

EXPLANATION OF PLATE 5.

Fig. 1.—*Bdella corticis*, n. sp., left palpus, x 108.

“ 2.— “ “ right mandible from above, x 240.

Fig. 3.—*Bdella corticis*, tip of tarsus of leg 1 with ambulacra; from the inside and below, x 500.

Fig. 4.—*Bdella muscorum*, n. sp., left palpus, x 160.

“ 5.— “ “ right mandible, x 140.

“ 6.— “ “ tarsus of leg 1, x 160.

“ 7.—*Bdella depressa*, n. sp., right palpus, x 240.

NOTES ON SOME HEMIPTERA TAKEN IN THE BERMUDAS
BY W. J. PALMER.

BY E. P. VAN DUZEE, BUFFALO, N. Y.

I am indebted to Mr. W. J. Palmer, of Buffalo, N. Y., for a small but very interesting collection of Hemiptera taken by him on the Bermuda Islands on December 9th, 1908. He was on the islands but two or three days, and had very little time for scientific work, but he was able to secure 120 specimens representing seventeen species. A very good showing, considering the season and the limited fauna of these islands. Prof. Verrill, in his "Bermuda Islands," published in 1903, lists all the species known to him to have been recorded as taken in these islands up to that time. Excluding the plant lice, he enumerates 20 species, to which must be added one, *Tinobregmus vittatus*, Van Duzee, recorded by Prof. Herbert Osborn, but overlooked by Prof. Verrill, and possibly the *Cicada* recorded by Dr. Uhler as *tibicen*, but perhaps considered identical with *Bermudiana* by Prof. Verrill. To these must now be added twelve of the species recorded below as taken by Mr. Palmer, making a total of thirty-four species now known from these islands. The identity of a few of those quoted by Prof. Verrill is doubtful. The *Lygus* he figures at plate 99, fig. 17, may be *Lygus apicalis*, var. *prasinus*, Reut. The *Rhaphigaster cydnus* recorded by J. M. Jones is unknown to me, and may represent merely a clerical error. The *Nabis* reported by Dr. Dahl may very likely be the *Reduviolus capsiformis* taken by Mr. Palmer. These identifications may reduce the total number of recorded forms to 30 or 31.

It is a somewhat remarkable fact that all the species taken by Mr. Palmer, and most of those recorded by Prof. Verrill, have also been taken in Florida. If this holds true for all the insect fauna of these islands, as it is very likely to do, we must look for the origin of this fauna to the

"drift" brought from the coast of Florida by the ocean currents. Of the thirty or more species now known from these islands, six are widely distributed forms common to Europe and America. These six are: *Nezara viridula*, Linn.; *Corizus hyalinus*, Fabr.; *Reduviolus capsiformis*, Germ.; *Cimex lectularius*, Linn.; *Lygus apicalis*, var. *prasinus*, Reut.; *Lygus pratensis*, Linn.; and *Trigonotylus ruficornis*, Fall. Five others, *Mormidea lugens*, Fabr.; *Jassus olitorius*, Say; *Ormenis pruinosa*, Say; *Liburnia ornata*, Stal, and *Agallia sanguinolenta*, Prov., have an extended range on the mainland of North America, where they occur as far north as Canada. Eight species: *Nezara viridula*, Linn.; *Corizus hyalinus*, Fabr.; *Pamera bilobata*, Say; *Reduviolus capsiformis*, Germ.; *Lygus apicalis*, var. *prasinus*, Reut.; *Lygus olivaceus*, Reut.; *Liburnia albo-lineosa*, Fowl., and *Athysanus exitiosus*, Uhler, are known to me to inhabit the West India Islands. *Cicada Bermudiana*, Verrill, if it prove to be a valid species, is the only precinctive form known from these islands. The following are the species taken by Mr. Palmer:

Nezara sp. Two nymphs. These are quite distinct from any nymphs of either *viridula* or *marginata* which I have seen, but they may represent some stage of one of those species. They most closely resemble the adults of *Nezara bipunctata*, Stal, from Brazil, but it seems unlikely that they could be of that species.

Corizus (Liorhyssus) hyalinus, Fabr. Two dark-coloured examples.

Pamera bilobata, Say. Three specimens.

Reduviolus capsiformis, Germ. Two examples.

Lygus pratensis, Linn. Common.

Lygus apicalis, var. **prasinus**, Reut. Four examples. Dr. Reuter reports the variety *inops*, Horvarth described from Spain to be identical with this American form.

Lygus olivaceus, Reuter. This was described by Dr. Reuter from material taken by me in Jamaica, and I have lately taken it in southern Florida.

Lygus sp. A strongly-marked species doubtfully identical with a species taken in Florida.

Amphiscepa pumila, Van D. Mr. Palmer reports this as very abundant on a low bush with thick succulent leaves, probably the "yellow daisy bush," *Borrichia arborescens*. I took it on what was probably the same plant in Florida, in which State the type specimens were taken by Mrs. Slosson.

Liburnia albolineosa, Fowler. Twelve specimens, all of which are paler than those from Florida, the West Indies and Mexico, but apparently not distinct.

Liburnia circumcincta, Van Duzee, M.S. Three examples. This species is described in a report on Florida Hemiptera, now in press.

Liburnia ornata, Stal. One brachypterous female.

Agallia sanguinolenta, Provancher. One example.

Athysanus exitiosus, Uhler. Common here as in Florida and Jamaica.

Thamnotettix perpunctata, Van Duzee. Several taken on the fine shore grasses.

Tinobregmus vittatus, Van Duzee. Two males, one female and two larvæ. The male has more recently been described by Prof. Osborn. On the mainland it has been taken only in Florida and along the gulf coast.

Jassus olitorius, Say. Common. These were of the typical dark variety found throughout the northern States.

SOME NEW BEES, AND OTHER NOTES.

BY T. D. A. COCKERELL, BOULDER, COLO.

Melissodes dagosa, n. sp.

♂. Length, 10 mm.; black, with the clypeus bright lemon-yellow; the labrum (except at extreme sides) and a small spot on the mandibles also yellow; hair of head and thorax abundant, silky-white, without any black; eyes pale greenish; antennæ reaching to metathorax, scape black, flagellum black above, but broadly pale reddish-orange beneath; wings clear, nervures and stigma ferruginous; legs black, with light hair; small joints of tarsi red; hair on inner side of hind basitarsus orange; abdomen with pale hair; hind margin of first segment broadly hyaline; hind margins of segments 2 to 6 with broad, conspicuous white hair-bands; sixth and seventh segments toothed laterally, the teeth short; hind margins of ventral segments reddish-subhyaline. In my table of *Melissodes* (Trans. Amer. Ent. Soc., 1906), this runs to *M. lupina* and *M. agilis*, which it greatly resembles, but from which it differs in the very much shorter antennæ. The middle joints of the flagellum are little more than half as long as they are in those species. The antennæ are also wholly without crenulation.

Hab.—Grand Coulee, Washington State, at Osborn's Ranch, July 8, 1902. (*Wash. Agric. Exper. Sta.*)

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