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ON COLOR DIMORPHISM IN *PODALONIA VIOLACEIPENNIS* (LEP.).
(HYM.:SPHECINI).

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In a paper on "The Digger Wasps of the Genus *Podalonia* (*Psammophila*)" (Proc. U. S. Nat. Mus., Vol. 71, p. 25, 1927) the writer ended a discussion of the possibility that *Podalonia luctuosa* Sm. is only a differently colored *P. violaceipennis* (Lep.) with the statement: "On the whole it seems best to leave *luctuosa* as a species separate from *violaceipennis*, for the present, until more pairs have been captured and the evidence they may give becomes available."

In brief, *P. luctuosa*, found in Nova Scotia, the different Canadian provinces, New England, the most northern states, the Rocky Mountain states, from Montana to New Mexico, and on the Pacific coast, but at the higher altitudes in the more southern of these states, is known only by females with one exception, a tiny, black male taken at Troublesome, Col., 7345 ft. alt., June 9, 1908 by Mr. S. A. Rohwer. As nearly 500 specimens have now been examined, the absence of males is perplexing.

Podalonia violaceipennis (Lep.) is our most common species of the genus, having been taken practically everywhere *P. luctuosa* occurs, and also in the more central and southern states (see maps, idem, pp. 23 and 34). In this species both sexes have the abdomen more or less ferruginous.

The presence in the U. S. National Museum collection of a pair, taken at Placer Lake, Cal., the male of which is *P. violaceipennis* while the female is *P. luctuosa*, first suggested the possibility of color differences in the female, and the situation was discussed in the paper already referred to, closing with the statement quoted above.

Since then, two observations bearing on the subject have been made and are most significant. In June, 1928, Mr. Walter Carter at Twin Falls, Idaho, (*in lit.*) "noticed some *P. luctuosa* females digging nests. I put out plant pot baits filled with sand and succeeded in getting three or four cocoons. I was delighted later to have a male emerge. * * * I am sending you the specimen under separate cover. The label date should read—Twin Falls, Idaho, June, 1928. I was much interested to note that this male has red on the abdomen."

This specimen, upon examination, proved to be without question, a male *P. violaceipennis*.

Dr. J. Bequaert of the Harvard University Medical School "captured a mated pair of *Podalonia*, the female of which was entirely black, while the abdomen of the male was partly ferruginous." (Bull. Brooklyn Ent. Soc., Vol. xxiv, No. 4, pp. 220-221, 1929.). This pair was captured near Bayfield, La Plata Co., (9000 ft.) Colorado, in July, 1928. The male Dr. Bequaert identified as *P. violaceipennis* and the female as *P. luctuosa*.

The two mated pairs and the male *violaceipennis* raised from a female *luctuosa* would seem to prove conclusively that *luctuosa* is only a color variety of *violaceipennis*, most often found in northern or elevated regions and that the male is sometimes, though very rarely, affected in the same way. *Luctuosa* as

a specific name will therefore become a synonym and be used only in referring to the wholly black color variety.

A somewhat similar color variation in the European species, *Podalonia hirsuta* (Scop.) has been discussed by Kohl and was referred to by myself (i.e., p. 25), and also by Dr. Bequaert.