

A REPORT ON MEGA LANDING OF BLACKTIP SEA CATFISH, *Plicofollis dussumieri* (VALENCIENNES, 1840) FROM FRASERGUNJE FISHING HARBOUR, WEST BENGAL, INDIA

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ABSTRACT

A significantly large landing of Blacktip Sea Catfish (*Plicofollis dussumieri*) was reported from Frasersgunje Fishing Harbour of Sundarbans, West Bengal between 31 December 2011 and 6 January 2012. Around 320 tonnes of Blacktip Sea Catfishes were caught during this period. The mean length and weight of the catch were 665.19 ± 75.83 SD mm and 3833 ± 1336 SD g respectively. The length-weight relationship was showing the negative allometric growth. Unusual heavy landings are frequent on Indian coast, but the present landing is bigger than any other published. The important factors of aggregation of this fish species are the fog and temperature fluctuation during the winter season, though it is yet to be ascertained.

INTRODUCTION

Blacktip Sea Catfish (*Plicofollis dussumieri*) belongs to the family Ariidae. It is a common species in the coastal waters of West Bengal. Blacktip Sea Catfish is a highly mobile species which undertakes long courses of migration and lives in different types of unstable environments, depending on the changes of monsoon, etc. (Menon et al., 1990). The species is purely marine and forms large shoals that move vertically in the column and horizontally along surface waters (Menon and Bande, 1987). The biology and ecology of this species is not well studied. The species appears to be under least concern (LC) in the 'Red List' of IUCN (<http://www.iucnredlist.org/details/169632/0>, access on 10.02.12 at 1.55 PM). Heavy landings of this species were reported by Waghmare (1987) from Mumbai, Srinivasarengan (1988) and Madras, Sarang et al. (2004) at Arnala. The present report tries to explain heavy landing of this species during the four days in the winter season 2011 and 2012 with help of fishermen.

MATERIALS AND METHODS

Frasergunje Fishing Harbour ($21^{\circ} 34' 46.2''$ N, $88^{\circ} 15' 03.0''$ E) is one of the important fish landing centers of Western Sundarban, West Bengal (Fig. 1).

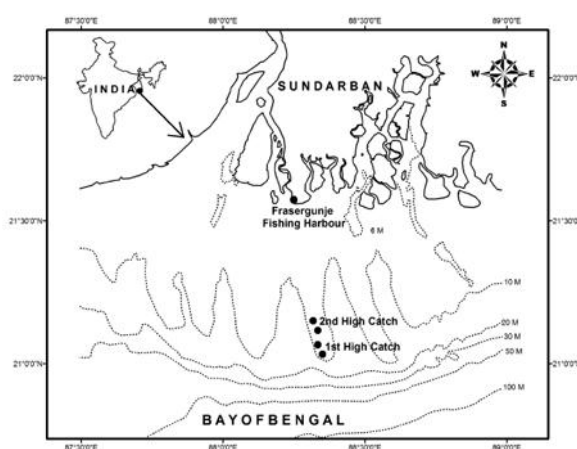


Fig. 1. Frasersgunje Fishing Harbour and the zone of Blacktip Sea Catfish catch.

The fishing in this estuarine region is carried out in the shallow waters of the Bay of Bengal up to 70 km from shoreline. This area receives the perennial flow of nutrient rich freshwater from the Ganga-Meghna-Brahmaputra (GMB) basin which makes the salinity of the coastal water significantly low in Frasersgunje.

According to the information collected from fishermen, boat owners, field staff and fishermen's association of Frasersgunje, trawl nets were not used in Frasersgunje. The positions of the catch were noted from the fishing boats. The total catch was provided by the boat owners and the fishermen's association. During 36 hours, 20 fishing boats (six cylinder) could catch fish shoal from 10-12 m water depth. The fish was caught using gill nets with 120 mm mesh size. The length and weight of 130 specimens were measured after landing. Length was measured by a metric scale and weight was measured by a digital scale Wensar (TTB-10) with capacity of 10 kg (accuracy ± 0.5 g). Length was measured in millimeter (mm) and weight was measured in gram (g). The length-weight relationship was established by the equation $W=a*L^b$ (Le Cren, 1951), where W is the weight of the fish, L is the total length of the fish, 'a' is the exponent describing the rate of change of weight by length and 'b' is the weight at unit length. The photographs were taken by a 12 megapixel digital camera (Cannon SX-13). The geographic position of the large catch was recorded by using a Garmin GPS 152 receiver present in the fishing boat. Coordinates were recorded as latitude and longitude in decimal degrees. Identification of the species was done using the keys provided by Talwar and Kacker (1984).

