

ADDITIONAL RECORDS OF *LAMINARIA OCHROLEUCA*
DE LA PYLAIE

By G. M. Spooner

(Plate I)

Laminaria ochroleuca De la Pylaie was recently added to the British flora by Dr Mary Parke (1948), who found it to occur freely in the sheltered parts of Plymouth Sound. It had first come to notice in 1946 and is possibly quite a recent introduction to the country, though it may have escaped notice for some years. The species can now be recorded from two other localities: Salcombe Estuary (South Devon), and Helford River (West Cornwall).

Salcombe, west side of the estuary, first observed 13 April 1949, a few plants round Woodville Rocks, in an area where all four *Laminaria* species and *Sacchoriza bulbosa* De la Pylaie occurred together in the L.W.S. region. Later, on 12 May, a continuous bed observed, exposed at extreme low water, on the north side of Fort Charles Rocks.

Helford River, north shore at level of E. Calamansack, a few single stunted *Laminaria* plants below E.L.W.S., amongst which was one *L. ochroleuca* (the remainder *L. saccharina* Lamour.) 25 September 1949.

Both the new localities happen to be in estuaries, but in neither of the habitats in which the weeds were found can the influence of fresh water be regarded as appreciable. The fauna of each habitat includes echinoderms (at the Helford River site, large examples of *Marthasterias glacialis* (L.) occurred). It is possibly the relative shelter obtainable in these narrow inlets of the sea that is advantageous to this *Laminaria*.

In the early spring of 1949, after an unusually mild winter, there was a rich growth of various littoral brown algae. An extensive bed of *L. ochroleuca* in Rum Bay, Plymouth Sound, was well exposed by the -2 ft. tide of 16 March, and the zonation relative to *L. digitata* Lamour. well demonstrated. The two zones could be seen mixing and the populations overlapping at about M.L.W.S.

level. On the other hand, not a trace of the species could be detected on the reefs off Wembury Point, where *L. cloustoni* Edm. occupies a long stretch of shore in the region of E.L.W.S. and below. Wembury Bay is decidedly more exposed to wave action than is much of the shore inside Plymouth Sound, and a particular instance of extensive destruction of brown algae occurred during a southerly gale on 3 April 1949, as a result of which, many tons of weed were deposited in the upper tidal zone.

Further evidence was thus obtained that *L. ochroleuca* occupies the same bathymetric levels as *L. cloustoni*, which, on the south coast of Devon and Cornwall, it may tend to replace in sheltered habitats. That these two species are in active competition for the same ground where there is moderate shelter seems a fair deduction, and continued observation is desirable to show how far equilibrium between the two species has been reached.

The photograph in Pl. I, taken by Dr D. P. Wilson at Salcombe, serves to show the main features by which *L. ochroleuca* is distinguished in the field from its nearest ally, *L. digitata*.

REFERENCE

- PARKE, MARY, 1948. *Laminaria ochroleuca* De la Pylaie growing on the coast of Britain. *Nature*, Vol. 162, p. 295.

EXPLANATION OF PLATE I

A plant of *Laminaria ochroleuca* (centre) growing amongst other oar-weeds, Salcombe, May 1949. A plant of *L. digitata* lies behind it with its stipe on the left side, showing the characteristic prostrate habit when left exposed on the shore. Several fronds of *L. saccharina* also lie prostrate. In the *L. ochroleuca* plant the stiffer stipe is semi-erect and the pronounced pale colouring of the base of the frond is well indicated.



Photo by D. P. Wilson