum, length 2.9 mm., extending slightly beyond posterior margins of hind coxae, pale, apex blackish. Antennae: segment I, length 1.57 mm., black, with six or seven small pale spots on dorsal aspect and one larger on middle of apical half; II, 3.32 mm., black, narrowly pale at base and a second somewhat broader pale annulus at slightly beyond middle; III, 2.3 mm., black, narrowly pale at base; IV, 1.43 mm., black. Pronotum: length 1.07 mm., width at base 1.8 mm.; black, basal margin of disk with triangular pale mark on middle and one each side near basal angle; collar more or less pale, calli marked with pale, a distinct line on basal margin and a hook-shaped pale mark on outer angles; propleura pale, dorsal margin and a ray passing through middle of coxal cleft, black. Scutellum pale, a large black mark each side on middle and joined by narrow line with median mark at base; mesoscutum black, a pale mark near each side. Sternum blackish, a white patch on each side.

Dorsum clothed with black simple pubescence and thickly intermixed with silvery white tomentum. Hemelytra black, spot at apex and on middle of corium, embolium except apically and three or four black marks, pale; clavus slightly paler along commissure and bordering scutellum. Cuneus

¹ Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.

black, base largely and a few small spots pale. Membrane largely pale and conspurcate with numerous small and large fuscous spots and marks, areoles chiefly blackish except middle of larger one, cubitus pale. Legs black, marked with small and large pale spots, bases of femora and the coxae pale; hind femora with three or four large pale spots, the largest forming an incomplete annulus at middle of apical half. Venter largely pale, dorsal margin and basal half of genital segment blackish. Genital segment without tubercles near base of claspers, the right clasper shaped much like that of *corticevivens* Kngt. and *fumatus* Reut., but the lack of tubercles will distinguish this species.

♀. Length 6.7 mm., width 2.4 mm. Head: width 1.18 mm., vertex .44 mm. Antennae: segment I, length 1.73 mm.; II, 3.43 mm.; III, 2.3 mm.; IV, 1.5 mm. Pronotum: length 1.03 mm., width at base 1.8 mm. Very similar to the male in pubescence and coloration, but dorsum more broadly pale; disk of pronotum and hemelytra with additional pale spots appearing.

Holotype: ♂, August 6, 1918, Gull Lake, Ontario, Canada (H. S. Parish); author's collection. *Allotype*: August 2, 1889, Jamestown, New York (E. P. Van Duzee); Iowa State College Collection. *Paratype*: ♂, same data as the type.

***Phytocoris albifacies* n. sp.**

This species runs to *davisi* Kngt., in my key (Hem. Conn., 1923, p. 616) but is distinguished by the black propleura having lower margin only white, and frons with dark lines.

♂. Length 5.9 mm., width 2.3 mm. Head: width 1.11 mm., vertex .46 mm.; lower half of face or beneath a line running through base of tylus and lower margin of eyes, white, black above this line, the vertex more or less pale and with fuscous, a curved white mark against inner margin of each eye. Rostrum, length 3.43 mm., attaining base of ovipositor, white, segments III and IV blackish. Antennae: segment I, length 1.8 mm., black, dorsal aspect with two glabrous white spots on apical half and four or five smaller spots on basal half, spines short, length scarcely equal to thickness of segment, both fuscous and pale; II, 3.3 mm., black, pale at base for a space of .23 mm., and a pale annulus of equal width beginning at middle; III, 1.77 mm., black, pale at base; IV, 1.31 mm., black. Pronotum: length 1.06 mm., width at base 1.69 mm.; black, lower margin of propleura, xyphus, and collar to a point behind lower margin of eye, white; dorsal aspect of collar and between calli more or

less pale and marked with reddish, calli with small paler maculae, central area of disk more fuscous, basal margin somewhat pale, with two black callous spots each side of median line. Scutellum fuscous to blackish, basal angles and apex pale.

