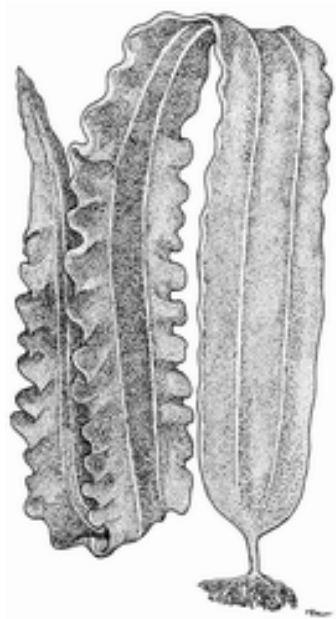




## Species Fact Sheets

### *Laminaria japonica* (Areschoug, 1851)



*Laminaria japonica*: (click for more)

See tree map [↔](#)

## Synonyms

- *Laminaria fragilis* Miyabe, 1902(basionim).

## FAO Names

En - Japanese kelp, Fr - Laminaire du Japon, Sp - Laminaria del Japón.

3Alpha Code: LNJ Taxonomic Code: 7710200202

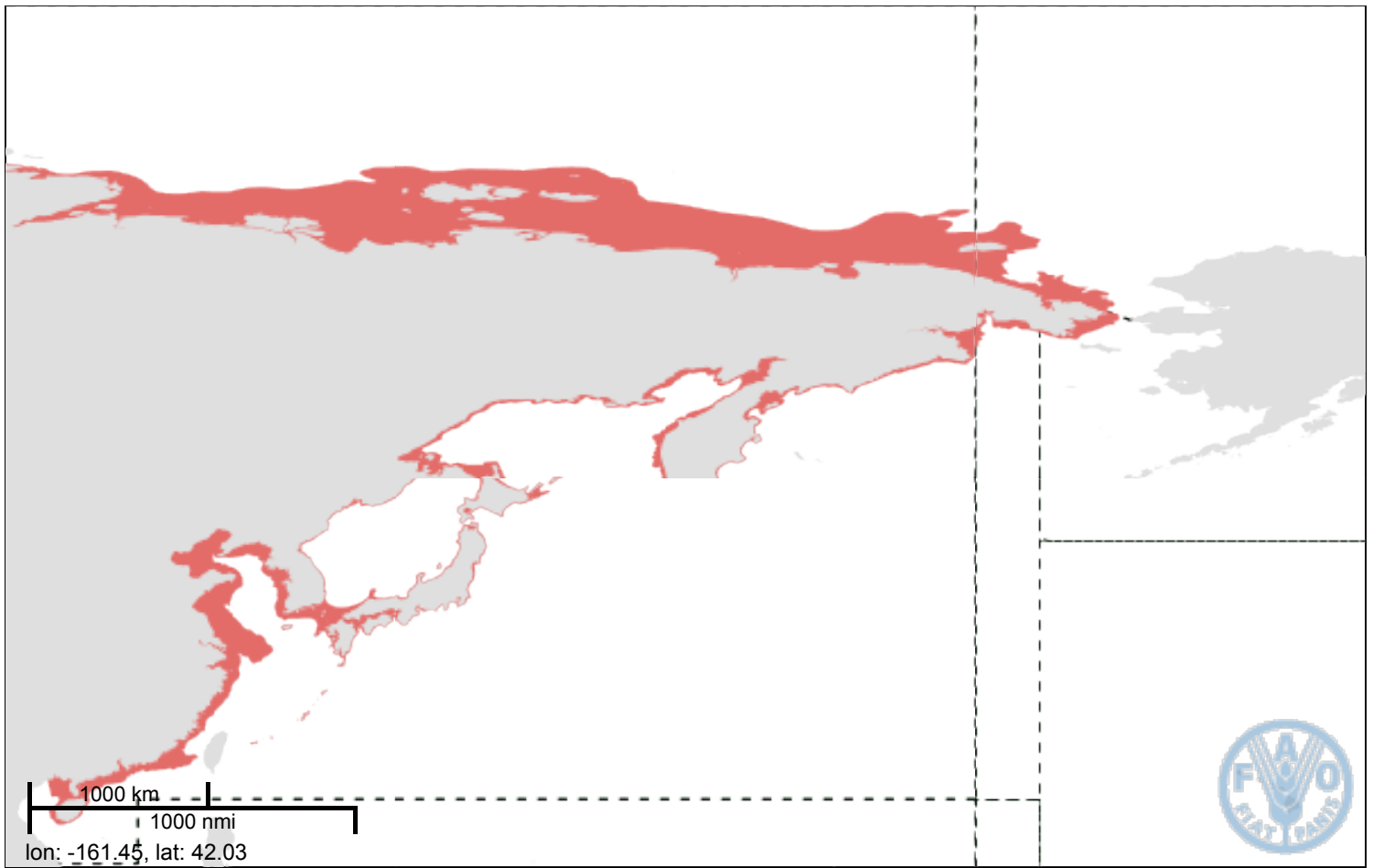
## Scientific Name with Original Description

*Laminaria japonica* Areschoug, 1851. *Phyceae Capenses*. Uppsala, Sweden.

## Diagnostic Features

Thallus consisting of root-like holdfast, short stipe and blade. Blade long-belt shaped, up to one meter long, 10-20 cm broad, with margin undulate and overlapping, thick at the middle and thin at the margin. A short and small stipe and holdfast at the base of the blade. Holdfast sturdy (presenting haptera) with which the algae is fixed to rocky substratum. Colour: thick dark green; blade surface brown, occasionally glaucescent.

