

Distribution, Abundance and Diversity of Finfish Species of Family Engraulidae Collected from Sonmiani Bay, Balochistan, Pakistan

Noor Hawa, Noor Us Saher

Centre of Excellence in Marine Biology, University of Karachi, Karachi, Pakistan

*E-mail: noorusaher@yahoo.com

ABSTRACT

Introduction: Engraulidae family is widely distributed in all the marine habitats, which are extended from 60°N to 50°S. The members of this family are commonly known as anchovies or Engraulids. These fishes are found in abundance in Indo Pacific Ocean, Atlantic and Indian Ocean. Currently this family included 151 species and 17 genera (Patadiya et al., 2018). These fishes are small to medium size pelagic fishes that exhibits as schooling form in tropical and sub-tropical coastal regions (Lavoué et al. 2010; Mahboobeh et al., 2020). They are moderate size in length with a dominant snout overhanging the mouth and they mostly feeds on plankton and play an important role in balancing of ecosystem because of their huge biomass that makes a link in food chain and energy web (Ganias 2014), moreover anchovies are main source of food for human enriched with protein and lipid (Francisco 2008).

Objective: The main purpose of this study to observe the seasonal diversity, abundance, distribution pattern of fin fish species of family Engraulidae collected from Sonmaini bay.

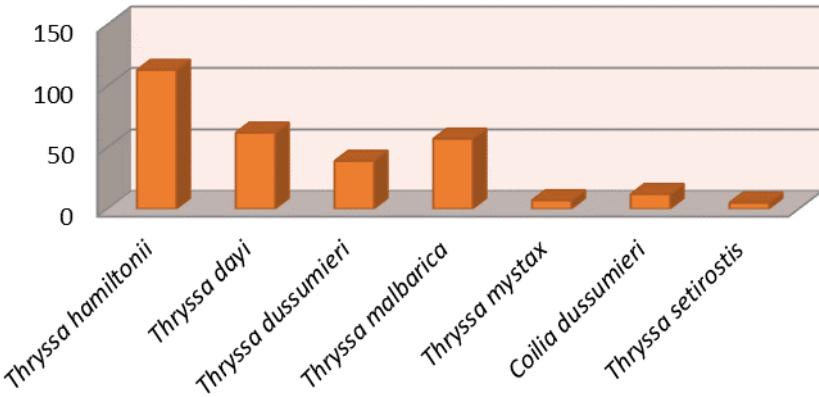
Materials and Methods: The Sonmiani beach stretched about 60 km in length and 7 km in width, contorted body of waters that inter connected to the Sea through 4 km wide mouth. The areas from the mouth of the bay known as; sand dunes front, area of Dam jetty, Off Dam mangrove creeks, and Bhaira mangrove creeks. The site is a crucial fishing point for their resident and the area also favors the use of all types of fishing gears since the bottom is muddy with occasional sandy patches. Gill net with the mesh size of 2.5 cm and beach seine with the 1.5 cm of mesh size fishing gear were used in the present research.

Results: The seasonal diversity was observed for the finfish species of family Engraulidae. The present study reported 7 different species (*Thryssa dayi*, *Thryssa malbarica*, *Thryssa dussumieri* *Thryssa hamiltonii*, *Thryssa mystax*, *Thryssa setirostris*, *Coilia dussumieri*) of family Engraulidae throughout the year during October 2021 to sep 2021. The *Thryssa hamiltoni*, was the most abundant species found throughout the year (Figure 1). Furthermore, morphometry of each species was taken by their parameter likewise weight, total length and standard length.

Conclusion: The seasonal diversity and abundance was observed in different species of family Engraulidae as have been study throughout the year from Sonmiani waters.

Keywords: DNA barcoding, diogenidae, Phylogenetic tree, MEGA-X, AT content

Species of Engraulidae found in Sonmiani Bay



REFERENCES

1. Francisco Araújo, et al., "Habitat selection by anchovies (Clupeiformes: Engraulidae) in a tropical bay at Southeastern Brazil." *Neotropical Ichthyology* 6 (2008): 583-590.
2. Ganias, Konstantinos, ed. *Biology and ecology of sardines and anchovies*. CRC Press, 2014.
3. Lavoué, Sébastien, Masaki Miya, and Mutsumi Nishida. "Mitochondrial phylogenomics of anchovies (family Engraulidae) and recurrent origins of pronounced miniaturization in the order Clupeiformes." *Molecular Phylogenetics and Evolution*. 56.1 (2010): 480-485. <https://doi.org/10.1016/j.ympev.2009.11.022>.
4. Mahboobeh, Afrand, et. al., "Morphological identification and molecular validation of anchovies (Engraulidae) in the Persian Gulf and Oman Sea." *Zootaxa* 4742.2 (2020): 375-391.
5. Patadiya, D. S., et al. "Length: weight relationship and relative condition factor of Indian anchovy *Stolephorus indicus* (van Hasselt, 1823) from Thoothukudi coastal waters." *J Entomol Zool Stud* 6.2 (2018): 279-282.