PERIODICITY AND NATURE OF FOULING ORGANISMS AND PREDATORS IN MUSSEL CULTURE

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The edible brown mussel, Perna perna found on mussel beds off the west coast of Sri Lanka is a culturable species whose commercial culture is as yet not practiced in Sri Lanka. During growth of spat in culture, various organisms attach onto mussels/culture ropes as fouling organisms or as predators. The result is growth retardation and/or death of mussel so that the manual removal or avoidance of the "nuisance" organism becomes necessary. A possibility is to time spat collection and culture operations so as to avoid intense fouling periods during the more vulnerable stages of mussel culture. This study of over a period of one year used biweekly-sampled spat-collectors suspended from wooden rafts adjacent to mussel beds as well as experimentally grown mussels and quadrat samples from mussel-beds to identify the nature and periodicity of fouling organisms and predators.

From among the permanently-attached fouling organisms, barnacles (Balanus SP.) were the main fouling organisms while Pomatoceros sp. also occurred frequently. Hydroid coelenterates, gastropods, oysters, other polychaetes and crabs were also present. Muricid gastropods and crabs predated extensively on the mussel beds. Algae (mainly filamentous green algae and, to a lesser extent, brown algae) were the dominant plant foulers.

Predatory gastropods were most abundant in February while lesser numbers were recorded in September and December. Marked crab predation occurred in March. The main fouling organism, Balanus sp. settled on collectors almost throughout the year, maximum numbers being available from February to April and around September/October. Spat collection itself, or the placement of spat collectors for lengthy periods, should be avoided during these times.

(This work was funded by I.F.S., Sweden grant no. A/760-1).