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Traditional Cephalopod Aggregating Devices Used in Palk Bay Region of Ramanathapuram District

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SUMMARY

The study revealed that there are 6 types of Cephalopod Aggregating Devices (CADs) viz., Phoenix sylvestris (Eechamaram leaf), Coconut leaf and spadix, Palm leaf, Casuarinae pine, Tephrosia purpurea (Kolanji), Rosopis juliflora (Mesquite) are used along the Palk Bay coast of Ramanathapuram District. Among the six types of CADs recorded during the study, the higher use of Phoenix sylvestris may be attributed to more attractive nature compared to other types of CADs. The fishermen are operating the CADs especially to catch cephalopods such as squid and cuttlefish. These aggregating devices are traditionally used by the fishermen to attract and aggregate the cephalopods closer to the shore. These objects are known to attract them effectively and increase the productivity of the area as they serves as feeding grounds by providing surface area for fish food organisms and even act as suitable spawning ground by giving substratum for the attachment of eggs. The study carried out during the period from March to August.

INTRODUCTION

Cephalopod jigging accounts for nearly 40 percent of the world cephalopod catches followed by trawling. In Tamil Nadu cephalopods are caught 11% by jigging. Cephalopods occur in marine habitats like benthic, cryptic or burrowing in coral reefs, grass flats, sand, rocks and mud (Lipton *et al.*, 1990). Cephalopods are soft-bodied, bilaterally symmetrical animals found in Open Ocean with a well-developed head and a body that consists of the muscular mantle cavity that houses the internal organs (Geetha *et al.*, 2006). The economically important cephalopods in India are the squids, cuttlefish and octopus.

Construction of CAD

A rope is connected to the thermocol which act as a marker float and the other end is connected to the attractant mainly *Phoenix sylvestris* (*Eechamaram*) (Fig.1), *Rosopis juliflora* (Mesquite) (Fig.2), *Tephrosia purpurea* (*Kolanji*) (Fig.3), *Casuarinae quisetifolia* (Pine) (Fig.4), Palm leaf (Fig.5), Coconut leaves (Fig.6) and spadix, *etc*., are fitted along with water bottles and thermocol which act as floats and a bag filled with sand is attached as the sinker. The construction cost is too low as it is made from natural materials.


Fig.1. *Phoenix sylvestris*


Fig.2. *Rosopis juliflora* (Mesquite)


Fig.3. *Tephrosia purpurea* (*Kolanji*)


Fig.4. *Casuarinae quisetifolia* (Pine)

Fig.5. Palm leaf

Fig.6. Coconut leaf

Fishing Practice

The fishermen use their craft (FRP & Wooden *Vallam*) to reach the fishing ground, with them they carry the thermocol (polystyrene) platform, after reaching the fishing ground each fishermen using their platforms travel and deploy to various location to demount the CADs and return back to their vessel (Fig.7). Each fisherman usually covers about 5 to 10 CADs each day. The distance between each CADs is about 50-100 m. The aggregating devices used have natural attractants. The major species caught are *Sepioteuthis lessoniana, Sepia pharaonis, S. prabahari* (Sundram and Desmuk, 2011).

Fig.7. Deployment of *Eechamaram* leaf

Fig.8. After one week

CONCLUSION

The CADs are eco-friendly and on rapid decay promote growth of periphyton and other food organisms. Because of their short-life, it warrants recurring costs for the fishermen. In spite of their small size, it is observed that they act as good habitat enhancement units and help in aggregating large numbers of cephalopods and reduced the fishing pressure. Compared to all the other attractants *phoenix sylvestris* (*Eechamaram* leaf) is considered to have longer lifespan.

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