

pale yellowish cuticle, which forms strong folds with here and there scattered disk-like structures. These *disks* are arranged in irregular (quincuncial) series, of which there are from 7 to 8 below and from 4 to 5 above; altogether, I found seventy-two of these disks. They are of roundish or oval contour, and both forms occur above (Pl. III. fig. 23) and below (Pl. II. fig. 9) within the præputium. Their greatest diameter varies between .8 and .25 mm., and plates of the two extreme sizes were found both above and below. The more or less arched upper surface (fig. 8) of the disks is prolonged into a hook, about .18 mm. high, which is often very sharply bent; the stroma of the disk is frequently prolonged into the hook (Pl. II. fig. 24), in others the stroma seems to be withdrawn, leaving small air-containing spaces (fig. 24). At the base of the cavity of the præputium is the cylindrical *glans*, about .8 mm. long, and covered with a simple cuticle; it is traversed by the seminal duct, opening by an oval aperture at its summit (fig. 23). As it passes into the vestibulum the præputium is strongly pigmented. At the lower end of the penis opens the whitish vestibular gland (Pl. III. fig. 12, *k*), about the size of the prostate, and rather compressed; it is sessile and has a largish cavity. The *spermatheca* (Pl. II. fig. 22, *a*) is spherical and about 6 mm. diameter, whitish in colour, and filled with semen and detritus. The stout vaginal duct is, including the long vagina (fig. 22, *b*), about 12 mm. long, and lined throughout by a strong yellow cuticle raised into 6–8 folds, which are especially strong in the vagina, and can be seen from the outside; the lowest end of the vagina (fig. 22, *c*) is brown coloured. The uterine duct (fig. 22, *dd*) is thinner and shorter than the vaginal, only 6 mm. long; at its lower end is the *spermatocyst* (fig. 22, *e*) attached by a short stalk; it is sac-shaped, yellow in colour, about 3.5 mm. in length, and was full of semen. The broad white upper margin of the *mucous gland* has fine gyri; quite in front there is a more yellowish portion; the rest of the outer side of the mucous gland is white, with a few thick windings. The larger part of the hinder side and the under margin was taken up by the large dirty yellowish *albuminiparous gland*; the duct of the mucous gland has the usual internal fold; the *vestibulum genitale* shows longitudinal folds.

In all probability the form described here is identical with the *Platydoris eurychlamys*, formerly investigated by me, though it presents a few differences, such as the greater number of disks in the præputium and their somewhat different form. An investigation of a number of individuals, however, would perhaps show a great variability in the armature of the penis; and perhaps the species *Platydoris vicina*, lately instituted by me,<sup>1</sup> may prove to be merely a variety of this.

Another specimen of the same species was dredged during the Challenger Expedition on the Reef of Tongatabu, from a depth of 8 fathoms. It was strongly bent; when

<sup>1</sup> Supplementheft i., 1880, pp. 62, 63, Taf. E. figs. 16–20.