Hemelytra blackish, several small spots on embolium, base of cuneus, a triangular spot at apex of corium and spot near middle, paler. Membrane brownish black, having paler areas sprinkled with fuscous dots, cubitus largely pale. Sternum and pleura black, margins bordering coxae pale. Venter black, pale beneath except on last genital segment. Legs black and marked with pale much as in *corticevivens*; femora black, irrorate with pale, a somewhat larger spot indicating an oblique subapical annulus. Dorsum clothed with rather short, black, simple pubescence and intermixed with silvery and golden sericeous pubescence.

♂. Length 6 mm., width 2 mm. Head: width 1.08 mm., vertex .40 mm. Antennae broken. Pronotum: length 1.1 mm., width at base 1.7 mm. Very similar to the female in coloration although more strongly black. Genital claspers distinctive (fig. 1); indicating a close relationship to *corticevivens* Kngt.

Holotype: ♀, June 17, 1913, Agricultural College, Mississippi (T. F. McGehee); author's collection. *Allotype*: ♀, June 11, 1912, Agricultural College, Miss. (T. F. McGehee), taken on pecan. *Paratype*: ♀, June 17, 1912, Agricultural College, Miss. (W. E. Dove).

No doubt this species will be found to frequent the bark of pecan and perhaps of other trees since it is of the bark inhabiting type.

***Phytocoris oppositus* n. sp.**

Allied to *lineatus* Reuter, but distinguished by the long antennal segment I (1.45 mm.) which exceeds (♀) the length of head and pronotum taken together (1.28 mm.). While the female of *lineatus* is unknown, the distribution of that species would seem to indicate something different.

♀. Length 4.5 mm., width 1.4 mm. Head: width .77 mm., vertex .43 mm., clypeus prominent, vertical, separated from the frons by a rather broad but deep depression; vertex and frons distinctly flattened, pale, a reddish brown line each side of middle which join just before apex of frons and continuing as a single median line on clypeus, also a transverse reddish mark across middle of clypeus, and a narrow

reddish line on dorsal margin of lora; a fuscous mark behind lower margin of eye which continues back on propleura, across lower margin of coxal cleft, broadening somewhat to take in lower one-third of propleura and extending upon sides of sternum. Rostrum, length 2.5 mm., extending upon fifth ventral segment, pale, apical segment blackish. Antennae: segment I, length 1.45 mm., cylindrical or only a trifle thicker near base, reddish brown, dorsal surface pale, margins of pale stripe somewhat irregular, inner and dorsal surface set with several pale setae of which the longest do not exceed thickness of segment; II, 2.6 mm., reddish brown to fuscous, a pale band near base just beyond the narrow brown basal ring, a second and broader pale portion beginning at middle and extending for a distance nearly equal to one-fourth the length of segment; III, 1.51 mm., brownish, paler at base; IV, broken. Pronotum: length .57 mm., width at base .94 mm.; disk much flattened, about on a level with vertex and scutellum; reddish to fuscous, median line, a broader one each side, lateral and basal margins of disk, paler, a blackish spot each side of median line on base of disk; propleura fusco-reddish, a longitudinal pale stripe on middle, bordered above by a slender fuscous line that marks off the pale margin of disk. Scutellum reddish to fuscous, apical half pale but with fuscous mark each side of median line. Hemelytra brachypterous, flattened, embolar margins strongly arcuate, cuneus deflexed, rounded, reaching upon seventh abdominal segment, membrane absent; pale and darkened with fuscous, embolium, outer margin of cuneus, and inner half of clavus, pale, apex of clavus set with a dense group of black hairs.

