

STUDIES ON PRODUCTIVITY AND WATER
CHARACTERISTICS SUITABLE FOR
MUSSEL CULTURE IN SRI LANKA

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In an attempt to identify water characteristics suitable for culture of the edible brown mussel, *Perna perna*, studies involving biweekly sampling were carried out into the annual cycles of productivity and other physico-chemical characteristics of waters sustaining the natural mussel beds off the west coast of Sri Lanka. The favourable growth that these waters support, form the basis of subsistence mussel fishery involving the regular collection of marketable-sized mussels by local fishermen.

Net productivity was minimal in July/August and December while high values were maintained from late February to early June. Peak values in community respiration were recorded in May and June, high values in August and November while values were low in January and July. Dissolved oxygen ranged from 6.1 to 7.6mg/l and p^H from 7.9 to 8.8. Salinity varied from 16 (in June) to 34ppt (from January to March and in September) and surface-water temperature from 27 (in June/July) to 32 degrees C. (in April). Highest turbidity was from May to July while clear waters prevailed in February and March.

The study shows that coastal waters with characteristics fluctuating within defined limits (eg. decreases in salinity over short periods to 16ppt) sustain growth in mussels so that such waters form potential mussel culture sites.

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