

TWO ORTHOPTERA HITHERTO UNRECORDED FROM THE UNITED STATES.

By ANDREW NELSON CAUDELL.

(of the Department of Agriculture.)

Through the kindness of Mr. C. Schaeffer, of Brooklyn, New York, I have had an opportunity of studying a small but interesting collection of Orthoptera from the Southern States, made by himself and others during the past year. The greater portion of the collection was made at Brownsville, Texas, and by agreement the results of the examination of that material is to appear in the Science Bulletin of the Brooklyn Institute of Arts and Science. This prohibits the discussion at present of several most interesting additions to our fauna. The following two species, however, not being from Brownsville, form no part of that report and are here recorded for the first time from the United States:

HAPLOPLUS EVADNE Westwood.

Haploplus evadne WESTWOOD, Cat. Phasm., 1859, p. 85, pl. xviii, fig. 6, male.

One mature female (fig. 1) and one large nymph, also a female, were taken at Loggerhead Key, Dry Tortugas, Florida. The label bears no date nor reference to the collector.

This is the first record of the occurrence in the United States of any winged Phasmid, though a young male larva of what I now suppose to be of this species was mentioned in my recent paper on the Phasmidae of the United States.^a The large nymph exhibits characters intermediate between those of the small male specimen mentioned above and this mature female. Hence my inference that they all belong to the same species. If I am correct in this, as I now believe I am, the young *evadne* is seen to have the intermediary segment subequal with the metanotum and the legs bear small lobe-like expansions on the posterior and intermediate femora and on all the tibiae. As the insect approaches maturity these expansions become obliterated on the anterior and posterior tibiae. The young are also less acutely spined than the adult. The interme-

^a Proc. U. S. Nat. Mus., XXVI, 1903, p. 884.

diary segment of the adult female as well as the nymphs is scarcely longer than the metanotum. The long-winged male insect as figured by Westwood seems also to have the intermediary segment subequal with the metanotum.

The adult female, which has never been described, is shining brown above, yellowish below, the margins of the pronotum and elytra and the center of the dorsal surface of the intermediary segment longitudinally marked with chalky white, probably a variable character. The head (fig. 2) has the usual horn-like tubercles, the right one fully twice as large as the one on the left. Behind these main tubercles is a pair of smaller ones, likewise dissimilar in size. The pronotum is transversely divided mesially by a deep sulcus and the anterior lobe is divided longitudinally by a narrow sulcus and bears a pair of stout black-tipped sharp spine-like tubercles. The mesonotum bears ten irregularly placed, black-tipped spines or sharp tubercles. The elytra are about as long as the metanotum, the wings about the same length, though they project a millimeter beyond the tip of the elytra, being placed farther back. The abdominal segments are about three times as long as broad and are apically furnished with a slight crescent-shaped transverse blunt carina. The tip of the abdomen and the antennae are gone but are drawn in dotted lines from the large nymph as a model. The legs are slightly lighter colored above than the body, below concolorous with the ventral portion of the body, unarmed except that the posterior and intermediate femora are armed below on the outer two-thirds with a few large black-tipped spines, the tip of the tibiae below also furnished with an elevated longitudinal ridge.

Length, 80+ mm.; pronotum, 4.75 mm.; mesonotum, 19.5 mm.; metanotum, 6 mm.; intermediary segment, 6.5 mm.; anterior femora, 19 mm.; intermediate femora, 15.5 mm.; posterior femora, 21 mm.; width of head, 3.5 mm.; pronotum, 3.5 mm.; mesonotum, 2.5 mm.; first abdominal segment, 3 mm.

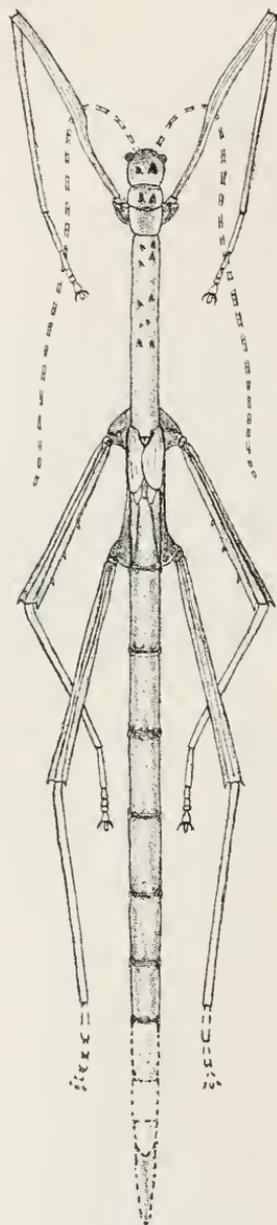


FIG. 1.—HAPLOPLUS EVADNE, FEMALE (ENLARGED).

