

Figure 1. Effect of prolactin (PRL) on testicular response of Photosensitive (A) and Photostimulated (B) Blackheaded Bunting. Control birds received normal saline (NS) and sham control (SC) was uninjected. Numbers on abscissa represent the groups.

close relationship between the amount of gonadal inhibition and the time of injection^{3, 9, 10}.

Besides non-migrants^{3, 12}, the antigonadal action of PRL has also been demonstrated in migratory avian species^{3, 11}. PRL injections inhibit the photogonadal development in *Zonotrichia leucophrys pugetensis*¹ and *Melospiza melodia merrilli*³, but not in *Zonotrichia leucophrys gambelii*^{2, 3}, *Zonotrichia albicollis* and *Junco hyemalis*³. (It may be pointed out that *Z. l. pugetensis* and *M. m. merrilli* are weak migrants, while *Z. l. gambelii*, *Z. albicollis* and *J. hyemalis* are strong migrants.) Nevertheless, we could find antigonadal action of PRL on photoperiodic induction of gonadotropin release in the blackheaded buntings, a strong migrant, whether the injections were made early, mid or late during the day (figure 1A, B). Further, we always used photosensitive birds, previously maintained under nonstimulatory photoperiods (8L:16D). Therefore, the difference between our data and those of others (cf. 2, 3) on strong migrants is easily understandable. Most of the studies on avian migrants have been performed on wild birds captured directly from the nature during the spring. And thus, the lack of effect of exogenous PRL could be the result of maximal antigonadal effect of endogenous PRL levels in spring so that exogenous PRL injections have no additional effect on the neuroendocrine-gonadal axis⁹.

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REDESCRIPTION OF A RARE SIMPLE ASCIDIAN, *PYURA LANKA* HERDMAN, 1906 (ASCIDIACEA/PYURIDAE) FROM INDIAN WATERS

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IN India taxonomical work on ascidians is very meagre. So far only 28 species of ascidians have been reported from India of which 10 have been recorded by the author¹⁻⁹. The present species was first reported by Herdman¹⁰ in 1906 from the Gulf of Mannar off Ceylon under the name *Cynthia lanka*. It was later recorded by Oka¹¹ in 1915 from Palk Strait, Mergui and Laccadive Sea under the same name, *Cynthia lanka*. Since the description of the species by both the authors was found incomplete, an attempt has been made here to redescribe it.

Two specimens were available. They were found attached to the chank, *Xancus pyrum* at a depth of about 30 m, off Tuticorin waters (Lat. 8° 47' 10" N and Long. 78° 9' 60" E.). The material (Slides No. S₂ 461 and S₂ 462) is deposited in the National Museum of Natural History in Paris.

Cynthia, *Rhabdocynthia* and *Herdmania* are today regarded as synonyms of *Pyura*.

Description

External appearance: Ovoid with a narrower anterior end raised to form a slight ridge, at the extremities of which the apertures are placed. The animal measures 2 cm in length and 1.5 cm in height. The test is thin and heavily coated with sand and broken pieces of shell. The oral and atrial apertures at the anterior end are somewhat free of these particles. Both the siphons are prominent, muscular and reddish in colour. The atrial siphon is longer. Branchial siphon is lined by closely placed, sharp pointed spines.

Internal structure: The mantle is thin and transparent. The gut loop and gonads can be seen through the mantle. Branchial sac has 6 prominent branchial folds on each side. The internal longitudinal bars are arranged as follows: Dorsal lamina 5(18) 3(18) 5(22) 5(20) 3(17) 3(14) 4 endostyle. Thinner transverse vessels are present. 2 or 3 stigmata are present in a mesh. Tentacles are short and much branched. There are 20 tentacles. Dorsal tubercle is small, widely cordate with an anterior opening. The dorsal lamina has short curved tentacular languets, about 52 in number.

The gut (figure 1) forms the usual curved loop as in other pyurids and it is of uniform thickness. The ascending and descending limbs are parallel. The liver is large and brownish yellow. It consists of dense arborescent tubules. It is widespread at the pyloric end. The anus is a plain opening without ridges and it reaches near the atrial siphon.

There are 11 pairs of pouch-like gonads inside the alimentary loop on the left side. The hermaphroditic gonads are indistinguishable since they were not well developed. The gonads are present alternately. Some of the gonads are hidden from view by the extension of the liver. On the right side there are 10 pairs of gonads. The zig-zag arrangement of the oviduct, which is characteristic of this species, is feebly visible here.

