

## NOTES ON COCCIDÆ—IV. (HEMIPTERA).\*

BY G. F. FERRIS, STANFORD UNIVERSITY, CALIFORNIA.

In an earlier paper of this series I called attention to the artificial character of the genus *Sphaerococcus*, and began the process of transferring the included species to other genera. At that time specimens of the genotype, *S. casuarinæ* Maskell, were not available for examination, but since then (through the kindness of Professor Cockerell) I have been enabled to see specimens of this species. The suspicion that I then expressed to the effect that this species is merely an *Antonina* is nearly, if not quite, substantiated, for it is certainly of this type. However, there are certain points upon which the genus *Sphaerococcus* may, for the present, be maintained.

I am here redefining the genus. Also, I am removing from this genus three more species, one of which, *S. obscuratus* Maskell, I refer provisionally to the genus *Kuwana*, another, *S. leptospermi* Maskell, which I refer to the genus *Amorphococcus*, and another, *S. pirogallis* Maskell, for which I name a new genus, *Eremococcus*. I may note here that *Sphaerococcus sylvestris* Ckll. and King, is probably nothing more than an immature stage of some species of *Kermes*.

## Genus SPHAEROCOCCUS (Maskell).

Coccidæ referable to the subfamily Dactylopiinæ (of the Fernald Catalogue) and belonging to the *Pseudococcus* group, that is, possessing dorsal ostioles. Adult female resembling the female of *Antonina*; apodous; with the antennæ reduced to mere vestiges of three or four minute segments; with the posterior end of the abdomen invaginated to form a short tube at the inner end of which is the anal ring, this bearing six short setæ. Differing from *Antonina* (if at all) only in the fact that the legs are present in the penultimate stage of the female. First stage larva with six-segmented antennæ, with six hairs on the anal ring, with dorsal ostioles.

Type of the genus, *Sphaerococcus casuarinæ* Maskell. It is probable that none of the other species now referred to this genus are congeneric with the genotype.

*Notes.*—As I have pointed out in the description given above, this is essentially an *Antonina*, differing only in the fact that the legs are retained in the penultimate stage. However, this point needs investigation. I would call attention to the fact that in one species now referred to *Antonina* (*A. parrotti* Ckll.) the anterior pair of legs alone are retained in what has been described as the adult. In specimens of *A. indica* Green, the legs are lacking in the penultimate stage.

*Sphaerococcus casuarinæ* (Maskell).

Fig. 33.

There is little except detail to add to the description given by Maskell. The species resembles the various species of *Antonina* except that it is more nearly circular. The anal ring bears six short setæ and is not hairless, as asserted by Maskell. Beyond this the material examined does not permit me to go.

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