

ART XVII.—*Description of a New Species of
Peripatoides from West Australia.*

By BALDWIN SPENCER, M.A., C.M.G., F.R.S.,
Professor of Biology in the University of Melbourne.

[Read 10th September. 1908.]

In March, 1907, Mr. H. M. Giles found in West Australia two specimens of a species of *Peripatoides* distinct from *P. leuckartii* var. *occidentalis*, the only one hitherto known from that part of the continent. It is evidently of rare occurrence, as Mr. Giles, though constantly on the lookout, has only recently succeeded in securing more specimens. In this instance he found three adults and four young ones, but, unfortunately, though two adults reached Melbourne safely, one adult and the young ones completely perished. The four adult individuals serve, however, to establish the existence of this second species in West Australia, and I have much pleasure in associating with it the name of its finder, who has devoted much time to the search. It may be described as follows:—

Peripatoides gilesii, sp. n.

Size of Body.—Three female specimens measure respectively 22 mm., 25 mm. and 27 mm. One male measures 25 mm.

Colour.—The general body colour is dull greenish, yellow or reddish brown. There is no set pattern, but each specimen has a narrow, darker band down the mid dorsal line, with a median very thin light line—so thin as only to be visible with the aid of a lens. It is not nearly so well marked as in the specimen of *P. leuckartii*, figured by Bouvier,¹ and closely resembles that in *Ooperipatus insignis*. On each side of the body there is a broad, lighter band just above the level of the legs. The whole

¹ Ann. des Sci. Nat., 9th series, tome ii., 1905. This is called *P. orientalis*, by Bouvier, pl. xi. The nearest approach amongst all those figured by Bouvier to the skin of *P. gilesii* is that of *P. eiseni*, pl. 4, fig. 31.

under surface of the body and of the feet is devoid of pigment save for insignificant speckles scarcely visible without a lens.

The whole surface is thrown into a number of transverse ridges, ornamented, as usual, by papillæ, of which two varieties are present—(1) a smaller, and (2) a larger. The former is usually black, the latter has a terminal black part (the equivalent in size of the whole of the smaller kind), with a lighter basal part surrounded by a light yellowish patch of skin. Each of the larger papillæ terminates in a minute colourless spine which is apparently wanting on the smaller ones.

The general colour of the body is affected, to a large extent, by that of the papillæ. In the greenish coloured specimens they are always black, but in the brownish ones the great majority of them are chestnut-brown in colour. In all cases the rings are continuous across the mid dorsal surface, though they are crossed one after the other by the thin median light line, which, however, in no way affects the continuity of the ridge, and may occasionally be quite wanting, a dark papilla then occupying the very middle line. The papillæ throughout are arranged in a single line on each ridge. There appear to be always seven ridges running between each successive pair of legs.

Ambulatory Appendages.—The claw-bearing legs are sixteen in number,¹ the first and last being somewhat smaller than the others. Each has three spinous pads and about eight or nine rings of papillæ, which contain only a very minute amount of pigment on the ventral side of the leg. On the proximal side of the first of the rings, that is, just where the leg joins the body, there is a small but very distinct round opening bordered by a circle of papillæ containing more pigment than those elsewhere on the ventral surface. This indicates the position of the external opening of the nephridium, and can be seen on every leg except the first and last pairs, though most noticeable in the middle and hinder parts of the body. In front of segment five or six it becomes smaller and more slit-like.

¹ As an abnormality one specimen has fifteen legs on the left side and sixteen on the right. The pairs are quite regular as far back as the thirteenth. The sixteenth pair is normal on each side, but the one between this and the thirteenth on the left side is opposite the middle of the internal between the fourteenth and fifteenth legs of the right side.

Crural Glands.—In one of the four specimens each of the legs, 6-14, carries a definite, small white glandular patch placed on the distal side of the nephridial opening, and always separated from the latter by two rings of papillæ. These, presumably, indicate the openings of crural glands, but I can see no trace of them on the two last pairs of legs, nor in the region of the reproductive opening. Their presence indicates the fact that this one specimen is a male and the three others females. In the latter there is no trace of any ovipositor, and in both males and females the generative opening lies between the base of the last pair of legs.

Jaws.—The first jaw is simple in all the specimens, there being no trace of any accessory tooth. The second jaw has four clearly-marked and one minute accessory tooth.

The number of the legs, together with the structure of the jaws, serves to distinguish this species from all other Australasian species of either of the genera, *Peripatoides* or *Ooperipatus*.

Locality.—Armadale, near Perth, West Australia. Collected by Mr. H. M. Giles.