

THE REPRODUCTIVE ORGANS OF *GEOPLANA SANGUINEA* MOSELEY.

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(Figure 1.)

Introduction.

In a description of New Zealand land planarians Dendy (1896) identified several specimens as *G. sanguinea*, which he considered had been introduced into New Zealand from Australia, where it is endemic. Nevertheless, Dendy was a little doubtful of his identification, as he goes on to say: "There is some difficulty in distinguishing between this species and *G. triangulata* var. *australis*."

In a collection of New Zealand land planarians received on loan from the British Museum for the study of the internal anatomy there was one specimen collected at Invercargill, N.Z., and labelled by Dendy *G. sanguinea*. From its internal structure this specimen proved to be an immature *G. triangulata* var. *australis*, now *Artioposthia australis*. In order to compare this with the real *G. sanguinea* the writer applied for material to the Director of the Australian Museum, Sydney, and was kindly given a selection of specimens of that worm.

Material.

G. sanguinea has a wide distribution all over eastern and southern New South Wales, Victoria and Tasmania, and specimens were chosen from four localities which were widely separated so as to give a fair idea of any variations in the local specimens and their geographical range. Longitudinal sagittal serial sections were cut and stained in borax-carmin and picro-indigo-carmin and from these a reconstruction of the internal anatomy was made. The result was as follows: No. W.1820 (part) from Tasmania had no reproductive organs; No. W.2151 from Blackheath was immature, having simple male and female ducts but no genital pore; No. W.2152 (part) from near Gosford had all the essential reproductive organs, though these were not so mature as in the two specimens No. W.2196 (part) from Victoria. The worms with immature reproductive organs were smaller than the mature ones, but the general structure and arrangement of the organs was the same throughout.

External Characters.

According to Moseley (1877) the dorsal surface is "a uniform light red which is lighter on the under surface of the body; length of living worm, 70 mm.". Since this was written, von Graff (1899) has included in this species *G. rubicunda* Fletcher and Hamilton (1888) and *G. alba* Dendy (1891). This allows for a wider variation in colour and size, as, for example, Dendy has found specimens of *G. alba* about 100 mm. in length, and Spencer (1891) in describing *G. alba* says: "Specimens vary in colour from almost white to orange, and sometimes brown and grey."

A faint dorsal median stripe has been described for some specimens, but Dendy (1891) says that there are no stripes in *G. alba* and there were no stripes on the specimens of *G. sanguinea* examined by the writer.

The mouth and the genital pore are in the usual position. In a specimen of 54 mm. length the mouth was 36 mm. and the genital pore 42 mm. from the anterior end.