



# Estuarine Fishes of Uttara Kannada

Mahima Bhat<sup>1,2</sup>, M.D. Subash Chandran<sup>1</sup>, V.N. Nayak<sup>2</sup> and T. V. Ramachandra<sup>1</sup>

<sup>1</sup>Centre for Ecological Sciences, Indian Institute of Science, Bangalore.

<sup>2</sup>Dept of Marine Biology Kodibag, Karwar .

Email:mahima38@gmail.com; mds@ces.iisc.ernet.in; cestvr@ces.iisc.ernet.in; venkat\_nike@rediffmail.com

## Estuaries and fishes

- Estuary is the meeting place of river and sea, where fresh water mixes with sea.
- They are among the most productive ecosystems.
- Estuaries act as nurseries and feeding grounds for many marine fish and prawns.
- Uttara Kannada estuaries are well protected through the generations for it's livelihood



- Fish diversity was studied in Uttara Kannada during June 2011 - May 2012.
- Specimens were collected during every month and fishermen interviewed on species availability seasonally
- Collected specimens were preserved in Kumta centre of CES, Indian Institute of Science

## Carangidae



*Carangoides praeustus*



*Carangoides chrysophrys*



*Megalaspis cordyla*



*Caranx ignobilis*



*Atule mate*

## Estuary

## Taxa

|             |    |
|-------------|----|
| Kali        | 58 |
| Gangavali   | 54 |
| Aghanashini | 77 |
| Sharavathi  | 29 |

- Most estuarine fishes are euryhaline tolerant of wide ranges of salinity; they are mainly from 4 orders
- Fish diversity in Sharavathi is poorest due to impact of hydel projects, lowering salinity
- Most estuarine fishes breed in sea and youngones enter estuary for feeding.
- Some marine fishes might enter the estuary if water salinity crosses 30 ppt. These are stenohaline fishes.

## Lutjanidae



*Lutjanus johni*



*Lutjanus argentimaculatus*



*Lutjanus ruselli*

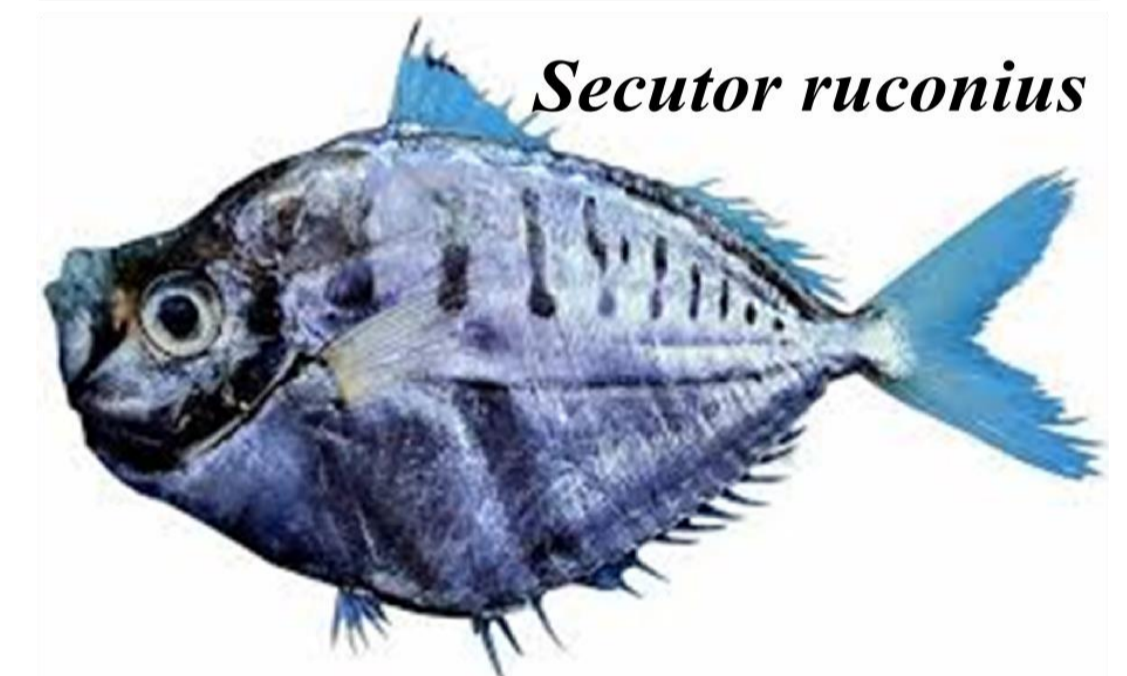
## Leiognathidae



*Secutor insidiator*



*Leiognathus splendens*



*Secutor ruconius*

## Engraulidae



*Stolephorus indicus*



*Stolephorus commersoni*



*Thyssa mystax*



*Thyssa malabarica*



*Thyssa setirostris*

## Stenohaline marine fish visitors to the estuary

The stenohaline marine fishes, notably mackerels (*Rastrelliger kanagartha*), white pomfret (*Pampus argenteus*), Black pomfret (*Parastromateus niger*), King fish (*Scromberomorous commerson*) appear in the estuary, when salinity level rises above 30 ppt, during the pre-monsoon months.



*Scromberomorous commerson*



*Rastrelliger kanagartha*

*Pampus argenteus*



*Parastromateus niger*

**Acknowledgements:** We are grateful to the Ministry of Science and Technology, Government of India, Karnataka Forest Department and Indian Institute of Science for the financial and infrastructure support. Mr. Shrikanth Naik is thanked for assisting in the field.