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ON A *COCCID* NEW TO GREAT BRITAIN: WITH NOTES ON ALLIED SPECIES.

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That indefatigable investigator of ants' nests, Mr. H. St. J. Donisthorpe, has submitted to me for determination, from time to time, various *Coccidæ* taken in association with ants. For the most part, these gatherings have consisted of the subterranean members of the genus *Ripersia*—principally *formicarii*, *tomlini*, and *donisthorpei*; but *Orthezia cataphracta* has also occurred.

Amongst a small collection recently received from the same source, I recognize two other Ortheziines. One of these is *Newsteadia floccosa*, Westw., associated with *F. fusca*; the other—four examples of which were taken from a nest of *Myrmica scabrinodis*, at Porlock (Somersetshire), in April of the present year,—proves to be the curious little species *Ortheziola vejdovskyi* described by Sulc, in 1894 (Sitzb. K. Bohm. Ges. Wiss., No. 44, p, 5), from specimens collected in Bohemia, and hitherto (to the best of my belief) recorded from no other locality.

The present examples are worn and discoloured by contact with the soil, and are, consequently, not such ornamental objects as those figured in the original description of the species; but there can be no doubt as to their identity. The greatly reduced antennæ, the undivided tibio-tarsus, the arrangement of the waxy lamellæ, and the bare median tract on the dorsum, all agree absolutely with Dr. Sulc's description and figures (*loc. cit.*).

My fig. 1 presents a dorsal view (enlarged by 30 diameters) of a British example of the insect. In their mud-stained condition the lamellæ show little or no trace of the yellow bands described by the author of the species. Nor have the present examples any prominent ovisac; but this difference is attributable merely to the comparative immaturity of the specimens.

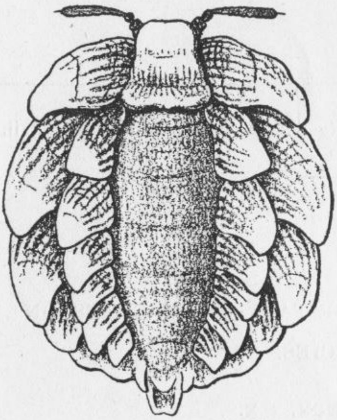
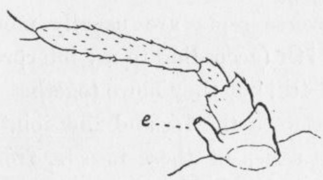


fig. 1

In one particular I am inclined to disagree with Dr. Sulc's interpretation of the characters of *Ortheziola*. He remarks that "the 3-jointed antennæ are attached to the frontal processes, which bear also on each side a stalked simple eye." From a comparison with the same organs in *Newsteadia* and in typical *Orthezia* (see figs. 2, 3, and 4), I am convinced that the so-called "frontal processes" are homologous with the basal joint of the antennæ in the allied genera. This (?) process or joint, in *Ortheziola*, is densely chitinous, and is in every particular of the same character as the unquestioned antennal joints. It is true that they have not a very well-defined basal margin, and their nature is also confused by the fact that the cylindrical eyes are firmly fused to their bases (see fig. 2); but I would interpret this condition as the result of a confluence or effusion of the denser chitinous areas at the base of the antennæ, in correlation with the confluence of the tibia and tarsus in the present insect. In other species of the Ortheziine group the eye, though separate from the acknowledged basal joint of the antenna, bears relatively the same position to it as does the eye in *Ortheziola* to the supposed frontal process. No frontal process—of this nature—has been observed in any other Coccid. In *Newsteadia*, to which genus this insect is most nearly allied, there are two stout cylindrical basal joints, followed by several small obconical or pyriform joints (fig. 3). In *Ortheziola*, Sulc's frontal process and what he understands as the first true joint clearly represent the two cylindrical basal joints in *Newsteadia*. If this view is accepted, *Ortheziola* should be credited with four (instead of three only) joints to the antennæ.

While on the subject of the Ortheziine antennæ, I should like to refer to Prof. Newstead's interpretation of the antenna of *Newsteadia.* He remarks (Mon. Brit. Coccidæ, vol. ii, p. 242): "With reference to the antennæ, Mr. Green says that 'the terminal joint is apparently composed of two fused joints, forming a scape-like termination; the antennæ thus consisting of seven distinct joints as opposed to eight in the other species. . . . Another remarkable character in *floccosa* is the very long basal joint of the antenna.' In ascribing seven joints to the antennæ, Mr. Green has evidently overlooked the true character of the third joint, which, although deeply constricted in the centre, is not articulated; the constriction, however, so exactly simulates a joint that it may easily be mistaken as such."



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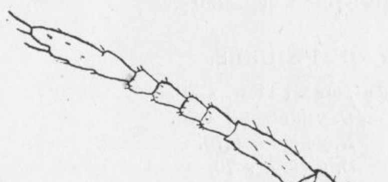

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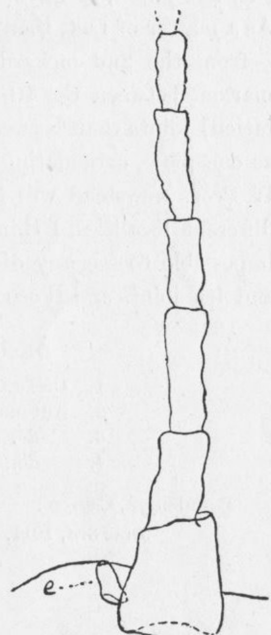

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Prof. Newstead is quite correct in asserting that there is no true articulation between what I considered as the 3rd and 4th joints and what he takes to be a single 3rd joint with an illusory constriction. There certainly is no articulation between these two joints—or nodes, as the case may be. But I do not agree with the view that this, of itself, deprives the part of its right to be considered a separate joint. In many *Lecaniinæ* there is no actual articulation between certain of the recognized joints. It is sometimes difficult to decide whether a manifestly compound segment should be reckoned as one or more joints. In practice, it is usual to consider such a segment as consisting of a single joint when the transverse divisions have completely disappeared, or of several joints when these septa can be distinguished,—quite apart from the consideration of whether or not they can articulate freely upon each other. In the present case, I maintain that the septum can be distinguished between my 3rd and 4th joints (at the point of Prof. Newstead's 'deep constriction.') The dividing line is very fine and delicate, but it is clearly demonstrable in a good mount, with a proper adjustment of focus and illumination. In some of my examples, it is fully as distinct as are the divisions between the other joints, and in one specimen a third joint is closely fused to the other two. Are we to consider, in this last case, that the antenna has only five joints, of which the third is deeply constricted in two places? As a matter of fact, there is little or no play between any of the joints—from the 2nd onwards. The transverse septa are usually more marked between the 4th, 5th, 6th, and 7th (according to my interpretation) joints than between the 3rd and 4th, but they move together—as one piece, articulating freely only between the 1st and 2nd joints. If Prof. Newstead will examine a long series of these insects, from different localities, I think that he will find individuals in which it is impossible to see any distinction between the divisions of (my) 3rd and 4th joints and those of the subsequent segments.

DESCRIPTION OF FIGURES.

1. *Ortheziola vejdovskyi*, dorsal view, × 30.
2. Antenna and eye of *O. vejdovskyi*, × 70.
3. do. do. *N. floccosa*, × 70.
4. do. do. *O. urticæ*, × 70.

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