LEARNING PORTAL

ROYAL BC MUSEUM

Violet Tunicate (Botrylloides violaceus)

An alien colony is spreading across the ocean.

Colonial Tunicates, also known as Sea Squirts, are made up of tiny individual organisms called zooids that connect to form a colony. The Violet Tunicate is one such species and is seen on docks, boat hulls, buoys, ropes, the undersides of rocks, seaweed or eelgrass, and growing over mussels. In spite of its name, this species varies in colour, from brilliant purple to orange, yellow and red. Violet Tunicates have few predators and their growth has been rapid. They are a rising threat and a serious concern for the fish and shellfish farming (aquaculture) industry.

The introduced Violet Tunicate (not always violet coloured, overgrowing other tunicate species and mussels.

Impact on Communities and Native Species

Despite being a newcomer, the Violet Tunicate is already a major problem for native species, habitat and the aquaculture industry in British Columbia. Once the Violet Tunicate becomes established, it spreads aggressively and is extremely difficult to eradicate. In a natural environment, the Violet Tunicate competes for space with native species, overgrowing and smothering other organisms in dense mats. In aquaculture operations, colonies may infest cages or equipment, eliminating the flow of oxygen and available food particles. They also settle on artificial surfaces such as docks and pilings, fouling fishing gear, ropes and moorings.

Invasion History

The Violet Tunicate is native to Japan and was first reported in British Columbia in the 1990s. It has been collected from the Strait of Georgia, Johnstone Strait, the southwest coast of Vancouver Island and Haida Gwaii. Given the amount of suitable habitat along our coastlines, the species is expected to spread extensively, if it hasn't already. This tunicate most likely arrived directly from Japan, hitchhiking on Pacific Oysters. It also travels in fishing gear, on floating debris, and on the hulls of ships, including recreational boats, fishing boats, container ships and tankers.

Identifying Characteristics

- colonies vary in colour from purple to burgundy, bright orange, yellow or tan, but each colony is usually a single, solid colour
- each colony comprises numerous individual zooids that are arranged into rows
- colonies are soft, smooth and fleshy in texture
- shape is often determined by the surface on which the colony grows, resulting in a variety of forms from thin, flat encrusting mats to thick, irregular lobes or projections