Dorsum sparsely set with short, rather stiff fuscous or black hairs, intermixed with more closely appressed, pale sericeous pubescence; head and dorsal part of collar set with pale to yellowish hairs. Legs pale, front femora with a heavy, fusco-reddish, longitudinal line on posterior aspect, the anterior aspect with a similar mark on apical half, while the dorsal surface has a more slender and sometimes interrupted line on apical half; intermediate femora marked much like the preceding but the dark lines more confused apically; hind femora blackish except near base, anterior aspect with a rather slender, slightly oblique white line which connects dorsally with a corresponding, although interrupted white mark on posterior aspect; tibiae pale, a reddish mark beneath knee, apices of anterior pair rather broadly fuscous while two other reddish bands are indicated on ventral surface. Venter pale, irregularly darkened with hypodermal

red, genital segments darker, the impressed lateral line bordered with fuscous.

Holotype: ♀, June 26, 1921, Aberdeen, Mississippi (C. J. Drake); author's collection.

***Phytocoris schotti* n. sp.**

In my key to the species of *Phytocoris* (Hem. Conn., 1923, p. 632) this species runs to *obtectus* Knegt., but is readily distinguished by the pale bucculae, slight depression at base of tylus, reddish coloration on outer margin of cuneus, and structure of the male genital claspers.

♂. Length 5.2 mm., width 1.9 mm. Head: width 1 mm., vertex .26 mm., frons with five or six oblique reddish lines each side of median line; base of tylus and spot each side on basal half, dorsal margins of juga and lora, and slender median line on apical half of tylus, reddish. Rostrum, length 2.34 mm., extending upon fifth ventral segment. Antennae: segment I, length .97 mm., brownish black, with several small glabrous white spots on dorsal aspect, spines pale; II, 2.3 mm., black, narrowly pale at base; III, 1.23 mm., black, pale at base and on extreme tip; IV, .91 mm., blackish. Pronotum length .84 mm., width at base 1.5 mm., propleura blackish, lower margin and a spot at top of coxal cleft, white; the white lower margin continued as a ray upon the black sternum.

Coloration suggestive of *salicis* Knegt., but the dark color more blackish; apical half of corium largely pale except near inner margin, without oblique infuscation; cuneus largely pale, apex and two spots on inner margin black, outer margin marked with red. Membrane marbled with fuscous, areoles chiefly dark fuscous, margined apically by white veins. Legs marked much like *eximius*, the blackish color on femora irregularly broken by two or three large and many small white spots. Clothed with fuscous to black simple pubescence and intermixed with white, sericeous pubescence, the hairs on head and embolium more pale than dark. Genital claspers distinctive (fig. 1) of the species.

Holotype: ♂, July 5, 1923, Bound Brook, New Jersey (F. M. Schott); author's collection.

***Phytocoris albitylus* n. sp.**

Allied to *husseyi* Knegt., and seems to run best to that species in my key (Hem. Conn., 1923, p. 631), but distinguished by the large eyes and shorter antennal segment I which in length only

equals width of head; also differs in the white tylus and much reduced genae.

♂. Length 5.7 mm., width 2.1 mm. Head: width 1.08 mm., vertex .26 mm.; eyes very large thus reducing width of gena to a point about equal to thickness of antennal segment II; white, a few fine lines on frons and one across base of juga, fuscous; lora blackish, ventral margin and apex pale, tylus white except for a slender transverse dark line on apex. Rostrum, length 2.4 mm., reaching middle of venter, pale, apex blackish. Antennae: segment I, length 1.08 mm.; II, 2.46 mm.; III, 1.26 mm.; IV, missing; coloration similar to *husseyi* except segment I is more broadly white, the spots largely confluent. Pronotum: length 2.4 mm.

Dorsum clothed with pubescence and in coloration very similar to *husseyi*. Legs colored much as in *husseyi* but hind femora with very large white areas, the dark marks reduced to the vanishing point except near apex. Genital claspers indicate a close relationship with *husseyi* but the right clasper is shorter, more sinuate, and sharply curved at apex.

Holotype: ♂, March 17, 1921, Dunedin, Florida (W. S. Blatchley); author's collection.

