

**A NEW SPECIES OF PTEROMICRA AND OF EUTHYCERA  
FROM WESTERN NORTH AMERICA  
(DIPTERA: SCIOMYZIDAE)<sup>1</sup>**

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The species described here were discovered among material loaned to us by G. E. Shewell, Entomology Research Institute, Ottawa, Canada. Additional material was provided by B. A. Foote, Kent State University, Kent, Ohio.

***Pteromicra rudis*, n. sp.**  
(Figs. 1-4)

Male and female. Body length, 2.08 to 2.72 mm. All bristles and hairs (except arisal and squamal) black. Head slightly higher than long. Frons somewhat narrowed and much lighter anteriorly; slightly wider than long, shiny, yellowish brown, with scattered hairs. Orbital plates and ocellar triangle dark brown to black. Cheeks broad, about  $\frac{1}{2}$  height of eye, with several strong hairs, especially on ridge above oral margin. Face and cheeks yellow, with variable amount of silver to yellowish pruinosity. Occiput shiny black, slightly pruinose; area between occipital grooves and circumcervical area with denser silver pruinosity. One pair of ocellar bristles; 2 pairs of frontorbitals, anterior pair only slightly shorter than posterior pair; 1 pair of inner and 1 pair of outer vertical bristles; 1 pair of divergent postverticals. First and second antennal segments yellowish to brownish; third segment yellowish basally, brownish apically. Basal  $\frac{1}{4}$  of arista thickened, somewhat lighter than dark brownish apical  $\frac{3}{4}$ ; pilosity shorter than width of arista at base. Blackish orbito-antennal spot present. Proboscis black; labellae large, yellow; palpi yellow, with 1 or 2 long subapical bristles and several hairs.

Thorax black, faintly pruinose. Propleural bristle strong. Humeral bristle usually small; posthumeral large; anterior notopleural well developed; posterior notopleural  $\frac{1}{2}$  to  $\frac{2}{3}$  as large; 1 supraalar; 1 postalar; no presutural dorsocentrals; posterior postsutural dorsocentrals well developed, anterior pair  $\frac{1}{2}$  as large, some specimens with 1 or 2 pairs of large, subequal hairs before anterior dorsocentral bristles. Basal and apical scutellars well developed, apicals twice as large as basals. Mesopleuron bare, with dense yellowish or silver pruinosity around spiracle and remaining surface slightly pruinose (Colorado specimens) or very shiny (Montana specimens); pteropleuron with 2 or 3 weak to strong bristles; sternopleuron with many fine hairs. Prosternum yellowish white, densely pruinose.

Fore coxae elongate, silvery, pruinose, mesially with scattered hairs, anteriorly with 1 bristle at or just below middle and 1 subapical bristle; middle and hind coxae black with silver pruinosity; hind coxae bare posteromesially. Fore femora

