

DESCRIPTION OF A NEW *POLYMERUS*, WITH NOTES ON  
TWO OTHER LITTLE KNOWN MIRIDS FROM THE  
NEW JERSEY PINE-BARRENS (HEMIPTERA: MIRIDAE)<sup>1</sup>

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*Abstract.*—The new species, *Polymerus rostratus*, is described from the New Jersey Pine-Barrens. *Hudsonia ericoides* L. is shown to be the true host of *Parthenicus vaccini* Van Duzee and *Polymerus rostratus*, and *Arenaria caroliniana* Walt. the host of *Polymerus nigropallidus* Knight.

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Several interesting species of Miridae have been described from pine-barren habitats along the eastern coast of the United States. Knight (1923), and in other papers, described from the New Jersey Pine-Barrens several mirids, most of which have not been recorded since. The hosts of these bugs have been confused or, in most cases, have remained unknown.

On a recent collecting trip to the New Jersey Barrens, my colleague, A. G. Wheeler, Jr., and I discovered the hosts of several species known only from one or a few localities and one new species. The description of a new *Polymerus* and notes on two other mirids are presented here.

*Polymerus rostratus* Henry, new species

Figs. 1-3

*Male holotype.*—Length 3.60 mm, width 1.36 mm, generally brown, with the head and pronotum largely black; clothed with silvery, silky or tomentose pubescence, intermixed with simple, semierect setae. Head: Length 0.40 mm, width 0.82 mm, black, basal carina, part of lorum and median line to base of tylus brownish yellow; vertex 0.30 mm, dorsal width of eye 0.26 mm; vertex and part of front set with a few silvery, silky setae. Rostrum: Length 1.98 mm, reaching well beyond hind coxae to 6th abdominal segment, segments I and II pale, III dark brown, IV black. Antennae: I, length 0.36 mm, black, extreme base pale; II, length 1.40 mm, dark brown or reddish brown, base black, thickly clothed with fine, brown, recumbent setae; III, length 0.76 mm, reddish brown; IV, length 0.56 mm, reddish brown. Pronotum: Length 0.72 mm, width at base 1.24 mm, largely black, with the basal  $\frac{1}{2}$ , collar and median line lighter brown (some specimens are entirely black, except for the basal margin and narrow median line); surface weakly rugose, calli slightly raised; calli and area immediately behind thickly clothed with silvery, silky pubescence; scutellum pale brown, basal angles black (some specimens are more nearly

black with only the apical 3rd brown), thickly set with silky pubescence. Hemelytra: Largely brown, with the clavus darker brown, its margins and inside  $\frac{1}{2}$  often approaching black, the costal and radial veins fuscous, often tinged with red, apical  $\frac{1}{3}$  of embolium and apex of corium red, cuneus bright red with the apex and outer margin pale; clothed with silvery, silky pubescence. Membrane: Translucent grayish brown, anal area more black, veins pale brown. Venter: Pale yellow, dorsal  $\frac{1}{2}$  of pleura black, abdomen greenish yellow with a black line across pleural region, genital segments more testaceous; thoracic segments thickly set with silvery, silky pubescence, abdomen clothed with longer, simple setae. Legs: Testaceous to yellowish orange, front and middle femora with 2 subapical red bands, the basal band often fading into broad reddish area, hind femora with 3 reddish bands, these often becoming infuscated, the basal 1 often broadly faded; tibiae testaceous, tinged with red, spines black, these sometimes with indistinct black spots at base; tarsi testaceous, 3rd segment and claws black. Genitalia: Parameres typical of genus, not distinguishable from other *Polymerus*; spiculum of aedeagus slender, apex acutely produced, covered with microspines.

*Allotype female*.—Length 3.72 mm, width 1.64 mm; very similar to male in coloration and markings, differing largely in the broader form and more brown pronotum. Head: length 0.44 mm, width 0.90 mm, black, median line, basal carina and spot on either side of vertex pale; vertex 0.42 mm, dorsal width of eye 0.24 mm. Rostrum: Length 2.20 mm, reaching beyond base of ovipositor to 7th abdominal segment. Antennae: I, length 0.34 mm, black, extreme base and apex pale; II, length 1.28 mm, brown, base black; III, length 0.78 mm, reddish brown; IV, length 0.50 mm, reddish brown. Pronotum: Length 0.84 mm, width at base 1.36 mm, largely brown, calli and anterior angles black; scutellum pale yellowish, black across basal angles. Hemelytra: more brown, less fuscous and red than males.

