

nearly as wide as the stigmatal and 7th band. Spiracles yellowish, ringed with brown. The 7th band is the most conspicuous mark on the body, being distinctly whitish in colour, with a bluish tint. The extremity of the anal flap has a few pale blunt bristles, which protrude straight outwards. All the feet concolorous with the venter, as before.

Unfortunately, on Sept. 13th the larva died. At this date it was only a little longer than the above measurement, viz., 8 mm. long. In view of this it would seem possible that the larva hibernates in this stage. During the above stages it was fed only on Kentucky Blue Grass, (*Poa pratensis* L.)

I have delayed the publication of the above notes, hoping that further material would turn up for study, but this I have not been able to obtain.

SOME HETEROPTERA FROM VIRGINIA AND NORTH CAROLINA.

BY J. R. DE LA TORRE BUENO AND G. P. ENGELHARDT.

In July and August of this year the junior author made a collecting trip in Virginia and North Carolina, and he took with other things a small number of Heteroptera, among them some of great interest.

In general, the little collection is striking on account of the number of characteristically Southern forms in it. These number 14, out of a total of 39 species taken. The majority, as may be seen, is made up of species familiar to us in this region.

Pentatomide.

Mormidea lugens Fab.

Virginia Beach, Va., July 20, two specimens; Linville Falls, N. C., Aug. 15, one specimen. This is common everywhere.

Solubea pugnax Fab.

Wilkesboro, N. C., Aug. 9, one specimen; Virginia Beach, Va., July 20, one specimen. Fairly common in meadows and open woods.

A species sometimes found about New York. Previously recorded from North Carolina, but seemingly not from Virginia.

Euschistus ictericus Linn.

Elizabeth City, North Carolina, July 24. A specimen with very prominent pronotal angles. This is presumably a Northern form, but has already been recorded from North Carolina. A number were observed along the swampy margin of a bayou running through a cypress swamp, where they were resting on the leaves of water-lilies and other plants, some mating.

April, 1910

E. servus Say.

Dismal Swamp, Va., July 22, one specimen. Of interest mainly on account of the locality. Taken sweeping along the canal.

E. servus Say? var.?

Virginia Beach, Va., July 20, one specimen.

E. fissilis Uhl.

Wilkesboro, N. C., Aug. 9, one specimen. Apparently not heretofore recorded from North Carolina. Taken in pastures by sweeping.

Thyanta custator Fab.

Three specimens, one each from Blowing R., N. C., Aug. 13; Smith's Island, Aug. 3, and Wilmington, Aug. 1. This is widely distributed throughout the United States.

Murgantia histrionica Hahn.

Virginia Beach, Va., July 20, one specimen. A purely Southern bug, although at times it has been noted in New Jersey under exceptional conditions. This, the only specimen taken, was swept near the seashore.

Nezara hiliaris Say.

Dismal Swamp, Va., July 22, one specimen. This is larger than the usual run in this locality. This was found dead in a spider-web.

Dendrocoris fructificola Bergr.

Wilmington, N. C., Aug. 1, two specimens. Not previously recorded from the State. Beaten from young oaks.

Banasa Packardii Stal.

Smith's Island, N. C., Aug. 3. A long series. This species was described from North Carolina, and has been recorded from Florida, Georgia and New Jersey, the last possibly erroneously. It is presumably a somewhat rare and local form.

This species was observed only on Smith's Island and only on one cedar tree. Close inspection showed this tree to be literally covered, the insects clinging to the twigs and small branches, many in copulation. In spite of the great numbers, they were rather inconspicuous, their colour and markings, especially those of the abdomen, bearing a striking resemblance to the small cedar twigs. On the slightest disturbance they dropped, taking to wing, however, before reaching the ground. A small vial, holding about 50 specimens, was filled from a single twig. A vigorous kick at the trunk dislodged so many as to obscure the air, but after a

short flight all returned and alighted again. As no injury whatsoever could be detected to the tree, which was a splendid specimen, and in the absence of other insects, which might have been the attraction, the visitation evidently was not due to feeding, but more probably a gregarious habit while mating. This conclusion was strengthened by further observations, including the examination of many cedars, as well as other trees, which failed to reveal the presence of the bug elsewhere on the Island.

Orsilochus guttatus.

Wilmington, N. C., Aug. 1, one specimen. This appears to be the first record for the State, and seems to be the most Northern habitat for the species. It is known from Georgia and Florida. Beaten from scrub-oak.

Coreidæ.

Chariesterus antennator Fabr.

