

The invasive mussel *Mytella strigata*: Impacts on fisheries and farming

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An alien species of mussel, the American brackish-water mussel *Mytella strigata* native to Central and South America has established recently in backwaters of Kerala, blocking nets in fish or cage farms. This species was recently reported from the Philippines, Singapore and Thailand, where its population has expanded exponentially in the last two years. *M. strigata*, the newly introduced marine invasive species was recorded from various places

in Kerala such as Vembanad Lake, Kadinamkulam, Paravur, Edava-Nadayar, Ashtamudi Lake, Kayamkulam, Chettuva and Ponnani. Mytilids typically have a high fecundity, rapid growth rate, are filter feeders and are tolerant to a wide range of environmental conditions. The *M. strigata* was initially reported from major ports, establishing the route of introduction to new areas through ballast waters transport or hull fouling on ships. It is a potential



Mussel spat along with *M strigata* in Chettuva estuary

threat to lucrative bivalve aquaculture as they could out-compete native mussels as well as cage farming. Hence the Molluscan Fisheries Division initiated a focussed drive on creating awareness among the stakeholders regarding the invasive mussel and its impacts on the fisheries as well as farming activities. A webinar was organized for stakeholders that included the mussel / clam / oyster pickers, fish farmers, crab farmers, Farmer's Association Leaders and fisheries department officials from Kerala, Karnataka and Goa. Dr. K. K. Appukkuttan, Advisor to the Fisheries Department of Kerala suggested eradication / prevention of spreading of this non-native mussel species through the combined efforts of the Fisheries Departments, the local communities, scientists and local governing bodies. Incentives to farmers / cooperative societies involved in the eradication drive as well as an economic evaluation of its impact on fisheries and farming was also proposed. Measures suggested for preventing the establishment of non-native species that may cause ecological and economic havoc were as given below:

- All-out efforts should be taken to prevent, control and eliminate *M. strigata* from establishing in our waters.
- Since the species is edible (though not as tasty as green mussel) they can be heavily fished and consumed.
- It can also be utilized as ingredient in fish /animal feed
- *M. strigata* should not be used for farming, as it will promote further spreading. Strict monitoring should be done by the Department of Fisheries to ensure that this species is not used for any farming activity.
- If found attached to cages/nets or any other materials they should be removed and kept out of the water body to ensure its eradication.
- Boat hull fouling by *M. strigata* is a major concern. Periodic scrapping of biofoulers from boat should be undertaken outside the water body



M strigata attachment on fish culture cage units