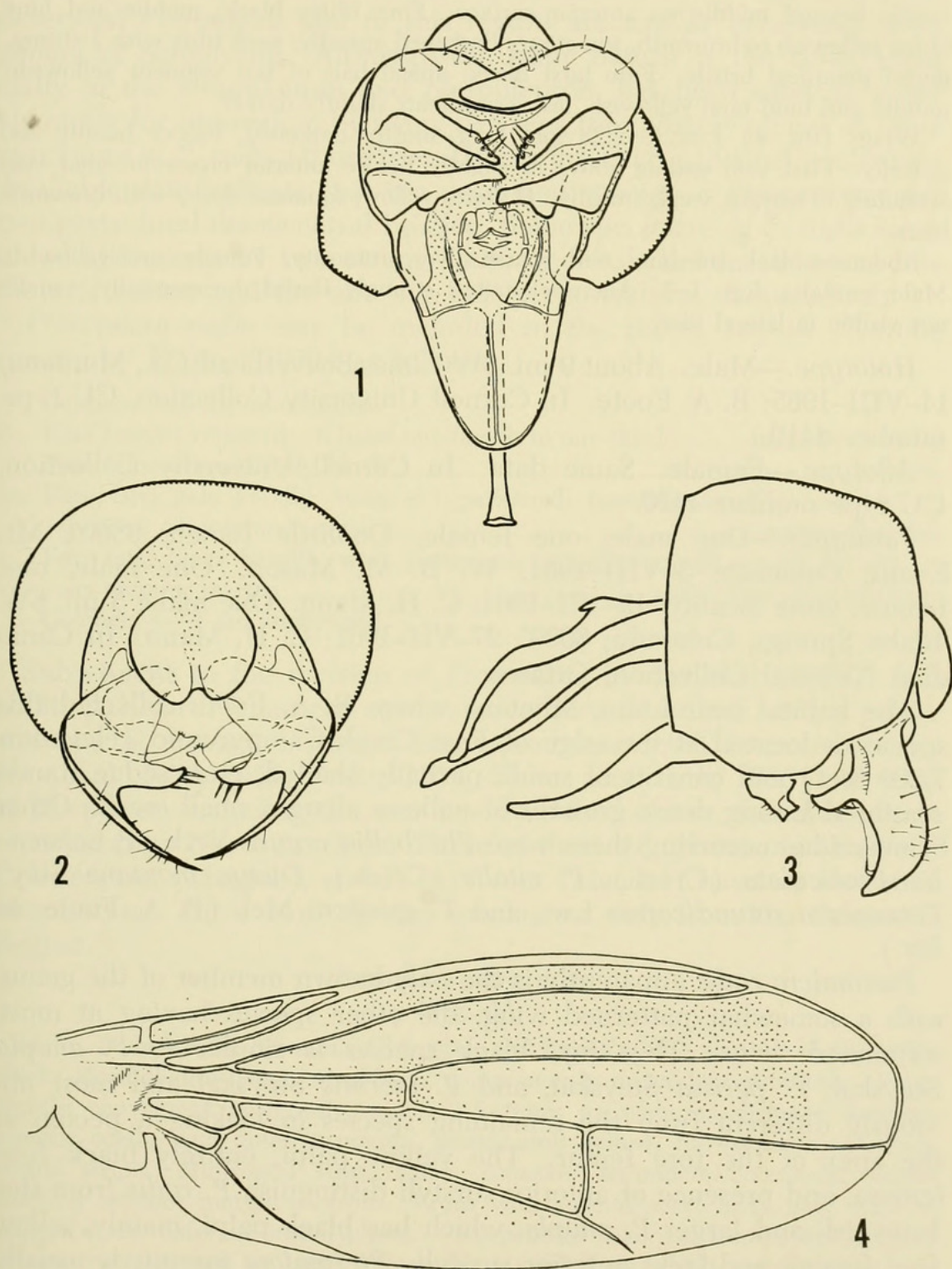
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Figs. 1-4, *Pteromicra rudis*, n. sp.: 1, ♂ terminalia, ventral view, surstyli in natural position; 2, ♂ terminalia, caudal view, surstyli extended; 3, ♂ terminalia, lateral view of left side, surstyli slightly more extended than in fig. 2; 4, wing.



black, without pecten but with several strong hairs ventromesially at apex; middle and hind femora black, sometimes brownish apically; middle femora with strong bristle beyond middle on anterior surface. Fore tibiae black; middle and hind tibiae yellowish to brownish, sometimes darkened apically; each tibia with 1 strong, dorsal preapical bristle. Fore tarsi black; apical half of last segment yellowish; middle and hind tarsi yellowish, last 2 segments slightly darker.

Wings (fig. 4) 1.92 to 2.28 mm long, mostly darkened, lighter basally and apically. First vein ending above or slightly before anterior crossvein; anal vein extending to margin, weak apically. Halteres yellow, squamae dusky with brownish hairs.

Abdomen black, subshiny, with sparse silver pruinosity. Female cerci yellowish. Male genitalia, figs. 1-3. Anterior surstyli strongly flexed dorsomesially, usually not visible in lateral view.

*Holotype*.—Male. About 9 mi. SW Lima, Beaverhead Co., Montana; 14-VIII-1965; B. A. Foote. In Cornell University Collection, CU type number 4410.

*Allotype*.—Female. Same data. In Cornell University Collection, CU type number 4410.

