

9. *Filaria paradiseæ*, n. sp. (Pl. II. figs. 6, 7).

From *Paradisea apoda*, Aru Islands, in the same tube as *Filaria flabellata*.

There is only one specimen—a male, which measures 19·2 mm. in length and 0·38 mm. in breadth, the proportion of breadth and length being thus 1 : 52. The body is decidedly elongated, narrowing rapidly after the head. The latter bears two small round lips. The œsophagus occupies  $\frac{1}{20}$  of the entire length, and is 0·036 mm. in breadth; the tail portion measures only  $\frac{1}{116}$  of the whole. The cuticle is distantly wrinkled. The tail end is rolled up in a spiral, and is on that account very difficult to study. One cylindrical spicule (0·098 mm. long by 0·049 mm. broad) was visible; a second was not to be found. The very end is conically rounded. I was not able to study exactly the nature of the papillæ on the tail, since it was impossible to unroll the coil, or to place the object with the ventral surface directed upwards. Only this could be certainly demonstrated, that the above form is not identical with *Filaria flabellata*. An exact diagnosis was impossible with such scanty material.

10. *Prothelmins profundissima*, n. gen., n. sp. (Pl. II. figs. 8–10).

Specimen labelled: "3 March 1874. Depth 1950 fathoms."

The vessel contained two Nematodes, 58 and 65 mm. in length, 0·9 and 0·96 mm. in breadth respectively. The colour is yellowish, but the alimentary canal shines through as a blackish tract on the dorsal surface. Both extremities of the body are rounded, the posterior somewhat broader. The anus is situated 0·35 or 0·43 mm. from the tail end; the latter occupies  $\frac{1}{81}$  of the entire length. The œsophagus measures in one specimen 1·42 mm., the other 1·62 mm., and thus occupies about  $\frac{1}{40}$  of the total length. Both head and tail ends are entirely devoid of papillæ, or other normal characteristics.

The cuticle is very firm and thick, measuring 0·084 mm. in transverse section, and consists of two systems of fibres crossing at an angle of 55°. The individual fibres are 0·0025 mm. in breadth. The cuticle is covered externally by a hyaline epidermis, 0·0033 mm. in thickness.

Below the cuticle is a muscular layer, 0·02 mm. in breadth. It belongs to the Holomyarian type as defined by Schneider, and consists of longitudinal fibres, with an average breadth of 0·013 mm. Each fibre exhibits a row of vacuoles and a system of transverse striæ. In transverse sections the fibres lie with the long diameter of their spindle-shaped cross section disposed obliquely to the surface of the cuticle, and the vacuoles appear as dark median points. No interruption of the muscular sheath by lateral, dorsal, or ventral ridges was to be observed.

The body-cavity is filled by the alimentary canal, which is attached to the dorsal