

Revival of fishery of the thin spine sea catfish, *Arius tenuispinis* at Mumbai, Maharashtra

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Catfish landings by trawlers in Mumbai comprise of three major species *viz.*, *Arius dussumieri*, *Osteogeneiosus militaris* and *Arius caelatus* with *A. dussumieri*, forming approximately 30-35% of the landings. However, of late the landings of *Arius tenuispinis* has showed an unusual upward trend at New Ferry Wharf, Mumbai and the species is observed in the catch almost throughout the year. Analysis of *A. tenuispinis* catch data from New Ferry Wharf during the period 1987 to 2012 clearly indicates collapse of the fishery of this species, showing signs of subsequent revival. The landings of this species reduced drastically from 352 t in 1987 and totally disappeared from the catch during the period 2000-2004. From 2005 onwards, there seems to be a gradual revival of the fishery (Fig. 1) (Raje and Vivekanandan, 2008). A similar decline of *A. tenuispinis* was also observed at Visakhapatnam (Lakshmi and Rao, 1992). The percentages of *A. tenuispinis* in the total catfish landings during this period decreased from 12.4% (1987) to nil (2004) and then a gradual increase to 27.3% (2012) indicating a total revival of its fishery in Maharashtra

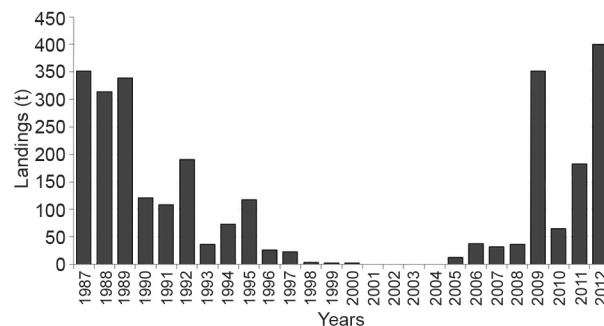


Fig. 1. Trend in landings of *Arius tenuispinis* at New Ferry Wharf, Mumbai during 1987 to 2012

waters. The species composition during this period was: *A. dussumieri* (32.8%), *Osteogeneiosus militaris* (27.5%), *A. tenuispinis* (9.2%), *Tachysurs caelatus* (9.2%), *T. thalasinus* (10.9%), *T. jella* (3.2%), *T. sona* (4.4%), *T. serratus* (1.2%) and other catfish species (1.6%).

On 28th September 2009, an unusual heavy landing of *A. tenuispinis*, to the tune of about 450 t was observed at New Ferry Wharf (Fig. 2). The fishing was carried out at 30-40 m depth, 70-80 km off north-west coast. Length measurements were



Fig. 2. *Arius tenuispinis* landed at New Ferry Wharf, Mumbai

taken for 120 specimens and the total length ranged from 283 to 486 mm with the corresponding weight ranging from 286 to 998 g. The maximum number of specimens belonged to the size range 420-429 mm (Fig. 3). The catch fetched ₹ 10 per kg at the landing centre. Fifty four specimens of *A. tenuispinis* were analysed for further biological studies. It was observed that 70% of the guts were in 'trace' and 'empty' condition. The species seems to mainly feed

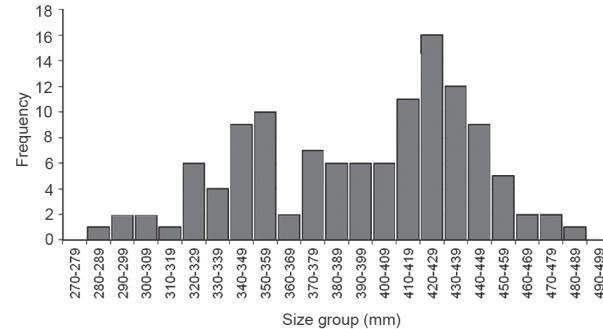


Fig. 3. Length frequency polygon of *Arius tenuispinis* landed at New Ferry Wharf, Mumbai

on 'fish' (43%) followed by 'Acetes' (35.4%), other crustacean species (21.5%) and molluscs (0.1%). The sex-ratio observed was 1:1 and all the specimens analysed were in 'immature' condition.

The revival of this resource over the years needs to be studied further. In the year 2009, the landings seems to have increased substantially. Introduction of new type of gear, like bottom trawl for the capture of *A. tenuispinis* could have led to the increased exploitation of the species.