***Phytocoris exemplus* n. sp.**

Allied to *buenoi* Kngt., but distinguished by the narrow vertex, smaller size, and by the tubercle above base of left genital clasper.

♂. Length 4.6 mm., width 1.7 mm. Head: width .97 mm., vertex .257 mm.; width of vertex much less than dorsal width of an eye. Rostrum, length 2.3 mm., extending upon base of eighth ventral segment. Antennae: segment I, length .84 mm., apex and three or four spots on dorsal aspect, white; II, 2.1 mm., black, pale at base; III, 1.2 mm., black, pale at base; IV, .94 mm., black. Pronotum: length .81 mm., width at base 1.43 mm. Coloration and pubescence very similar to that of *buenoi* Kngt., but the heavy fuscous mark on apical field of corium is here more triangular, its posterior margin nearly transverse. Membrane nearly pale, areoles fusco-brownish, veins white on apex. Hind femora largely white on ventral aspect, the white spots closely grouped and leaving only a reticulation of fuscous. Genital claspers very similar to *buenoi* Kngt., but a tubercle above base of left clasper will distinguish this species at once.

Holotype: ♂, June 16, 1917, Colyell, Louisiana (H. H. Knight); author's collection; collected on cypress (*Taxodium distichum*).

Phytocoris angustifrons n. sp.

Runs to *pinicola* Knegt. in my key (Hem. Conn., 1923, p. 641) but distinguished from that species by the large eyes and narrow vertex; genital claspers very similar to those of *diversus* Knegt. but otherwise very different. Pubescence much as in *pinicola* but with brownish to fuscous simple pubescent hairs and more thickly intermixed with whitish sericeous pubescence.

♂. Length 5.1 mm., width 1.7 mm. Head: width 1.13 mm., vertex .31 mm.; yellowish, with reddish marks on vertex, frons, and dorsal margin and base of lora. Rostrum, length 2.1 mm., extending slightly beyond posterior margins of hind coxae. Antennae: segment I, length .66 mm., marked nearly as in *pinicola*; II, 2.26 mm., fusco-brownish, narrow base paler; III, 1.28 mm., black, narrowly pale at base; IV, .97 mm., blackish. Pronotum: length .82 mm., width at base 1.5 mm.; yellowish to dusky, darker near base but narrow basal margin pale. Hemelytra somewhat paler than in *pinicola*, outer margin of cuneus with three or four dark points. Legs much as in *pinicola* but coxae and basal half of femora paler; dorsal margin of hind tibiae with white line, not broken into spots as in *pinicola*. Genitalia distinctive, the claspers very similar to those of *diversus*; flagellum with nine teeth in the comb.

♀. Length 4.8 mm., width 1.6 mm. Head: width 1.06 mm., vertex .41 mm. Antennae: segment I, length .66 mm.; II, 2.1 mm.; III, 1.18 mm.; IV, 1 mm. Pronotum: length .77 mm., width at base 1.36 mm. Very similar to the male in pubescence and coloration.

Holotype: ♂, April 1, 1921, Dunedin, Florida (W. S. Blatchley); author's collection. *Allotype*: ♀, June 16, 1917, Colyell, Louisiana (H. H. Knight). *Paratypes*: ♂ ♀, Aug. 4, Ocean Springs, ♀, June 25, 1921, Aberdeen, Mississippi (C. J. Drake).

Phytocoris signatipes n. sp.

Allied to *angustifrons* but differs in the reddish coloration of scutellum, apical area of corium, and apex of cuneus; hind femora brownish black and mottled with large and small coalescing white spots.