The large female nymph is dark opaque brown in color, lighter below. Head armed as in the adult as are also the pro- and mesonotum, though the spines or tubercles are here quite small. Anterior legs unarmed, though the fore tibiae of the small male specimen have a small compressed expansion near each end above, as have also all the tibiae in that specimen. In the large female nymph these expansions are maintained only on the middle pair where there is, in both nymphs, also a small longitudinal expansion near the base below. Middle and posterior femora furnished above with a pair of parallel lobes near the apex and armed below with spines as in the adult, except smaller. The measurements are as follows:

Length, 69 mm.; antennae, 24 mm.; pronotum, 3 mm.; mesonotum, 14 mm.; metanotum, 4.5 mm.; intermediary segment, 4.5 mm.; oviscapt, beyond the tip of the abdomen, 5.5 mm.; posterior femora, 13 mm.; intermediate femora, 10 mm.; anterior femora, 12 mm.; width of head, 3 mm.; pronotum, 3 mm.; middle of mesonotum, 2.75 mm.; of metanotum, 3 mm.; of first abdominal segment, 2.5 mm.

The right hind leg of this specimen has been broken off and regenerated, being therefore smaller than the other, the femora measuring but 9 mm. in length.

This species was described from Santo Domingo, West Indies, and is an unusually interesting addition to our fauna by reason of its being the only winged representative of the family occurring within our borders. The long-winged males are objects of note and suggest tropical forms. The asymmetrical horn-like tubercles of the head seem to be a constant character of the genus. Why one of these tubercles, usually the one on the right, should be longer or larger than its fellow is, so far as I know, unexplained.



FIG. 2.—HEAD OF HAPLOPLUS EVADNE (ENLARGED).

HELIASTUS SUMICHRASTI Saussure.

Heliastus sumichrasti SAUSSURE, Prodr. Oedip., 1884, p. 213; Add. Prodr. Oedip., 1888, p. 90.

A pair of this Mexican species was taken at Galveston, Texas, by Mr. Schaeffer. No date is given. It exhibits certain characters somewhat at variance with those of typical specimens taken in Mexico. At first I thought it represented a new species, but Prof. Laurence Bruner, who is writing that part of the *Biologia Centrali-Americana* treating of the Acridiidae and is well informed on the fauna of that region, thinks it is a variety of *sumichrasti*. The following description is made from these specimens (fig. 3), which may be designated by the varietal name *subrosea*, varying from the typical form in the less roseate under wings, the

red not extending upward into the middle field, and the generally lighter color.

Head and thorax as in typical *sumichrasti* except the anterior border of the latter is even less noticeably notched than in that form, being practically entire. Antennæ long, compressed toward the apex. Elytra long and slender, surpassing the tips of the femora by about the length of the thorax, membranous in the apical fourth; color light testaceous, somewhat infuscated, the infuscation forming indications of two very illy-defined transverse bands or clouds, one at the

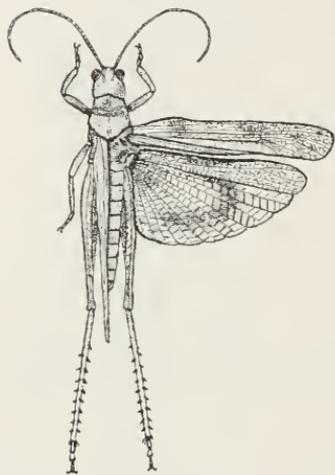


FIG. 3.—*HELIASTUS SUMICHRASTI*, VAR. *SUBROSEA*, MALE (ENLARGED).

humeral angle and one about the middle of the elytra; on the membranous tip the infuscation is in the form of somewhat rounded spots. Wings comparatively longer and more pointed than in *sumichrasti*, pale yellowish at the extreme base followed in the anal field by an area of bright but somewhat washed-out-appearing red color; beyond this red disk, which scarcely extends above into the middle area, is a narrow fuscous band, interrupted in the middle field and with scarcely any humeral tænia; beyond this fuscous band the wing is hyaline. Posterior femora longer and more slender than in typical specimens and the outer face somewhat less flattened and not banded with

fuscous, but internally there are three black bands, a very narrow one near the base, a broad one with the outer edge at the middle of the femur, and another very narrow one at the middle of the apical two-thirds. Besides this the inner geniculation is piceous, and there is a broad pallid annulation at the tip of the femora. Hind tibiae pale yellowish on the basal third followed by a very narrow black ring, the rest of the tibiae red with the base on the inner side piceous and the spines tipped with black.

Length, antennæ, male, 12 mm., female, —; pronotum, male, 4.5 mm., female, 5 mm.; elytra, male, 21 mm., female, 26 mm.; posterior femora, male, 12 mm., female, 15 mm.

Type.—Cat. No. 7774, U.S.N.M., male.