RESULTS AND DISCUSSION

A huge catch of Blacktip Sea Catfish (*Plicofollis dussumieri*) (Fig. 2) was reported on 31 December 2011 and 1, 5, 6 January 2012 from Frasersgunje Fishing Harbour of West Bengal. About 320 tonnes of *Plicofollis dussumieri* were caught in these four days.

During the first two days, 150 tonnes of the species were caught in the geographical position within $21^{\circ} 02' N - 21^{\circ} 04' N$ latitude and $88^{\circ} 20' E - 88^{\circ} 21' E$ longitude. The second catch of 170 tonnes was caught within the geographical position of $21^{\circ} 07' N - 21^{\circ} 09' N$ latitude and $88^{\circ} 19' E - 88^{\circ} 20' E$ longitudes. The length of the 130 measured individuals varied between 518 mm and 817 mm (mean length 665.19 ± 75.83 SD mm) and the weight ranged between 1730 g and 6896 g (mean weight 3833 ± 1336 SD g). The length weight relationship (Fig. 3) of this species was $W=0.00001 L^{2.984}$, 'a' is 0.00001 and



Fig. 2. Blacktip Sea Catfishes unloaded from a fishing boat

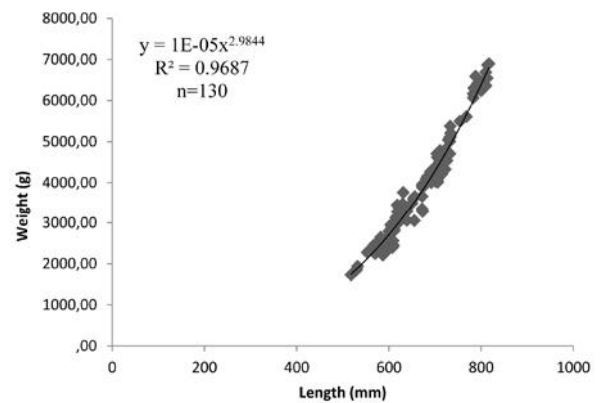


Fig. 3. The length weight relationship of Blacktip Sea Cat fish (*Plicofollis dussumieri*)

the 'b' value is 2.984 whereas the R^2 value is 0.9687. The growth of *P. dussumieri* was negatively allometric but close to isometric in nature. Menon and Muthiah (1987) estimated the length-weight relationship of *P. dussumieri* as $W=0.00001047 L^{2.6479}$.

In this report, large fish landing could be explained by fishermen's observations. During the winter season, they noticed that fish schools come close to shallow regions of the Bay of Bengal. The fishermen also observed that this fish school had appeared during foggy conditions in the winter season. Fog and temperature fluctuation are an important factor of aggregation of the fish, though it is yet to be ascertained.

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Sažetak

IZVJEŠĆE O VELIKOM ULOVU MORSKOG SOMA, *Plicofollis dussumieri* (VALENCIENNES, 1840) U RIBARSKOJ LUCI FRASERGUNJE, ZAPADNI BENGAL U INDIJI

Prijavljen je veliki ulov morskog soma (*Plicofollis dussumieri*) u ribarskoj luci Frasergunje, Sundarbans, Zapadni Bengal od 31. prosinca 2011. do 6. siječnja 2012. Oko 320 tona morskog pauka je ulovljeno tijekom ovog razdoblja. Srednja dužina i masa ulova iznosila je $665,19 \pm 75,83$ SD mm, odnosno 3833 ± 1336 SD g. Dužinsko-maseni odnos je pokazivao negativni alometrijski rast. Iako su neobično veliki ulovi česti na obali Indije, navedeni ulov je veći od svih dosada objavljenih. Magla i fluktuacija temperature tijekom zimskog razdoblja su važni čimbenici sakupljanja ove vrste što je potrebno potvrditi.

Ključne riječi: ulov, morski som, *Plicofollis dussumieri*, ribarska luka Frasergunje, Sundarban

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