♂. Length 4.4 mm., width 1.7 mm. Head: width .98 mm., vertex .31 mm.; pale and marked with red, vertex, transverse lines on frons, bases of juga, of lora and of bucculae, sides of tylus except apically, reddish. Rostrum,

length 1.8 mm., extending upon fifth ventral segment, yellowish, apex blackish, a red line on side of first segment. Antennae: segment I, length .54 mm., dark red, with several glabrous white spots, spines pale to fuscous; II, 1.86 mm., black, narrowly pale at base; III, .97 mm., black, narrowly pale at base; IV, .77 mm., black. Pronotum: length .73 mm., width at base 1.33 mm.; pale to dark reddish brown, basal margin narrowly pale but irregularly bordered on discal side with reddish brown, calli and central area of disk chiefly pale. Scutellum dark reddish, slender median line and broad apex pale.

Simple pubescence pale on head and collar, fuscous on pronotum, and brownish on hemelytra; intermixed on dorsum with white sericeous pubescence. Hemelytra varied with pale, fuscous, and reddish; clavus fusco-brownish, commissure narrowly margined with white; embolium pale, marked with dark reddish; corium fusco-brownish, a spot near base and an oblique mark on middle, pale, apical field reddish, but apex and joining with basal angle of cuneus, pale; apical half of cuneus and two spots on outer margin near base, reddish, with two black points on membrane margin near base. Membrane and veins fusco-brownish, scarcely paler at apex of cuneus, cubitus white at apex of larger areole. Sternum and venter reddish to dark brown. Femora reddish brown, darker on hind pair, closely spotted with small and coalescing white marks; hind femora with several large white spots, ventral aspect appearing largely white and spotted with irregular dark marks, the spines and hairs pale. Tibiae dark brown, varied with white spots and areas, spines pale brownish. Genital claspers (fig. 1) distinctive, although exhibiting a close relationship with *conspersipes* Reut. and *angustifrons* Knegt.

Holotype: ♂, Sept. 25, 1911, Silver Springs, Florida (Geo. P. Engelhardt); author's collection.

***Phytocoris taxodii* n. sp.**

Allied to *rufus* Van D., but differs in the longer rostrum which extends upon base of male genital segment, also differs in the longer antennal segment I, and in the structure of the male genital claspers.

♂. Length 5.1 mm., width 1.7 mm. Head: width .94 mm., vertex .26 mm.; yellowish, sometimes tinged with red. Rostrum, length 2.5 mm., attaining base of genital segment. Antennae: segment I, length 1.03 mm., slightly thicker at base and apex, a few weak yellowish setae on basal half,

yellow to reddish; II, 2.34 mm., yellowish; III, 1.3 mm., yellowish to dusky; IV, 1.05 mm., dusky, yellowish pubescent. Pronotum; length .80 mm., width at base 1.4 mm.; reddish, becoming fusco-reddish near base of disk, narrow basal margin and median line on collar and between calli, paler. Scutellum yellowish or tinged with reddish. Hemelytra yellowish to reddish much as in *rufus* Van D., inner apical angles of corium becoming infuscated but not extending forward along radial vein across middle of corium as in *rufus*; cuneus roseate red but narrow outer margin yellow; membrane fusco-brownish, veins strongly red. Ventral surface and legs yellowish; hind femora reddish except basal one-third, irrorate with small yellowish spots; base of hind tibiae more or less reddish. Genital claspers distinctive, basal half of right clasper much more slender than in *rufus* Van D.

Clothed with golden yellow simple pubescence, but becoming fuscous on pronotal disk, and intermixed on dorsum with more closely appressed, sericeous, silvery white pubescence.

♀. Length 5.3 mm., width 1.8 mm. Head: width .91 mm., vertex .34 mm. Rostrum, length 2.6 mm., reaching upon base of ovipositor. Antennae: segment I, length 1.10 mm.; II, 2.4 mm.; III, 1.31 mm.; IV, 1.03 mm. Pronotum: length .85 mm., width at base 1.49 mm. Very similar to the male in pubescence and coloration.

