

SPAWNING OF *NEMATALOSA NASUS* BLOCH IN PILLAIMADAM LAGOON AT MANDAPAM*

Marine fishes are usually not known to spawn in the coastal lagoons though such habitats constitute one of the preferred nurseries for the growth of migrating fry and fingerlings of some of the culturable species like mullets and milk fish.

During the course of the routine observations on the fishing activities of the Pillaimadam lagoon at Mandapam, large numbers of *Nematalosa nasus*, locally known as 'Koi' measuring 195-235 mm and weighing 80-140 g were caught from the lagoon (Fig. 1 c). The gonads of the fish were in ripe condition, weighing 10 to 20 g. The lagoon bar mouth which remains closed during the pre-northeast monsoon months opens with the onset of the northeast wind and the high tidal amplitude in the Palk Bay, carrying the sea water

into the lagoon. Along with this tidal flow many species of fishes migrate into the lagoon, of which *N. nasus* forms a considerable percentage.

On 23-11-'83, when a trial netting was conducted by the author, using a 1 mm mesh synthetic fibre net, large numbers of transparent fry of *N. nasus* measuring 10 to 25 mm were collected (Fig. 1a). These hyaline fry were very delicate to netting operations resulting in heavy mortality. These fry were characterised by large eyes, pointed mouth, 17-19 dorsal rays and 18 to 22 anal fin rays. Fingerling of size 30 to 40 mm were collected subsequently on 17-12-'83 and 18-12-'83 (Fig. 1b). These withstood netting operations well. It was possible to transport them alive to 'hapas' erected in the shallow regions of the lagoon. Fingerlings were observed to have large eyes and terminal mouth. They were silvery in colour. Most of the adult of *N. nasus* collected from the lagoon after 10-12-'83 found

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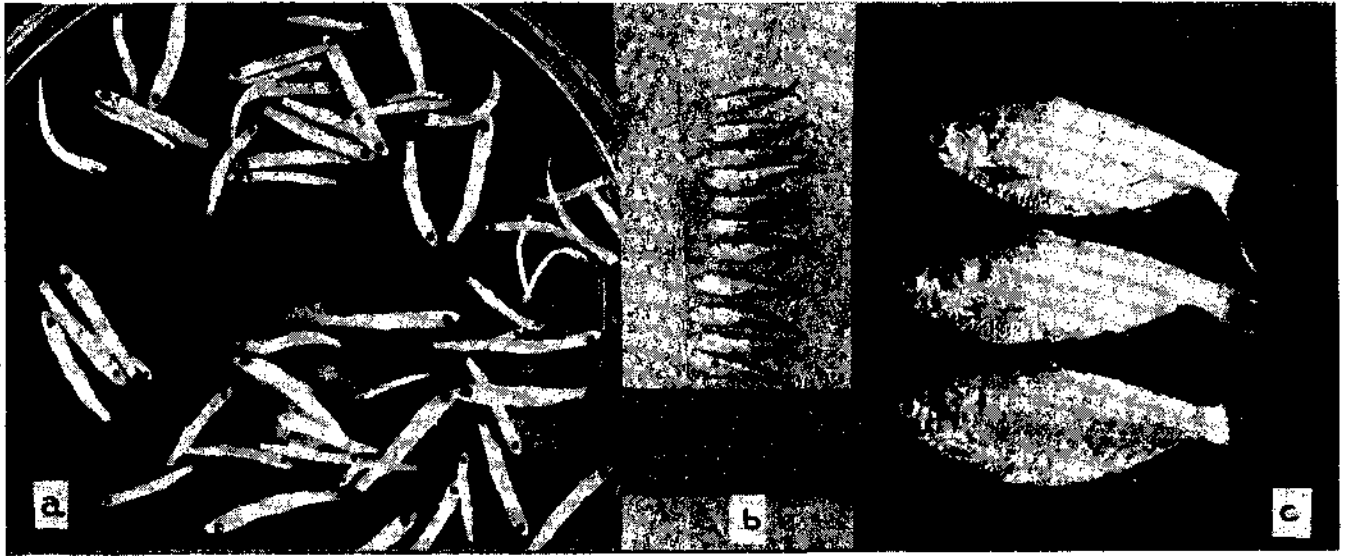


Fig. 1. *Nematalosa nasus*. a. Fry, b. Fingerlings c. adults.

to have gonads in 'spent' stage. The gonads were invariably shrivelled and weighed 2.5 to 4.0 g. However, some ovaries were vascular containing a few residual ripe ova indicating a very recent spawning. The above observations point to the probability of *N. nasus* entering the lagoon with mature gonadial condition and spawning in the water mass there. The salinity of the lagoon which was 35.2 ‰ during the first week of November came down to 28.8 ‰ during the last week of November due to the admixture of fresh water from the land on account of monsoon rain. The water temper-

ature had dropped from 30°C to 23°C during the early hours of the morning.

Earlier observations show the possibility of *N. nasus* spawning in confined saline ponds in a salinity range of 28.0 to 32.0‰. The present observatoin of the fish spawning in coastal lagoons and ponds makes it extremely viable for culture. The observations suggest the immense possibilities of utilising the fingerling resources of *N. nasus* in the area to meet the seed requirements of this species for successful farming.