*Paratypes*.—One male, one female; Doolittle Ranch, 9800', Mt. Evans, Colorado; 3-VIII-1961; W. R. M. Mason. One male, one female; same locality; 15-VII-1961; C. H. Mann. One male; 5 mi. SW Idaho Springs, Colorado; 8600'; 27-VII-1961; C. H. Mann. In Canadian National Collection, Ottawa.

The habitat near Lima, Montana where B. A. Foote collected this species is located at the edge of East Creek Campground (elevation 7,200 feet) and consists of small, partially shaded, grass-sedge stands scattered among dense growths of willows along a small creek. Other Sciomyzidae occurring there were *Pherbellia argyra* Verb., *P. schoenherri maculata* (Cress.), *P. vitalis* (Cress.), *Dictya montana* Stey., *Tetanocera rotundicornis* Lw., and *T. spirifera* Mel. (B. A. Foote, *in litt.*).

*Pteromicra rudis* apparently is the only known member of the genus with a somewhat patterned wing, the other species having at most infumated veins. This tiny, black species is similar to *P. anopla* Steyskal, *P. perissa* Steyskal, and *P. inermis* Steyskal and most obviously different from the remaining species in lacking a pecten at the apex of the fore femur. The yellow palpi, entirely black fore femora, and presence of anterior surstyli distinguish *P. rudis* from the brownish and larger *P. anopla*, which has black palpi, mainly yellow fore femora and lacks anterior surstyli. *Pteromicra inermis* is usually much larger than *P. rudis* and the basal  $\frac{1}{3}$  or  $\frac{1}{4}$  of the fore femora is yellowish. *Pteromicra perissa*, a very small species known from 1 male from Colorado, has the basal segments of the fore tarsi pale whereas in *P. rudis* they are black; the male genitalia of these two species are quite different.



*Pteromicra rudis* has several atypical features. The cheeks are relatively much wider ( $\frac{1}{2}$  of the height of the eye) than any other described *Pteromicra* and in this regard are similar to several other genera of Sciomyzini. Although the shiny nature of the body, especially of the mesopleuron and pteropleuron, has been used as a key character for *Pteromicra* by many workers, the thoracic pleura of some specimens of *P. rudis* (those from Colorado) have a distinct pruinosity. Available data indicate that the described species of *Pteromicra* have two postsutural dorsocentral bristles. Some specimens of *P. rudis* have, in addition, one or two strong hairs or weak bristles between the thoracic suture and the anterior pair of postsutural dorsocentrals.

*Pteromicra rudis* may be included in the recent key to Nearctic species by Foote, (1959) as follows.

Couplets 1-2 are unchanged.

3. Fore femora yellowish on basal one-fourth to one-third ..... **inermis** Steyskal  
 Fore femora completely black ..... 3a
- 3a. Fore tarsi pale basally; wing not patterned; posterior surstylus without  
 process on anterior margin ..... **perissa** Steyskal  
 Fore tarsi black basally; wing patterned; posterior surstylus with process  
 on anterior margin ..... **rudis** Knutson and Zuska
- Couplets 4-13 are unchanged.

Subsequent to the revision of *Pteromicra* by Steyskal (1954), five additional North American species have been described in this genus, and one of Cresson's species has been resurrected from synonymy (Steyskal, 1956, 1957; Foote, 1959; Fisher and Orth, 1966). A total of 16 species, including the new one described above, thus have been reported from North America. Three of these (*P. glabricula* (Fallén), *P. leucopeza* (Meigen), and *P. pectorosa* (Hendel) have an Holarctic distribution. Three more species are known only from the Palearctic Region.

**Euthycera mira**, n. sp.

(Fig. 5)

Male. Body length, 8.0 mm. All bristles and hairs (except arisal and squamal) black. Head slightly longer than high, conspicuously protrudent anteriorly. Frons slightly convergent posteriorly, about 1.5 times as wide as distance between anterior ocellus and anterior margin, mostly dull yellow, brownish around midfrontal stripe. Midfrontal stripe shiny, concave, acuminate anteriorly, almost reaching anterior margin of frons. Frons with several short hairs near anterior margin, a few hairs on orbital plates. Two pairs of subequal frontorbital bristles; anterior pair situated on large, velvety-black oval spots which are about as long as widest part of midfrontal stripe. One pair each of ocellars, internal verticals, and external verticals; postocellars long, divergent. Ocellar triangle shiny, dark brown. Occiput with a few rather long bristles, patch of short hairs above cervix, and cordate black spot below postocellar bristles about twice as wide as greatest width of midfrontal stripe. Orbito-antennal spot well developed. Facies, parafacies, and cheeks pale yellow; facies subshiny, with sharp carina in upper part



