OPEN-WATER MUSSEL CULTURE TRIAL

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Mussel culture in New Brunswick is generally practised in sheltered locations. However, the rearing sites currently in demand are becoming increasingly rare given the distinctive characteristics associated with this type of culture.

In an effort to remedy the situation, Thomas Kenny, a lobster fisherman from the Stone Haven area near Bathurst, is conducting a pilot project in co-operation with DAFA aimed at determining the technical and financial feasibility of engaging in open-water mussel culture in Chaleur Bay. Chaleur Bay certainly has good potential for suspended culture in view of its physicochemical parameters. These parameters are an environment favourable to mussel growth, as well as appropriate salinity, temperature, and water quality. However, the physical characteristics of the environment require the use of techniques that are different from those currently in use in sheltered, shallow bays.

The technique now being evaluated in Chaleur Bay is comparable in many ways to the technique used by mussel growers in the Mediterranean region (France). It seems to be the one best suited to our environmental conditions.

This technique requires the use of longlines 200 metres in length that are equipped with five anchors and 800-litre buoys, unlike traditional longlines, which have only two anchors and 20-litre buoys (see diagram).

In the spring, socks five metres in length were attached to the longlines. These longlines are maintained at mid-water depth, or about eight metres below the water surface, at all times. They are kept at this depth in order to limit the constant churning at the surface caused by waves in bad weather. This churning causes the mussels to fall to the bottom and greatly reduces harvest yield. Also, keeping the longlines at this depth minimizes the risk of their being swept away by pack ice during the spring breakup.

Monitoring of mussel quality and growth in socks is currently being carried out, as is the floating capacity and durability of the equipment in the water. In addition, a profitability assessment regarding the use of this technique will be carried out.

The results obtained since May 2003 have been promising so far, and if everything goes well, the mussels' winter growth and the structure will react well to the fall and winter conditions. The mussels could reach harvest size in spring 2004.

DAFA's role in this project consists in providing field monitoring as well as expertise and scientific support for this research and development project.

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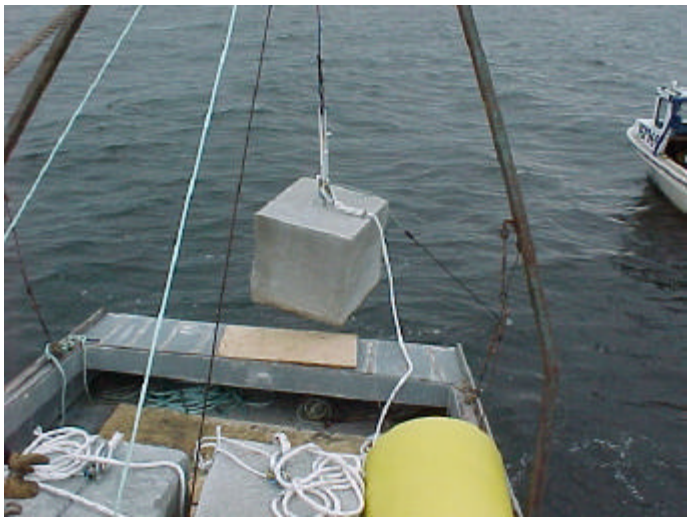
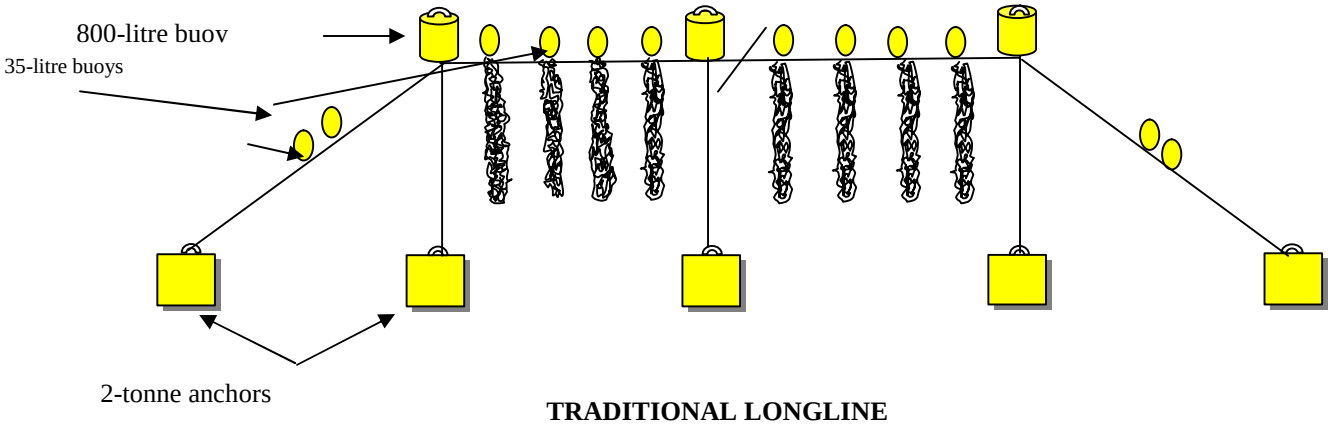
Preparation of buoys used at each anchor point before the longlines are set in the open water.



Setting of buoys and anchors in the open water in May 2003.

Setting of longlines in the open water.

DIAGRAM SHOWING A
MEDITTERANEAN-TYPE LONGLINE



TRADITIONAL LONGLINE