*Type-data*.—*Holotype*: ♂, Burlington Co., N.J., near Tabernacle, June 13, 1977, taken on *Hudsonia ericoides*, T. J. Henry and A. G. Wheeler, Jr. coll. (USNM type no. 75743). *Allotype*: ♀, same data as holotype (USNM). *Paratypes*: 1 ♂, 9 ♀, same data as holotype; 15 ♂, 11 ♀, Ocean Co., N.J., Rt. 37 near Lakehurst, 14 June 1977, taken on *H. ericoides*, T.J.H. and A.G.W. coll. (Am. Mus. Nat. Hist., Pa. Dept. Agric., Pa. State Univ., USNM); 1 ♀, Ocean Co., N.J., near Tom's River along Rt. 37, 14 June 1977, taken on *H. ericoides*, T.J.H. and A.G.W. coll. (Pa. Dept. Agric.).

*Remarks*.—*Polymerus rostratus* is very similar in coloration and markings to *Polymerus basalis* Reuter, 1876. When first collected, this species was thought to be *basalis*; but after some field observation, its smaller size and quicker, more erratic flight habit strongly suggested a new form.

*Polymerus rostratus* keys to *basalis* in Blatchley (1926) and Knight (1923



Fig. 1. Typical New Jersey Pine-Barrens habitat for *Arenaria caroliniana* and *Hudsonia ericoides*. Fig. 2. *Hudsonia ericoides*. Fig. 3. *Arenaria caroliniana*.

and 1941). It is easily separated from *basalis* by its smaller size ( $\delta$ ,  $N = 10$ ,  $\bar{x} = 3.75$ , 3.48–4.04;  $\text{♀}$ ,  $N = 10$ ,  $\bar{x} = 3.91$ , 3.68–4.32), mostly black head, longer rostrum that reaches well beyond the hind coxae to the 6th or 7th abdominal segment, the relative lengths of the antennal segments (*rostratus*,

segment II  $2\times$  length of segment III vs. *basalis*, segment II nearly  $4\times$  length of segment III) and the male genitalia.

Extensive collecting throughout much of the Pine-Barrens region revealed that golden heather, *Hudsonia ericoides* L. (Cistaceae) (Figs. 1 and 2) is the only host of *rostratus*. Only several miles away, but outside the undisturbed Barrens, 13 examples of *basalis* were found breeding on ox-eye daisy, *Chrysanthemum leucanthemum* L., in an old field along Rt. 37 near Tom's River, June 14, 1977.

#### *Polymerus nigropallidus* Knight

*Polymerus nigropallidus* (Knight, 1923), one of our prettiest *Polymerus* species, is known only from Brown's Mills Junction, New Jersey. Concentrated collecting in the Pine-Barrens disclosed that this species is actually very common and breeds on the low growing, pine-barren sandwort, *Arenaria caroliniana* Walt. (Caryophyllaceae) (Figs. 1 and 3). Numerous adults and a few nymphs were taken June 13 and 14, 1977 at Lakehurst, Ocean Co. and Tabernacle, Burlington Co.

#### *Parthenicus vaccini* Van Duzee

*Parthenicus vaccini* (Van Duzee, 1915) is known only from Long Island, N.Y., Massachusetts and Florida (Knight, 1923). The name *vaccini* would suggest that this species breeds on *Vaccinium* spp. and, in fact, numerous authors have carried this misnomer through the literature. A special effort was made to collect *vaccini* on cranberry and blueberry, but only after carefully beating plants of *Hudsonia ericoides* did we discover both adults and nymphs. *Parthenicus vaccini* was common wherever *Hudsonia ericoides* was growing. Eight males, 1 macropterous female and 21 brachypterous females were taken near Tabernacle, June 13; 1 male and 11 brachypterous females were taken along Rt. 37 near Tom's River, June 13; and 1 male and 4 brachypterous females were taken at Lakehurst, June 14.

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#### Footnote

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