In India 3 species of the genus *Pyura* have been reported, including the present one, the other two being *P. momus* and *P. ennurensis*.

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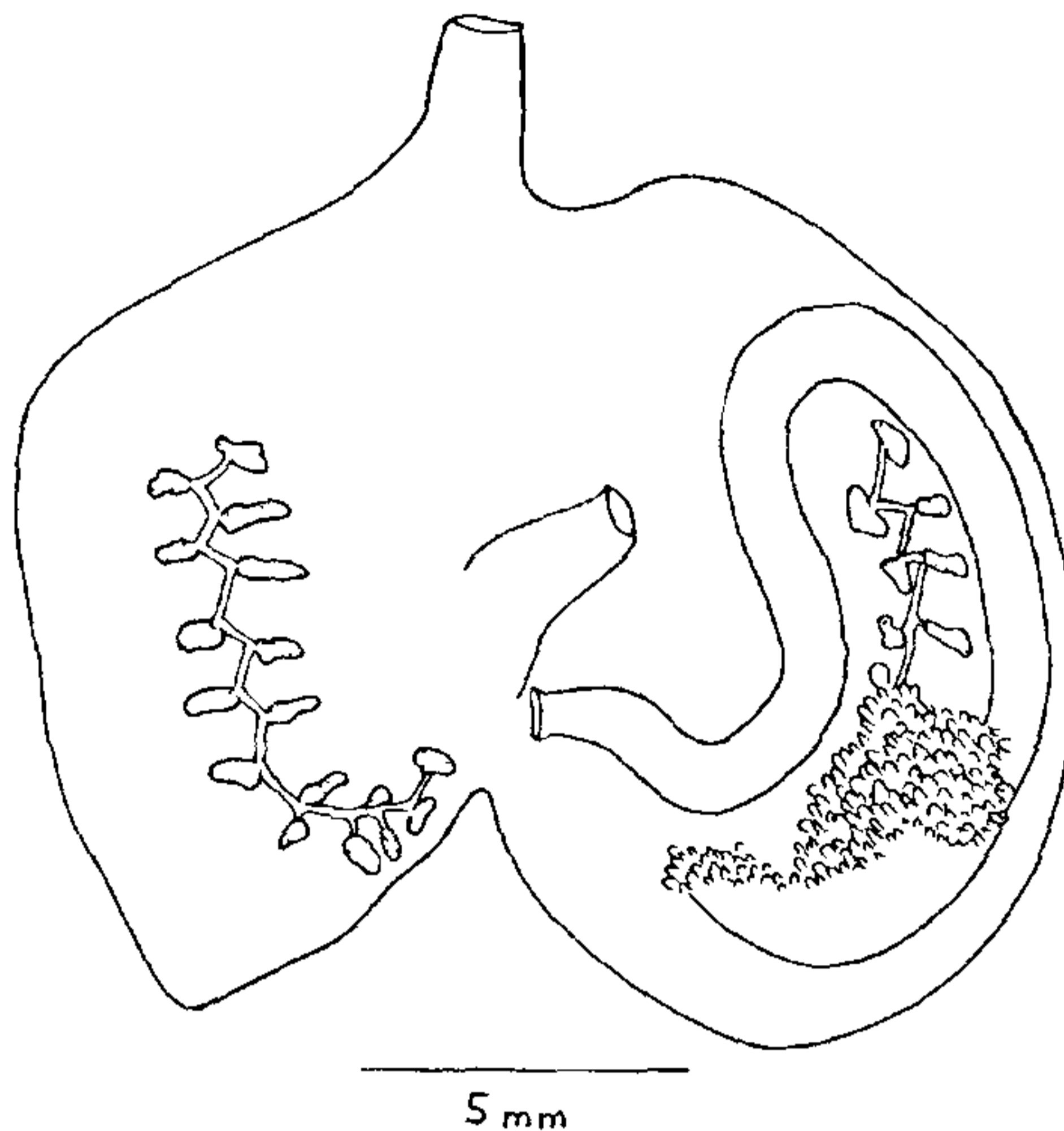


Figure 1. Zooid dissected along the ventral border showing the position of the gut loop and the gonads.

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