Virginia Beach, Va., July 20, one specimen. Under bark.

Corynocoris typhæus Fab.

Virginia Beach, Va., July 20, one specimen; Wilmington, N. C., Aug. 1, one specimen. Swept in a meadow.

Corynocoris distinctus Dallas.

Wilmington, N. C., Aug. 20, one specimen. Both the above apparently are new records. Swept along border of moist meadow.

Acanthocerus galeator Fab.

Roanoke Id., N. C., July 25, one specimen. Under bark of pine.

Leptoglossus phyllopus Linn.

Dismal Swamp, Va., July 22, one specimen. Common on rank vegetation and generally distributed through coastal regions.

Alydus eurinus Say.

Dismal Swamp, July 22, two specimens; Linville Falls, N. C., Aug. 15, one specimen. Taken sweeping and under stones.

A. pilosulus H. S.

Virginia Beach, Va., July 20. Beating.

A. quinquespinosus Say.

Linville Falls, N. C., Aug. 15. Beating.

Lygæidæ.

Cnemodus movortius, Say.

Wilmington, N. C., Aug. 20, two specimens. Sweeping.

Eremocoris ferus ? Say.

Roanoke Id., N. C., July 22, a doubtful specimen. Sweeping.

Phlegyas abbreviatus Uhl.

Virginia Beach, Va., July 20, one long-winged example. Sweeping.

Melanocoryphus bicrucis Say.

Wilkesboro, N. C., Aug. 9, two specimens; Linville Falls, N. C., Aug. 15, three specimens. Common in meadows and pasture lands.

Lygæus lineola Dallas.

Dismal Swamp, Va., July 22, one specimen. Sweeping.

*Aradidae.**Neuroctenus elongatus* Osb.

Wilmington, N. C., Aug. 1. Described by Osborn from Ohio, and recorded by Heidemann from North Carolina and Pennsylvania. Under bark of pine.

*Gerridae.**Gerris marginatus* Say.

Montezuma, N. C., Aug. 6, four specimens. Very common, as usual.

*Reduviidae.**Sinca diadema* Fab.

Virginia Beach, Va., July 20, one specimen. Sweeping.

Arilus cristatus Linn.

Smith's Id., N. C., Aug. 3, and Wilmington, Aug. 1.

Zelus bilobus Say.

Wilmington, N. C., Aug. 1, three specimens; Smith's Id., N. C., Aug. 3, one specimen.

Z. cervicalis Stal.

Virginia Beach, Va., July 20, one specimen; Roanoke Id., N. C., July 25, one specimen; Wilmington, N. C., Aug. 1, one specimen. This and the preceding are distinctly Southern.

Z. luridus Stal.

Roanoke Id., N. C., July 25, one specimen. This is common all through the Atlantic States. These three species common in moist situations.

Hygromyces n. sp.

Roanoke Id., Aug. 1, two specimens. Swept from sedges back of beach.

Melanolestes picipes H. S.

Dismal Swamp, Va., July 20, one specimen.

M. abdominalis H. S.

Wilmington, N. C., Aug. 1, one specimen. Very common under stones and logs.

Conorhinus sanguisugus Lec.

Virginia Beach, Va., July 20; Smith's Id., N. C., Aug. 3. This is the "Big Bedbug," a common Southern Reduviid, who at times performs functions similar to his humbler and more malodorous domesticated namesake. Taken under bark or logs.

*Phymatidæ.**Phymata erosa* Linn.

Virginia Beach, Va., July 20, one specimen; Roanoke Id., N. C., July 25, one specimen; Wilmington, N. C., Aug. 1, two specimens. Very common.

*Gelastocoridæ.**Gelastocoris* n. sp.

Roanoke Id., N. C., July 25, two specimens of an undescribed form. Taken near beach.

*Corixidæ.**Corixa* sp.

Dismal Swamp, Va., July 22, four specimens of a small form. Attracted to light.

*Notonectidæ.**Notonecta undulata* Say.

Johnston City, N. C., Aug. 17.

BOOK NOTICE.

EXPERIMENTS ON THE GENERATION OF INSECTS: by Francis Redi, of Arezzo. Translated from the Italian edition of 1688 by Mab Bigelow. Open Court Publishing Co., Chicago.

The average entomologist of to-day is apt, perhaps, to give little thought to the work of the pioneers of biological science in pre-Linnæan times, partly no doubt because the records of such work are not easily accessible to many. Such a book as this excellent English translation of Redi's famous work is therefore to be welcomed by all who would be acquainted with the work and character of the great Italian naturalist,