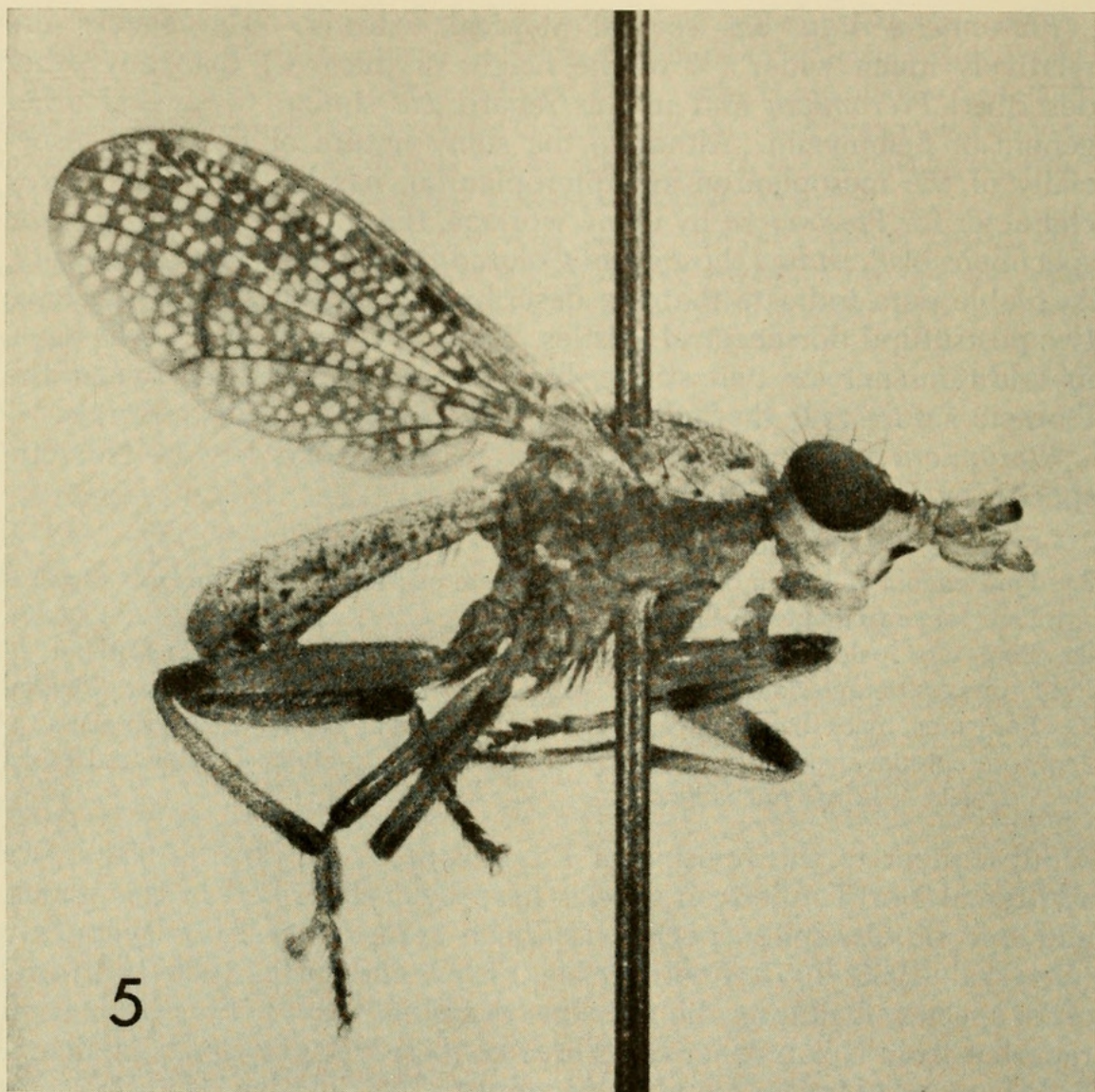


Fig. 5, *Euthycera mira*, n. sp., holotype ♂.