Holotype: ♂, June 16, 1917, Colyell, Louisiana (H. H. Knight); author's collection. *Allotype*: same data as the type. *Paratypes*: GEORGIA—♂ ♀, June 28, 1912, Okefenokee Swamp (J. C. Bradley); Cornell University collection. LOUISIANA—16 ♂ ♀, taken with the types; 2 ♂, 1 ♀, June 18, 1917, Shriever (H. H. Knight); taken on cypress (*Taxodium distichum*). MISSISSIPPI—10 ♂ ♀, July 15, Durant; 5 ♂ ♀, July 27, Natchez; 2 ♀, June 18, 1921, Vicksburg (C. J. Drake). This species was found breeding on bald cypress (*Taxodium distichum*) by Dr. C. J. Drake and by the writer.

Phytocoris rubellus n. sp.

This species runs to *puella* (♂) in my key (Hem. Conn., 1923, p. 644), but is distinguished by the shorter antennal segment I which is not equal to width of head plus width of vertex.

♂. Length 4.8 mm., width 1.54 mm. Head: width .86 mm., vertex .25 mm. Rostrum, length 1.94 mm., extending slightly beyond hind coxae or upon base of fourth ventral segment, pale to yellowish, apex blackish. Antennae: seg-

ment I, length .81 mm., reddish, with three or four large glabrous white spots and about the same number of small ones, set with six or eight pale bristles, some of which in length exceed thickness of segment; II, 2.1 mm., yellowish, sometimes tinged with red, apex dusky; III, 1.06 mm., yellowish, becoming dusky apically; IV, 1 mm., fuscous. Pronotum: length .71 mm., width at base 1.28 mm.; reddish to fuscous, median line and extending upon vertex, and frequently one each side on pronotal disk, pale. Scutellum reddish, basal angles and apex pale. Hemelytra reddish to fuscous, embolium with several obsolete pale marks. Cuneus reddish, scarcely darker at apex. Membrane pale fuscous, marbled with paler, veins fuscous although pale to reddish at apex of areoles. Legs pale yellowish to reddish and marked with paler irrorations, exhibiting more red than in *puella*. Clothed with pale to fuscous simple pubescence and intermixed with white sericeous pubescence, the latter tending to form in spots on hemelytra.

♀. Length 4.8 mm., width 1.63 mm. Head: width .86 mm., vertex .37 mm. Antennae: segment I, length .88 mm.; II, 2.06 mm.; III, 1.08 mm.; IV, .95 mm. Pronotum: length .77 mm., width at base 1.37 mm. Coloration usually of a deeper red than in the male, hemelytra uniformly red without fuscous.

Holotype: ♂, August 22, 1921, Brookings, South Dakota (H. C. Severin); author's collection. *Allotype*: same data as the type. *Paratypes*: IOWA—2 ♂ 2 ♀, Sept. 22, 3 ♂ 1 ♀, Oct. 13, 1896, ♂, July 12, ♀, July 21, 1897 (E. D. Ball). 2 ♂ 7 ♀, July 19, 1925, Ledges State Park (H. H. Knight), found breeding on *Salix longifolia*, nymphs and teneral adults taken. INDIANA—♀, Aug. 26, 1904, Laporte County (W. S. Blatchley). MISSOURI—♀, June 29, Kansas City (F. Rogers). KANSAS—3 ♂ 2 ♀, Sept. 23, Riley County (E. E. Faville). SOUTH DAKOTA—6 ♂ 2 ♀, taken with types. ♀, July 26, 1921, ♀, Sept. 9, 1920, Brookings; ♀, Sept. 20, 1920, Ft. Pierre; ♀, Oct. 22, 1919, Yankton (H. C. Severin).

***Phytocoris balli* n. sp.**

This species runs in group I of my key (Hem. Conn., 1923, p. 615) and traces as far as couplet 13, where it differs from both species by the black antennal segment II being pale only at base, by the large eyes and narrow vertex; also antennal segment I is not equal to width of head, and the scutellum has a clearly defined median pale line.

