

## Macroalgae (Brown) - *Undaria pinnatifida*

<b>DESCRIPTION</b>	brown kelp with long blades, a midrib and 'ruffled' reproductive structure or sporophyll at base, attaches by a root-like holdfast. No swim bladders and stipe (stem) is short relative to the rest of the plant.
<b>RANGE</b>	Islas de Todos, Mexico (Baja) to San Francisco Bay, Ca. Native to Japan, first record on the west coast from Long Beach and Los Angeles, California, 2000.
<b>SIZE</b>	Body from 1-3 m long, but typically up to 1.5 m
<b>STATUS</b>	Invasive, see complete record at <a href="http://undaria.nisbase.org">http://undaria.nisbase.org</a>
<b>COLOR</b>	appears yellow green to dark brown colored when you remove from the water
<b>HABITAT</b>	Often found growing on hard surfaces, both natural and man-made structures such as docks and boat hulls. Can form dense kelp forests in sheltered areas.
<b>TIDAL HEIGHT</b>	low intertidal to 25 m, but most common at 1-3 m
<b>SALINITY</b>	20-38 ppt, but grows best above 27ppt
<b>TEMPERATURE</b>	0-27C, but grows best below 12C
<b>SIMILAR SPECIES</b>	Can be confused with other kelps such as <i>Alaria fistulosa</i> (see picture), <i>Egregia menziesii</i> (has swim bladders and small paddle like blades unlike <i>Undaria</i> ) and several native <i>Laminarias</i> , but the midrib and distinctive ruffled sporophyte distinguishes the species.



© Chela Zabin sporophyte



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mature *Undaria* with sporophyte



©Chela Zabin *Alaria fistulosa*



©Chela Zabin juvenile *Undaria pinnatifida*