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Background

Swarming dynamics of scyphozoan jelly fishes have great influence on the coastal ecosystem, wherein some scyphozoan are filter feeder and others are piscivores/carnivores. The summer swarming of jellyfishes along the Gulf of Mannar and Palk Bay coast was monitored since 2013 during the months from April to September, and different species of jelly fishes could be recorded in the coastal waters. Furthermore the beach seine operation hauls in several tons of jellyfishes during their operation along this coast, creating a nuisance situation in the fishing operation. Hence the present study was attempted to document the different species of jelly fishes which are found in the coastal waters of Gulf of Mannar and Palk Bay.

Materials and Methods

During the summer months (April to September) along the coast of Gulf of Mannar and Palk bay weekly sampling was carried out for three years since 2013. The important shore seine operation area like Dhanuskodi and Panaikulam in the Palk Bay and Kundhukal in Gulf of Mannar were covered for sample collection. The freshly collected jelly fishes were brought to the laboratory of Mandapam Regional Centre of CMFRI and their morphological characters were studied to arrive at the species. During such sample collection visit in 2016, specimen of *Phyllorhiza punctata* was collected, which is considered to be an invasive species and a native of Australian and Phillipines waters and commonly called Australian white spotted jelly fish.

Results

The continuous monitoring of jelly fish swarm in the Gulf of Mannar and Palk Bay since 2013 revealed that there are nine species have been found to occur in these waters during the summer months.

<i>Mastigias cf. papua</i>	<i>Crambionella stuhlmanni</i>
<i>Netrostoma coeruleus</i>	<i>Cyanea cf. nozakii</i>
<i>Cassiopea cf. andromeda</i>	<i>Aurelia aurita</i>
<i>Chrysaora caliparea</i>	<i>Phyllorhiza punctata</i>
<i>Rhopilema cf. hispidum</i>	

During every year in May and June months the intensity of swarm of *Chrysaora caliparea*, *Cyanea cf. nozakii*, *Rhopilema sp.* and *Netrostoma coeruleus* is very high and the entrapment of these huge size jelly fishes hindering the shore-seine fishing activity, where manual labour is employed to drag the net. This cause considerable economic loss to fisher folks who are actually operating the shore seine for shoaling fishes but invariably get jelly fishes in their net during these swarming months.

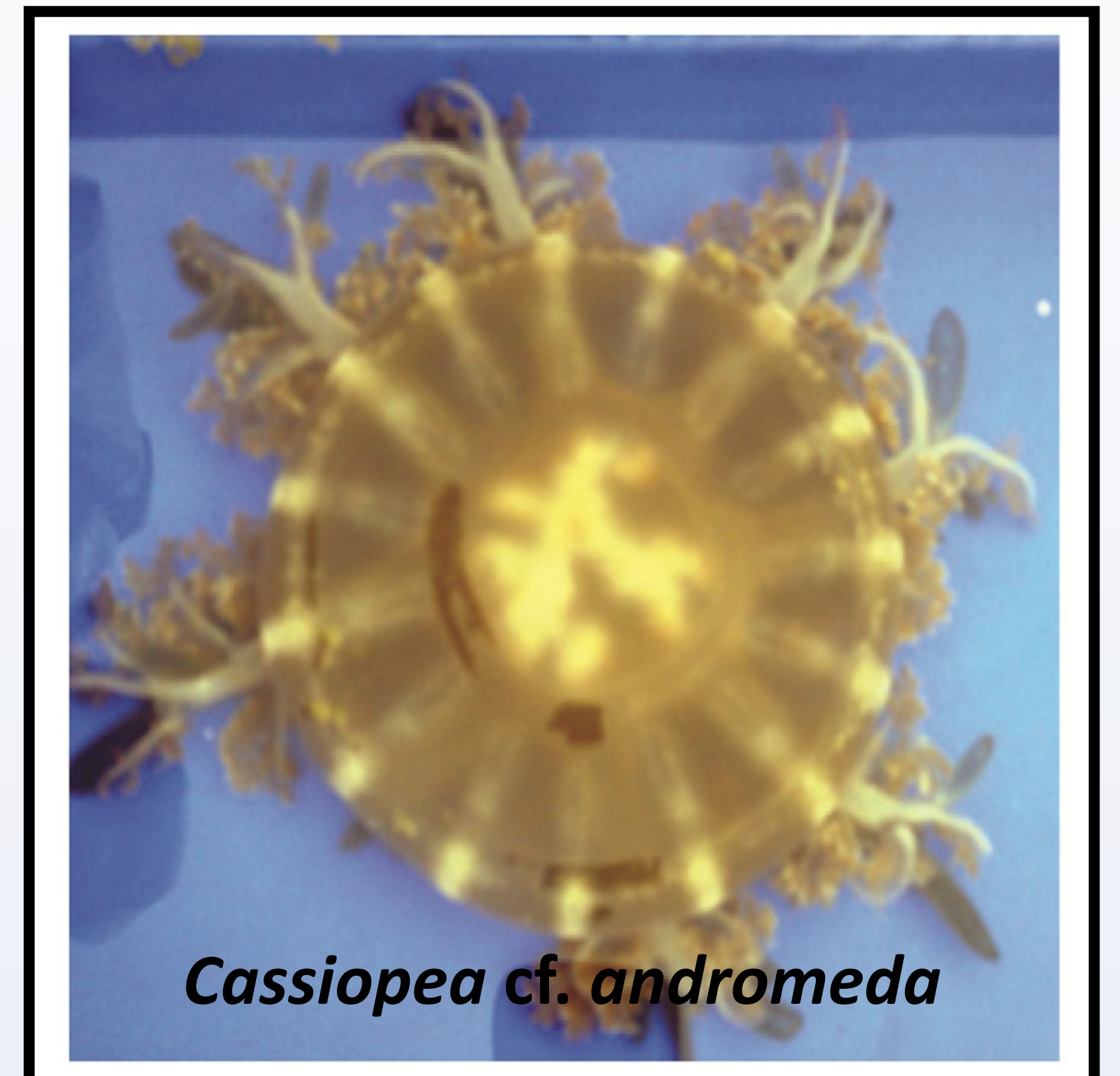
The range of *P. punctata* has expanded over the past century to include tropical and subtropical waters of all three major oceans and the Mediterranean Sea through unintentional human mediation. *P. punctata* appears to be particularly adept at invading new territories.



Jelly fish *Netrostoma coeruleus* trapped in shore-seine net operated along Panikulam area of Palk Bay



Cyanea cf. nozakii



Cassiopea cf. andromeda



Chrysaora caliparea



Rhopilema cf. hispidum



Mastigias cf. papua



Phyllorhiza punctata

Summary

The present investigation on Scyphozoan diversity and distribution has recorded 9 species of jelly fishes along the Gulf of Mannar and Palk bay coast in a four years study period. This study further recorded the *P. punctata*, a jelly fish considered to be an invasive species. Further monitoring studies would reveal the swarming jelly fish diversity in these waters and the mechanism involved in triggering swarming.

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