

A NEW SPECIES OF *DASYMUTILLA* FROM FLORIDA  
(HYMENOPTERA: MUTILLIDAE)

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*Abstract.*—*Dasymutilla archboldi*, new species, appears to be restricted to a small area around Archbold Biological Station, Florida. Geographical and biological data pertaining to the species are presented.

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In March of 1976 and 1978 and in October of 1978 numerous female specimens of a new species of *Dasymutilla* were collected in Highlands Co., Florida. We describe the species here.

*Dasymutilla archboldi* Schmidt and Mickel, NEW SPECIES

Female.—Ferruginous except for pair of coalescent yellow spots on posterior  $\frac{1}{2}$  of 2nd tergum, 3rd through 5th terga mahogany; pubescence of head and legs pale golden, that of terga 3-5, and of all sterna pale, glittering; eyes extremely prominent; propodeal spiracles narrow, elevated, prominent; scutellar scale narrow, prominent; anterior  $\frac{1}{2}$ – $\frac{2}{3}$  of disk of 2nd metasomal tergum with brush of short, stiff light ferruginous pubescence; pygidium strongly longitudinally striate; apices of middle and hind femora rounded; length 6.4 mm.

Head clothed with sparse appressed erect pale golden pubescence; eyes very prominently bulging; distance between eye and occipital margin slightly greater than  $\frac{1}{2}$  greatest length of eye; from above occipital margin very shallowly concave; mandible acuminate at apex with minute tooth within at point  $\frac{1}{5}$  of distance from apex; anterior margin of clypeus very feebly bidentate, almost straight; anterior  $\frac{1}{2}$  of clypeus glabrous, impunctate, separated from posterior  $\frac{1}{2}$  by transverse sinuate carina, posterior  $\frac{1}{2}$  of clypeus punctate, clothed with long pale ferruginous pubescence, latter forming clypeal fringe; scape with moderate punctures above, clothed with very pale pubescence, 1st flagellar segment slightly longer than 2nd, length approximately  $1.5\times$  width at apex; antennal scrobes not at all carinate; front with coarse, shallow confluent punctures; vertex and gena with moderate, sep-



arated punctures; posterolateral angle of head rounded; head and mesosoma same width.

Mesosoma longer than wide, dorsum and posterior face of propodeum clothed with recumbent ferruginous pubescence, and especially anteriorly and laterally with long sparse erect pale glittering hairs; dorsum anteriorly with large reticulo-foveate punctures, each containing a short hair, spaces between punctures becoming asperate posteriorly near scutellar scale; scutellar scale narrow, prominent, from posterior view its height as great as width; pubescence of pleural region pale, glittering; propleura coarsely foveo-punctate; anterior  $\frac{1}{2}$  of mesopleura smooth, micropunctate, with very fine appressed glittering pubescence, posterior  $\frac{1}{2}$  coarsely punctate; metapleura coarsely punctured at ventral margin, indistinctly punctured dorsally; lateral surfaces of propodeum mostly smooth with few large shallow punctures, posterior face vertical, rounding dorsally, dorsum asperate, with smooth areas between the asperities, posterior face smooth, bare; propodeal spiracles distinctly elevated, prominent.

Metasoma with anterior  $\frac{1}{2}$ – $\frac{2}{3}$  of 2nd tergum clothed with brush of short, stiff ferruginous pubescence, pubescence of terga 3–5 pale, glittering; 1st tergum short, nodose, with coarse punctures subapically, disk glabrous with spot of dense pale glittering pubescence, apical fringe very thin, almost lacking; 2nd tergum  $1.3\times$  as long as wide; punctures of 2nd tergum moderate, confluent, each containing a short seta, setae becoming longer and more erect anteriorly. Pubescence within yellow spots golden; sides of 2nd tergum with coarse, more confluent punctures than disk, pubescence within longer, pale; apical fringe of 2nd tergum pale, glittering, interrupted medially with black pubescence; 3–5 terga with small, close punctures and pale, glittering pubescence; pygidium distinct with 7–12 prominent irregular striations extending to distal margin; pubescence of all sterna pale and glittering, longer than that on terga; 1st sternum possessing a low, weakly bidentate carina; 2nd sternum with moderate, separated punctures; sterna 3–5 with close, fine punctures; hypogydium with fine, very close punctures.

