

NOTE ON THE GENUS *CARIDOPHTHALMUS*, ASSM.

BY E. BERGROTH, M.D.

In the "Amtlicher Bericht der 50 Versammlung deutscher Naturforscher und Aerzte in München, 1877," p. 191, Herr A. Assmann has described a remarkable new genus and species of *Pentatomidae* from New Guinea, under the name of *Caridophthalmus sexspinosus*. From the description given it was not difficult to guess that this insect belonged to the anomalous genus *Allocotus*, Mayr, and this conjecture I find to be correct, after having received from the author a more complete description and a drawing of the species. It is well distinguished from the other three species hitherto known, being structurally allied to *A. Sayeri*, Dist., but in colour more resembling *A. Mayri*, Sign. As to the generic name, that proposed by Herr Assmann must stand, *Allocotus* being pre-occupied. New Guinea and the adjacent islands seem to be the proper home of this genus. Mr. Distant speaks of "the Australian *A. Rogenhoferi*, Mayr," but no species of the genus have been found in Australia, the species of Mayr being described from Timor. As the description in the "Amtlicher Bericht" is very succinct, and almost inaccessible to Entomologists, I think it useful to give a reproduction of the complete description forwarded to me by Herr Assmann.

"Length, $5\frac{1}{2}$ mm., breadth, $3\frac{1}{2}$ mm. Head, $\frac{1}{2}$ mm. long, $1\frac{1}{4}$ mm. broad; the sinuated broad front bears two straight, porrect, acute spines of $\frac{1}{2}$ mm. length. The eyes are inserted on a comparatively thick cylindrical process, which is directed forwards and outwards. On the under-side between the spines and the ocular processes the antennæ are inserted. The 1st joint is short and thick, and only little projecting between the two processes on each side; the 2nd joint is stout, cylindrical, 1 mm. long; the 3rd joint is the longest, 3 mm., and has scarcely half the thickness of the 2nd joint; the 4th joint is as thin as the 3rd, 2 mm. long; the 5th, $1\frac{1}{2}$ mm. long, somewhat thicker, rounded at the apex. Thorax 2 mm. long, in the front as broad as the head, behind $3\frac{1}{2}$ mm. broad; before the middle of the external margin is an almost horizontal, finely pubescent spine of 1 mm. length; more hindwards, at the greatest breadth of the thorax, is another spine, which is somewhat broad at the base, and has the tip curved back; between the two anterior spines is a tolerably stout transversal callosity, and the hind-margin of the thorax is likewise, but not so strongly, callous. Scutellum $2\frac{1}{2}$ mm. long, and at the base nearly 2 mm. broad, obtusely acuminate at the apex. Corium, at the lateral margin, $3\frac{1}{4}$ mm., at the internal margin nearly $2\frac{1}{2}$ mm. long, with the internal angle only little before the tip of the scutellum. Membrane exactly reaching the end of the abdomen, $2\frac{3}{4}$ mm. long, with six strongly elevated, somewhat curved, longitudinal veins. The fore and middle legs of the same length (the hind legs are wanting); coxæ short, femora a little beyond 2 mm. long, tibiæ thinner, 2 mm. long, tarsi with strong fastening lobes, $\frac{3}{4}$ mm. long. Sternum, head, thorax and scutellum coarsely punctured, corium

and under-side of abdomen at the sides more finely punctured, the middle third of the venter smooth. Sternum blackish, faintly shining. Head, thorax and scutellum brownish-green, with a faint brassy shine. Corium more brownish-black, opaque; membrane black. Under-side of abdomen reddish-brown, smooth, the punctured sides blackish-brown. Antennæ dull brown, the base yellow. On each side of the thorax between the two spines, but more towards the middle of the disc, is an elevated, smooth, round, yellow spot; the anterior acute spines are reddish-yellow. In the basal angles of the scutellum is a hard, smooth and elevated yellow spot, extending obliquely backwards; from opposite the end of these two spots runs, in the middle of the scutellum, a very narrow, yellow, longitudinal line, which is dilated towards the apex of the scutellum, the whole of which it occupies. The lateral margin of the corium is narrowly bordered with yellow, and in the middle of the disc is a yellow longitudinal line, dilated towards its posterior end. Coxæ, trochanters, and the basal quarter of the femora bright yellow, the rest of the femora blackish-brown, tibiæ tawny, with the base and tip brownish, tarsi tawny."

Mayr, Signoret and Distant describe the antennæ as being four-jointed, Assmann as five-jointed. But it is evident that the first short and thick joint mentioned by Assmann is only the basal node of the antennæ.

Forssa, Finland: *March*, 1890.

NOTES ON *GRACILARIA POPULETORUM*, *ELONGELLA*, AND *FALCONIPENNELL*.

BY JOHN H. WOOD, M.B.

These three *Gracilaria* form part of a very natural group that is placed in the "Manual" at the head of the genus, and is characterized in the perfect insects by the presence of a costal triangle, and in the larvæ by being solitary in their habits, and living upon trees or shrubs, the leaves of which they mine in the first half of their existence, and fold or roll into chambers in the last half. In most of the members of the group the mine is compound, consisting partly of a very shallow and superficial gallery, which, from the inconspicuousness of the "frass," looks not unlike Dipterous work, and partly of a small *Lithocolletis*-like blotch. A point to be noticed about the chambers is, that the number which each species constructs is singularly invariable. In all but one of them there are two of these structures, so that, counting the mine, the larvæ may be said to have three distinct householdings, each householding, as I hope to show, being associated with a particular stage in the life of the insect. The form of the first chamber often varies much in the same species, and appears to depend chiefly upon the size and shape of the leaf, or upon the part at which the larva sets to work; but the form of the second or final chamber is on the contrary most constant, and affords a useful character for differentiating the species. The difficulties in the way of ascertaining some parts of their economy, and especially the relationship just alluded to between the larva and its domicile, were by no means slight, and in the case of the early or mining life could only be indirectly overcome, since opening a mine meant the death of the larva; but in the chamber-life the