

## ON THE FRY OF THE MILK-FISH *CHANOS CHANOS* (FORSKAL)

It is well known that the fry of the milkfish, *Chanos chanos* (Forskäl), appear in large numbers in the tidal flats of the Pamban area, especially near the Chinnapalam Creek. Observations of Delsman<sup>1</sup> (1929), in the Indonesian waters have shown that the fish larvæ appear first in the summer months of April and May, and later in the months of September, October and November. The information available on the distribution of *Chanos* fry in different parts of South India has been recently summarised by Ganapathi, *et. al.*,<sup>2</sup> (1950), and it will be found from the Table published by them that *Chanos* fry have been recorded in most parts of the Madras State only in the summer months with the exception of the Adyar near Madras and Pulicat where they have been recorded also in the October-December periods. In Visakapatnam, *Chanos* fry are recorded up to the September period.

The observations made during the past few years in the Pamban area have not revealed the presence of *Chanos* fry in months other than April-June and it is interesting to note that on 28th November, 1951, the fry of *Chanos* were observed by us in the Chinnapalam Creek in sizes as small as 15 mm. which represent some of the earliest stages of the fry recorded in Indian waters. Fry have continued to be available for many succeeding days. While the possibility of their occurrence in the autumn months is always kept in mind as it will prove to be of great value in the culture of the milkfish, it is noteworthy that throughout the Indian coast the summer months of April-June appear to be

the principal period for them. Schuster's<sup>3</sup> (1951) record of young *Chanos* in Kalpitiya is also in conformity with this observation. This is very different from the behaviour of this species in Indonesian waters where the September-November period has been found to be more important.<sup>1</sup> It may also be added that on 16th October 1951, we obtained what is probably the first recorded adult specimen of *Chanos* from the Gulf of Manaar, which had a total length of 1,240 mm. and had spent ovaries. During the last summer months it was also possible for us to extend the places of fry collection in this area to the shores of Palk Bay in the direction of Mandapam to Theedai where the fry enter the saline lagoons adjoining Palk Bay in large numbers.

Based on ova diameter measurements, Bunag<sup>4</sup> (1951) has shown that *Chanos* has only one spawning season in the Philippines. In the adult *Chanos* we have examined, the ovaries are in a completely spent condition and do not indicate the possibility of protracted spawning as no part of the ovary was showing active growth of the oocytes indicative of a secondary spawning. It is possible, therefore, that so far as individual fish are concerned, there is only one spawning during the year but that the spawning period for the species is not limited to a very short period in terms of summer or autumn months. It is noteworthy, however, that there is a pronounced discontinuity in the occurrence of fry between their first appearance in the summer months and their later appearance. The Table given by Ganapathi, *et. al.*, would give the impression that in the various places the fry might occur for the April to October period, but it is not clear whether these authors have differentiated between the appearance of early stages of the fry and of the availability of the fingerlings. More information on the initial appearance of the larvæ in various regions of the coastline at different times of the year is essential for a further understanding of the habits of the fish. It is needless to add that, if a definite secondary period of spawning could be established, it is of considerable importance for the future development and expansion of milkfish culture.

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1. Delsman, H. C., "Fish eggs and larvæ from the Java Sea. 13. *Chanos chanos* (Forsk.)," *Troubia*, 1929, 11