and sharply delimited, shiny, black, cordate spot above middle, spot with apex directed dorsally and about 0.8 of maximum width of midfrontal stripe. Epistoma distinctly protrudent anteriorly. Parafacies with a few, fine, scattered hairs and row of sparse, short hairs on anteroventral margin. Cheeks about 0.6 times height of eyes; with very short, fine, scattered hairs and with 3 large bristles along lower margin. Eyes 1.6 times as long as high, maximum diameter slightly oblique. Lunula strongly exposed, shiny, brownish reticulate. Antennae yellowish, about two-thirds as long as head including lunula. First segment short, brownish yellow, with transverse row of tiny hairs dorsally. Second segment compressed laterally, 1.4 times as long as wide, yellowish ventrally, brownish reticulate dorsally; dorsal surface with rather long hairs and several long bristles; ventral surface with long hairs; dorsal margin sharp, almost straight, ventral margin smooth and distinctly convex. Third segment 0.8 times as long and 0.8 times as wide as second, oval, yellow basally, darkened toward apex, almost black dorso-apically. Arista sub-basal, yellow, about as long as antenna, basal fifth thickened, remainder hairy and with whitish proclinate hairs about as long as width of arista at base. Pro-



boscis yellowish brown; labellae large; palpi yellow, spatulate, with a few long hairs.

Thorax brownish, mostly dull and strongly pruinose. Mesonotum in posterodorsal aspect with 2 indistinct brown vittae separated by distance half as wide as frons. Pair of brown spots posteromesially from humeral calli, on bases of posthumeral and supraalar bristles, and smaller spots around bases of other mesonotal bristles. Mesonotum densely covered with very short, strong hairs situated on small brownish spots. Indistinct prescutellar spot mesially. Scutellum brown, shiny mesially, borders pruinose; pair of velvety blackish spots on posteroventral margin. Prosternum and pleura, except for propleura and sternopleura, bare with whitish pruinosity. Propleura with a few hairs on lower surface, sternopleura with bristles on lower surface and hairs on upper surface. Humeral calli, upper part of mesopleura, and greater part of pteropleura dark brown, shiny to subshiny. One prescutellar pair of acrostichal bristles; 2 pairs of postsutural dorsocentrals situated on posterior half of postsutural part; 1 pair each of humerals, posthumerals, and supraalars; 2 pairs of notopleurals and postalars; 2 pairs of long scutellars, distance between basals and apicals slightly more than distance between apicals. No pleural or vellar bristles.

Legs yellowish, brownish, and black. All coxae brownish yellow, pruinose. Femora brownish yellow, apices black. Posterior femora with irregular, suberect hairs and bristles ventrally. Tibiae yellowish, apices black. Preapical bristles of all legs about as long as apical width of tibiae. Basal 2 segments of tarsi translucent white, apical half or entire third segment and 2 apical segments blackish. Claws with whitish bases and black apices.

Wings 8.5 mm long, densely patterned, white spots mostly subcircular, pattern slightly darker before  $r_3$  than behind  $r_3$ , white spots between  $r_5$  and  $m$  in 3 rows. Halteres brownish yellow.

Abdomen long, slender, in dorsal aspect only slightly tapering posteriorly, densely pruinose except for large, subshiny protandrium and small, subshiny epandrium. Median stripe indistinct; lateral stripes diffuse, interrupted. Fifth tergum half as long as fourth tergum.

*Holotype*.—Male. 14 mi. SW El Salto, Durango, Mexico; 8,000'; 26-VI-1964; J. F. McAlpine. In Canadian National Collection, Ottawa, Ontario.

