



Cobia – *Rachycentron canadum*

- Common name: Black King fish
- CMFRI has pioneered the successful demonstration of cobia breeding in India.
- Large and fast growing fish, excellent flesh quality with huge commercial and recreational value.
- Landings (2007): 10,484 t (World) 4486 t (India)
- Distribution: Pakistan, Philippines, Malaysia and Iran.
- Selectivity of gears: Drift gill nets, hooks and lines and bycatch in trawl nets.
- Size: 30-170 cm fork length.
- Peak landings - Table size: August- September along SW Coast of India.
- Juveniles: July- August and November - January.
- Biology: Mature at around 70 cm FL and are highly fecund. A single batch spawning by a female is indicated by the ova-diameter frequency distribution. Diet of cobia is largely opportunistic and dominated by fin fishes, especially balistid fishes and anchovies, crabs and molluscs.

Marine Capture Fisheries Research : Some Glimpses



Oceanic Tunas of Lakshadweep Seas

- Oceanic tunas such as yellowfin and skipjack are highly valued in the export market. The potential yield estimate of oceanic tunas from the Indian EEZ is 2.13 lakh tonnes of which hardly 10% is exploited. Lakshadweep seas and Andaman seas are the richest tuna fishing grounds in the Indian EEZ.
- Species composition of tuna landings in Lakshadweep indicates skipjack (*Katsuwonus pelamis*) contribute 96% of the total tuna landings and the rest is by yellow fin (*Thunnus albacares*).
- Genetic stock analysis using Cytochrome-b gene of mt DNA of *K. pelamis* and *T. albacares* was carried out to study the stocks and mixing patterns. For the genetic divergence analysis, 599 bp-edited fragments were used and the relationship among populations investigated using neighbour joining (NJ) and maximum parsimony (MP) algorithms in MEGA 3.2. The study revealed that the samples collected from these regions are genetically homogeneous.



Deep-Sea Chondrichthyans

- A diverse group with more than 150 valid species in the Indian EEZ; The resource base supported a shark fishery with an estimated landing of 53,688 tonnes in 2009 (2nd position in world shark landings after Indonesia).
- Although elasmobranchs occurred only as a high value by-catch until the mid 1980s, the demand from South East Asian countries for shark fins and the development of a domestic market for fresh /salted and dried shark meat led to the targeted fishing for sharks in India.
- The ban/regulations on shark fishing by the European Union where the resource was judged to be getting depleted in Pacific and Atlantic Ocean led to search for alternate sources for the oil rich deep-sea squalene sharks such as *Centrophorus spp.* and the bramble shark *Echinorhinus brucus*.

Lobster fishery resources of India

- The annual average landing during 2000-09 was 1589 t.
- Northwest region contributed 45%, southwest, 33% and southeast 19% of total landing.
- Panulirus polyphagus* and *Thenus orientalis* are the two major species in the northwest coast.
- P. homarus*, *P. ornatus* and the deep sea lobster *Puerulus sewelli* are the three major species in the south.
- Co-management of the fishery by involving fishermen, exporters and maritime Governments is being implemented in Tamilnadu, Maharashtra and Gujarat.



Commercially important Bivalves of India

Resource	Name	Pictures (not in scale)	
Clams			
<i>Villorita cyprinoides</i>	Black clam		
<i>Paphia malabarica</i>	Short neck clam		
<i>Paphia sp.</i>	Textile clam		
<i>Meretrix casta</i>	Yellow clam		
<i>Meretrix meretrix</i>			
<i>Mercia opima</i>	Baby clam		
<i>Sunetta scripta</i>	Marine clam		
<i>Donax sp.</i>	Surf clam		
<i>Gelonia bengalensis</i>	Big black clam		
<i>Tridacna sp., Hippopus hippopus</i>	Giant clam		
Cockles			
<i>Anadara granosa</i>	Blood clam		
Mussels			
<i>Perma viridis</i>	Green mussel		
<i>Perma indica</i>	Brown mussel		
Edible oysters			
<i>Crassostrea madrasensis</i>	Indian back water oyster		
<i>Saccostrea cuculata</i>	Rock oyster		
Pearl oysters / Pearl producing Mussel			
<i>Pinctada fucata</i>	Indian pearl oyster		
<i>Pinctada margaritifera</i>	Black lip pearl oyster		
<i>Pinctada placentata</i>	Window pane oyster		

Crab fishery resources of India

- The annual landing of edible crabs fluctuated between 29000 t and 55000 t. during last decade. The annual average landing during 2000-2009 was 42918 t.
- The edible crab fishery in India is constituted mainly by *Portunus sanguinolentus*, *P. pelagicus* and *Charybdis feriatus*. Landings constituted mostly from trawlnets and gillnets.
- Gujarat contributed 31%, followed by Tamilnadu 29%, Andhra Pradesh 12% and Kerala 10%.
- P. pelagicus* (blue swimming crab) has high export value.
- No drastic decline or signs of overexploitation of stock has been observed.

Prepared by : Vipinkumar V.P., Mohamed K.S., Radhakrishnan E.V., Ganga U., Salini K.P. & Abhilash P.R., (2012)