ON AN ABNORMALITY IN THE PENAEID PRAWN *METAPENAEUS AFFINIS* (H. MILNE EDWARDS)

STRUCTURAL abnormalities in the genital organs of decapod crustaceans have been observed by several authors (Marshall, 1902; Hay, 1905; Ridewood, 1909; Matsumoto, 1955; Gordon, 1957 and Hartnoll, 1960). George (1963) has reported the occurrence of an undeveloped petasma in the first pleopod of a female specimen of the prawn *Metapenaeus monoceros* (Fabricius). During the course of a routine observation on trawl catches off Cochin an abnormal specimen of *Metapenaeus affinis* (H. Milne Edwards) possessing both male and female external genitalia (Fig. 1) was collected in November 1967, from a depth of about 25 metres. The specimen measured 152 mm. in total length and 41 mm. in carapace length.

A detailed study of the reproductive system of this specimen revealed that it is a fully grown female with well developed ovary in the late maturing stage and typical adult thelycum. The male character is represented by a pair of partly developed petasmal endopodites on the first pair of pleopods. Other male secondary sexual characters are lacking. The petasmal endopodites are not fused with each other along the median edges and are of unequal size, the left half being smaller than the right. In structure, they are closely similar to those of the juvenile specimens des-

cribed by George and Rao (1967) ; the left half resembling the petasmal endopodite of a 45 mm. specimen and the right that of a 65 mm. specimen. Hall (1962) has recorded a hermaphrodite specimen of the species from a Singapore prawn pond.

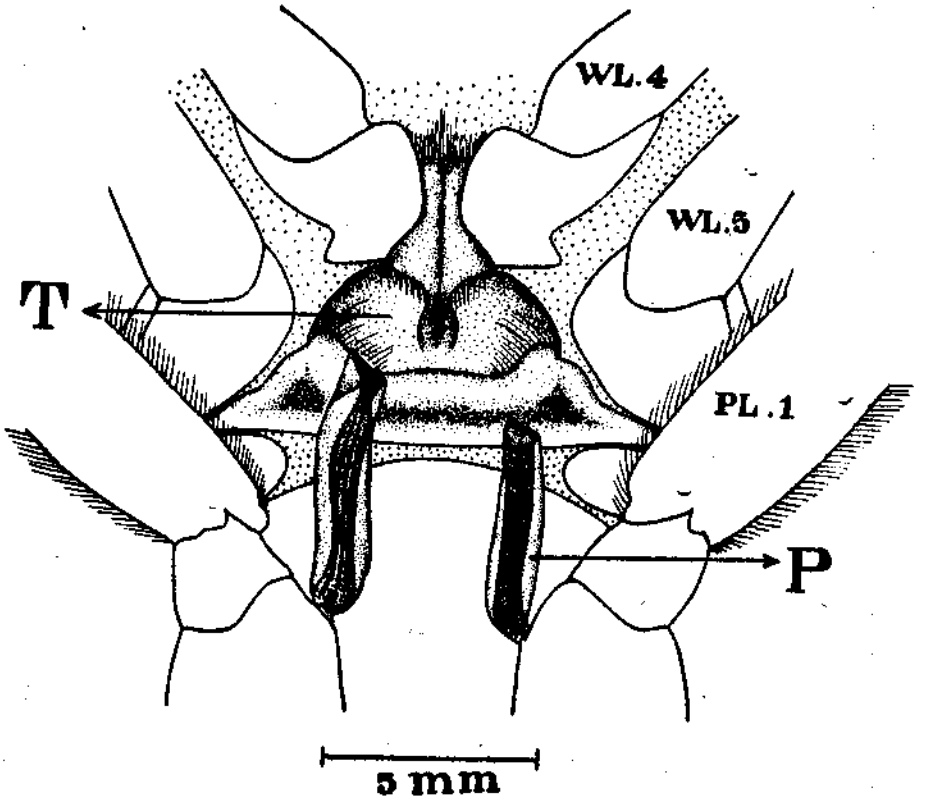

Fig. 1. *Metapenaeus affinis* (H. Milne Edwards), ventral view of the region between 4th walking leg and 1st pleopod. P—petasma. T-thelycum. PL. 1-1st pleopod. WL. 4 & WL. 5-4th & 5th walking legs.

The present specimen is decidedly a female with abnormally developed petasma and is not a hermaphrodite.

It is well known that the androgenic gland in crustaceans plays an important part in sex determination and that its regression inhibits the appearance of external male sexual characters (Charniaux-Cotton, 1960). In the present specimen it would appear that the regression of androgenic gland cells got delayed during the course of early development resulting in simultaneous growth of both petasma and thelycum for some more time. The left petasmal endopodite seems to have stopped its growth a little earlier than the right as evidenced from its size and structure.

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