*Euthycera mira* can be distinguished easily from other known species of this genus by the large, sharply delimited, shiny black spot on the face, and by the unusual coloration of the legs. The differences between this new species and *Euthycera arcuata*, the other North American species, are as follows:

|  |  |
|--|--|
| Face without black spot. Black, cordate, occipital spot absent. Aristal hairs at least twice as long as basal width of arista. Legs yellow, without distinct annulations. Wings with 2 rows of white spots between veins $r_5$ and $m$ ..... | <b><i>Euthycera arcuata</i></b> (Loew)         |
| Face with large, shiny black spot. Occiput with cordate black spot. Aristal hairs as long as basal width of arista. All femora, tibiae, and tarsi black or blackish apically. Wings with 3 rows of white spots between $r_5$ and $m$ .....   | <b><i>Euthycera mira</i></b> Knutson and Zuska |



While only two species are now known from North America, in the Palearctic Region there are at least eight species referable to this genus and several poorly known species presently included under *Limnia* Robineau-Desvoidy also may belong to *Euthycera*. The presence of vellar (subalar) bristles and mesopleural hairs in *Limnia* serve to distinguish that genus from *Euthycera*.

## REFERENCES

- Fisher, T. W. and R. E. Orth.** 1966. A new species of *Pteromicra* from Western North America and resurrection of *Pteromicra pleuralis* (Cresson) (Diptera: Sciomyzidae). Pan-Pac. Ent. 42:307-318.
- Foote, B. A.** 1959. A new species of *Pteromicra* reared from land snails, with a key to the nearctic species of the genus (Diptera: Sciomyzidae). Proc. Ent. Soc. Wash. 61:14-16.
- Steyskal, G. C.** 1954. The genus *Pteromicra* Lioy (Diptera: Sciomyzidae) with especial reference to the North American species. Papers Michigan Acad. Sci., Arts, Let. 39:257-269.
- . 1956. New species and taxonomic notes on the family Sciomyzidae (Diptera, Acalyptratae). Papers Michigan Acad. Sci., Arts, Let. 41:73-87.
- . 1957. A new species of the genus *Pteromicra* associated with snails. Proc. Ent. Soc. Wash. 59:271-272.

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## FURTHER RECORDS OF APHIDS FROM PLUMMERS ISLAND, MD.

(HOMOPTERA: APHIDIDAE)

An annotated list of the aphids of Plummers Island, Maryland, was published by the writer in Proc. Biol. Soc. Wash. 79:117-126, 1966. The following records were not available for inclusion in this paper.

*Dactynotus* (*Dactynotus*) *ambrosiae* (Thomas). This common and widespread species, the brown ambrosia aphid, was represented in the list only by McAtee's collection in 1914 on *Solidago* sp. A number of alatae and apterae were collected by Geo. B. Vogt, 11 Aug. 1964, on *Ambrosia trifida* (A. T. Olive det.).

*Dactynotus* (*Lambersius*) *gravicornis* (Patch). Not in the previous paper. A number of alatae and apterae were collected by Geo. B. Vogt, 11 Oct. 1964, on *Solidago* sp. (A. T. Olive det.) Second record for Maryland, the first being College Park, Sept. 1951 (W. E. Bickley coll.—L. M. Russell det.; 2 slides in USNM).

*Dactynotus* (*Lambersius*) *pseudambrosiae* Olive. Not in the previous paper; first record for Maryland. A number of alatae and apterae were collected by Geo. B. Vogt, 27 Sept. 1964, on *Lactuca biennis* and 18 Oct. 1964, on *L. canadensis* (A. T. Olive det.).

*Dactynotus* (*Uromelan*) *ruralis* (Hottes & Frison). Alatae and apterae collected by Geo. B. Vogt, 16 Aug. 1964, on *Actinomeris alternifolia* (A. T. Olive det.).

*Drepanaphis saccharini* Smith & Dillery. This is referred to in the previous paper as "*Drepanaphis* near *parvus* Smith, probably n. sp., 25 June 1964 on suckers of silver maple" (Geo. B. Vogt coll.—C. F. Smith det.).—MORTIMER D. LEONARD, 2480 16th St., Washington, D. C. 20009.



Knutson, Lloyd and Zuska, Jan. 1968. "A new species of Pteromicra and of Euthycera from western North America (Diptera: Sciomyzidae)." *Proceedings of the Entomological Society of Washington* 70, 78–84.

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