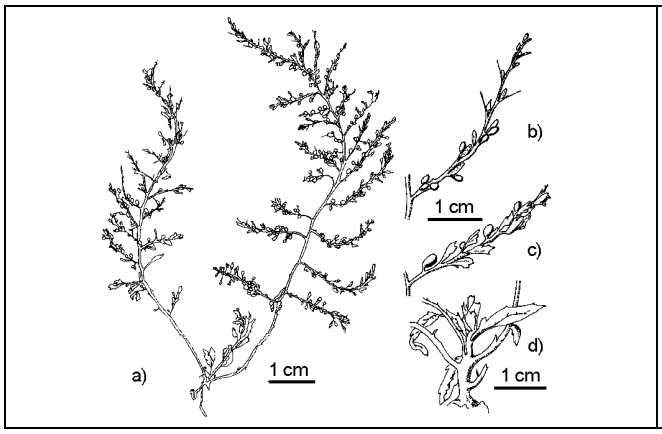
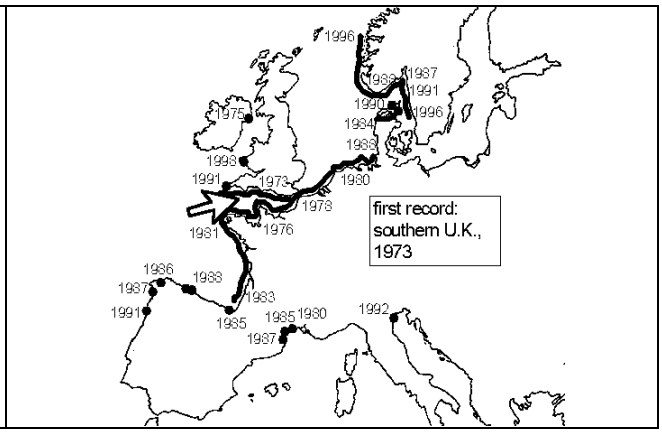
Sargassum muticum (Yendo) Fensholt, Sargassaceae, Fucales, Phaeophyceae

Common names: Japweed, Wire weed, Strangle weed, (English), Sargassosnärje (Swedish)



Sargassum muticum [after 46]. a) Winter morphology, b) detail branch: summer morphology, c) winter morphology, d) detail: perennial primary shoot.



Known coastal distribution of *Sargassum muticum.*

Impact: (* = possibly harmful, ** = harmful, *** = very harmful, ? = not known, $ = beneficial)

Resources/Environment			**Uses of the Sea**		
Commercial stocks	?	Commercial uses tried without much success.	Fisheries	* or $	Clog and foul nets, hinder to sport fishery. Attract fish.
Other biota	**	Competing with other seaweeds. Seagrass beds may be second-arily affected by habitat changes.	Aquaculture	**	Foul ropes, lines, bags etc., grow on molluscs and may drift away. Difficult to spot oysters.
Human health	?	Can harbour epiphytic invertebrates causing allergy.	Water abstractions	*	Drifting plants may block water intakes.
Water quality	*	Dense canopies accumulate silt.	Aquatic transport	**	Entangle in boat propellers, tricky manoeuvring in beds, foul pontoons and piers.
Habitat modification	* or $	Large, long canopies change the habitat, reduce light and water movements. Shelter for animals	Tourism	**	Sandy bays can become dense algal beds. Detached plants accumulate on beaches.

Vulnerable habitats: Especially sheltered to semi-exposed areas not densely covered by other seaweeds, harbours or aquaculture sites. Sandy areas with small stones, pebbles and shells, or free patches in seagrass beds. It may become established in all warm and cold temperate areas of the world in not too exposed areas, also in brackish water (at least in salinities above 16 ‰). Enhanced by polluted and nutrient-rich waters, but does not tolerate desiccation. Easily spread by drifting fertile branches or transfer of molluscs.

Biology: The life cycle consists only of the large pseudo-perennial plant, up to 5-10 m long. The long, annual branches have numerous small (<0.5 cm) round air-bladders, making plants stand upright in the water or float on the surface, and small leaf-like branches. Attached by a disc-shaped holdfast to rocks, stones, pebbles, artificial substrates (ropes and mariculture structures, glass, plastic, metal etc.) and also to shells, barnacles, tunicates and occasionally seaweeds. Plants on pebbles or shells often drift away. The lateral branches detach in summer-autumn in cold waters, leaving only a short perennial stem with coarse, broad leaf-like branches which overwinter. In warm waters long plants may persist all year. Even small pieces of holdfasts can regenerate branches.

Reproduce by the <1 cm long receptacles producing both eggs and spermatozoids. Thus one single plant can multiply with a potential for many millions of germlings. Fertility depends on temperature, in summer-autumn in cold waters, may occur all year in warm waters. The small embryos remain on the receptacles until rhizoids are developed, giving a competitive advantage. After detaching they sink and reattach immediately to any surface encountered by the rhizoids and develop a new plant with a holdfast. Old germlings loose ability to reattach.