## Geographical Distribution



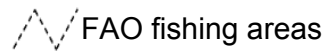
**Launch the Aquatic Species Distribution map viewer**

*Species distribution*

**Laminaria japonica**



*Base layers*



NW Pacific: Japan, Hokkaido, Korea, China, Coasts of Siberia (Levring et al., 1969). Mediterranean: France (accidentally introduced to Thau lagoon together to other algae (*Sargassum muticum* and *Undaria pinnatifida*)).

## Habitat and Biology

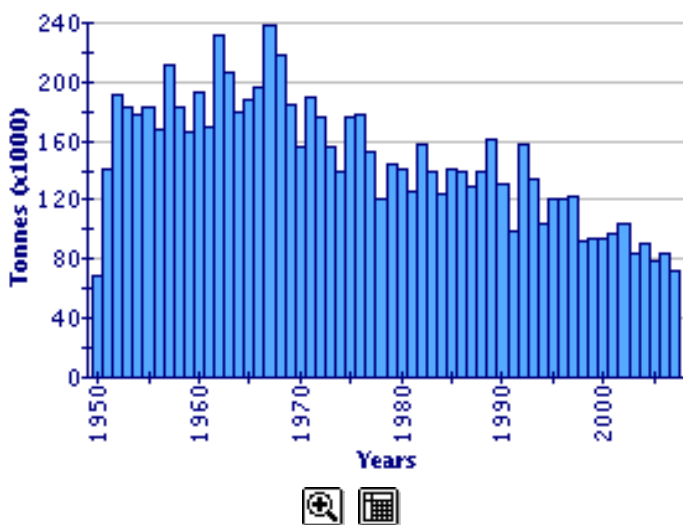
Seaweds of *Laminaria japonica* grows in subtidal areas from the upper infralittoral level. Sessile. Primary producer. *Laminaria* exhibit alternation of generations with heteromorphic (morphologically dissimilar) reproductive phases. The asexual diploid phase, the sporophyte, is of considerable size, while the gametophyte, the haploid dioecious phase, is microscopic. Sporophytes produce large numbers of haploid zoospores from sporangia (the called sori) situated on the blade. Zoospores develop into microscopic dioecious haploid gametophytes, male plants producing spermatozoid and female plants developing oogonia. Sori are produced all year round with maxima in July - August and November - December. Also, fragments of gametophytes may develop into new separate gametophytes. In winter, at the beginning of the vegetative period, a new thallus grows from the stipe while the old blade gradually dies. The gametophytes need low temperatures (and blue light) as optimal conditions to become fertile.

## Size

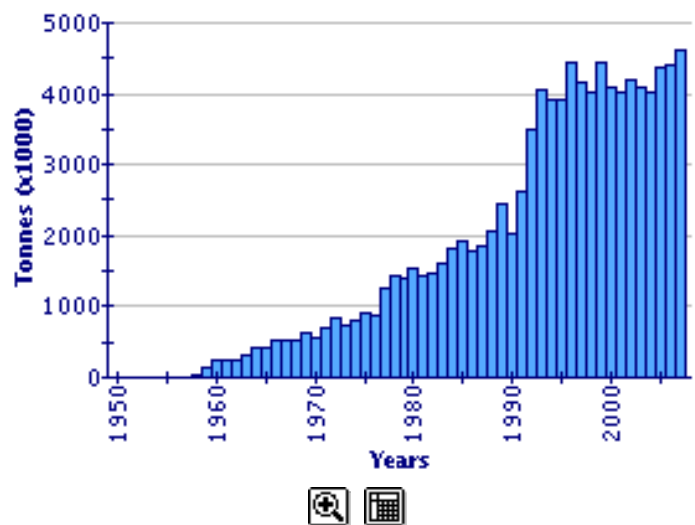
Normal size to around 3 m.

## Interest to Fisheries

**Global Capture production for *Laminaria japonica***  
(FAO Fishery Statistic)



**Global Aquaculture production for *Laminaria japonica***  
(FAO Fishery Statistic)



In 1976 about 176,000 wet tonnes of *Laminaria* spp. were collected in Japan from wild sources and about 22,000 t were cultivated. Introduced from Japan, the intensive seaweed cultivation in China occurs since 1951. Harvest production: 62 tonnes (1952), reaching three million tonnes dry weight in 1998. Grazers (gastropod snails, amphipods), and diseases (some fungi) can cause great harms to cultivated kelp (the quantity of cultivated algae can lower up to 85%) (Ivin, 1995).

Used frequently in Japanese cooking. It is used for making sweets and flavours to foods. Used as a medical drug in Southern China, and as a source of iodine in Russia. Usually sold in dried pieces and found in health food stores and Japanese groceries. *L. japonica* is collected from wild sources and also cultivated (Japan, Chinese coast). Cultivated in blasted areas of rocky shores or by seeding ropes.

Related Fishing Techniques

## Local Names

**CHINA** : Hai Dai , Hai Tai , Kunpu .

**ENGLAND** : Konbu , kelp , royal kombu .

**FRANCE** : Kombu .

**JAPAN** : Makombu , Ebisume , Habariko-Kombu , Hirome , Minmaya-Kombu , Moto-Kombu , Oki-Kombu , Powdered Kombu , Shinori Kombu , Uchi-Kombu , Umiyama-Kombu .  
**KOREA** : Hae Tae , Makombu , Tasima .

**RUSSIA** : Makombu .

**SPAIN** : Kombu .

**UNITED STATES** : Powdered Kombu .

## Remarks

Near 30 species of *Laminaria* are distributed in the Northern Atlantic, Pacific, and Arctic Oceans.

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