Legs ferruginous, tarsi and tibiae slightly darker than femora; pubescence of legs, except tarsi, pale, glittering; calcaria dark ferruginous.

Holotype.—♀, Archbold Biological Station, Highlands County, Florida, March 24–25, 1978 (Schmidt and Hook), in the Smithsonian Institution, USNM Type No. 75944. Paratypes (all females): From type-locality: 11, March 15–17, 1976 (Schmidt and Schmidt); 49, March 20, 24–25, 1978 (Schmidt and Hook); 6, 4 mi W Sebring, Highlands County, Florida, March 24, 1978 (Schmidt and Hook); 38, October 20–22, 1978 (Schmidt); 1, Lake Placid, Highlands County, Florida, April 1, 1954 (Krombein); 1, Lake Placid, Florida, June 26, 1962 (Krombein); 1, Polk County, Florida, March 25, 1954 (Weems). Paratypes are in the Smithsonian Institution, the American Museum of Natural History, Los Angeles County Museum of Natural His-



tory, and collections of the University of Georgia, the University of Florida, the University of Minnesota, and Archbold Biological Station.

In Mickel's (1936) key to the *Dasymutilla*, *D. archboldi* keys to couplet 70, *D. vesta sappho*, from which it is easily distinguished by the conspicuously asperated dorsal face of the propodeum, the greatly elevated propodeal spiracles, the narrower scutellar scale, the more bulging eyes, and the brush-like appearance of the pubescence on the second metasomal tergum. It can be easily separated from *D. chattahoochei* Bradley by the absence of conspicuously carinate posterolateral angles of the head, the narrower scutellar scale, and the smoother, more glabrous posterior face of the propodeum. The taxonomic position of *D. archboldi* in the genus is uncertain, though it perhaps belongs in the *caneo* group (Mickel, 1928).

Etymology.—We are proud to name this species in honor of Richard Archbold who pioneered in natural history exploration and who established the biological station where the type was collected.

#### DISCUSSION

*Dasymutilla archboldi* was by far the dominant species of mutillid wasp taken at the type-locality in March of 1976 and 1978 and in October 1978. In spite of extensive personal collecting in Florida by the first author and careful examination of specimens of *D. vesta sappho* from the collections of the University of Georgia, the Smithsonian Institution, the University of Minnesota, the Archbold Biological Station, and the authors' personal collections, only one specimen outside of Highlands County, Florida was found: that was taken in neighboring Polk County, Florida. To date all specimens were collected in early spring or mid-to-late fall.

All specimens collected by the first author and his fellow collectors were taken on very well drained coarse light-colored sand described on the 1962 General Soil Map of Florida, Florida Agricultural Experiment Station as "No. 1 Soil—excessively drained soil dominated by thick acid sand." This type of soil is restricted in range mainly to patches in Highlands County with one large area in Ocala National Forest, Marion County, Florida. Extensive collecting in the latter area in late March to mid-April 1978 in a variety of successional habitats yielded 68 females of Mutillidae, including 19 *D. vesta sappho*, 19 *D. chattahoochei*, and none of the new species. Thus, *D. archboldi* appears restricted to the small upland well-drained area around Archbold Biological Station, an area it shares with *D. v. sappho* and several other species.

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### LITERATURE CITED

- Mickel, C. E. 1928. Biological and taxonomic investigations of the mutillid wasps. U.S. Natl. Mus. Bull. 143:1-351.
- . 1936. New species and records of Nearctic mutillid wasps of the genus *Dasymutilla* (Hymenoptera). Ann. Entomol. Soc. Am. 29:29-60.



Schmidt, Justin O. and Mickel, C E. 1979. "New Species Of Dasymutilla From Florida (Hymenoptera, Mutillidae)." *Proceedings of the Entomological Society of Washington* 81, 576–579.

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