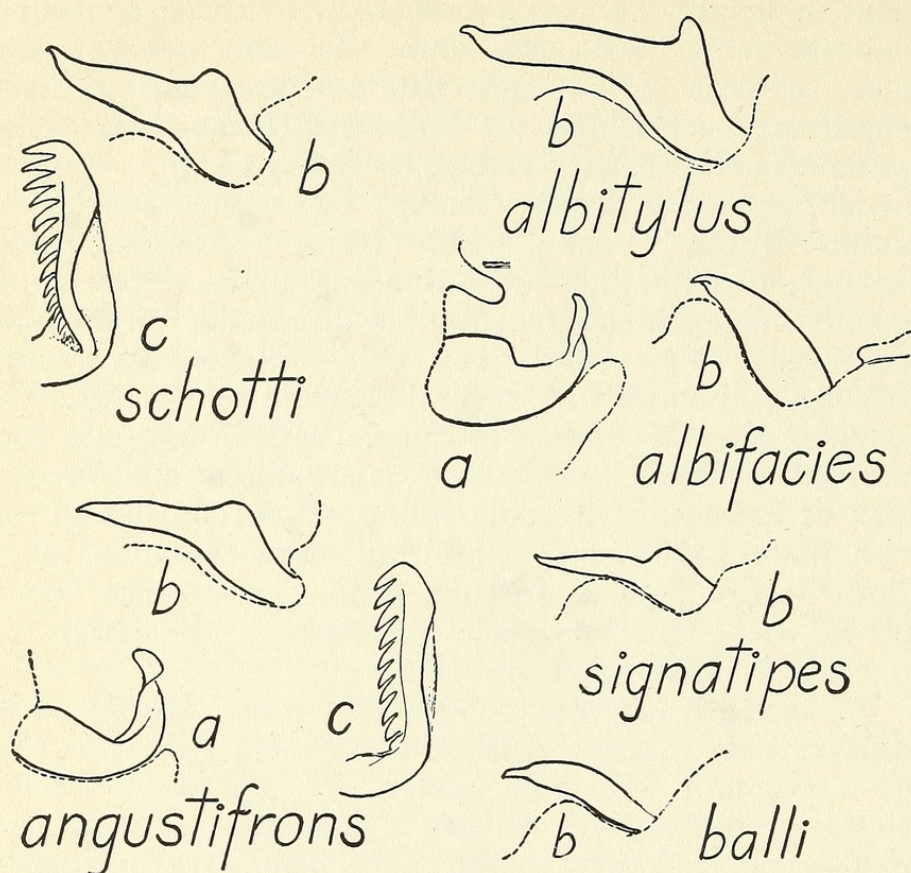


Fig. 1. Male Genitalia of Species of *Phytocoris*. a. Left clasper, lateral aspect, with partial outline of genital segment in dotted line. b. right clasper, lateral aspect, outline of genital segment added. c. flagellum.

♂. Length 5.3 mm., width 1.8 mm. Head: width 1.03 mm., vertex .21 mm.; eyes extremely large, greatly reducing width of vertex and size of genae; frons marked with transverse black lines, tylus with a large mark on each side and bivittate mark at base, and base of juga and of lora, black. Rostrum, length 2.3 mm., reaching upon sixth ventral segment. Antennae: segment I, length .91 mm., pale beneath, blackish above and marked with several small white spots; II, 2.43 mm., black, narrowly pale at base. Pronotum: length .83 mm., width at base 1.43 mm.

Coloration and pubescence suggestive of *eximius* Reut., but the dark areas of membrane broken into spots and reticulations; veins pale to white except the one separating areoles which is black. Scutellum with median line pale, a rounded black spot on each lateral margin at slightly behind middle. Genital claspers distinctive (fig. 1).

Holotype: ♂, April 15, 1926, St. Augustine, Florida (E. D. Ball); author's collection.



Knight, Harry H. 1926. "Descriptions of eleven new species of *Phytocoris* from eastern North America (Miridae)." *Bulletin of the Brooklyn Entomological Society* 21, 158–168.

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