

Contribution to biology knowledge of *Laminaria rodriguezii* Bornet

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*Laminaria rodriguezii* BORNET is an endemic algae of Western Mediterranean. The prostrate branched rhizome of this algae makes the identification easy (1). As this plant lives at great depths (2), it has been very difficult to know its geographic distribution (3). Along the last years, however, it has been collected in other localities (4)(5). This same reason has diffculted the research on both physiologic (6) and anatomic (1) characters.

A study on some anatomic characteristics of this species has been carried out on individuals collected in Spanish localities (Menorca, Ibiza, Islas Columbretes and Peniscola; Herbariums BCF, MA, MACB and F. Boissset).

The prostrate branched rhizome consists in a stoloniferous region (4 - 5  $\mu$ m diameter) where several hapteres (1 - 3  $\mu$ m diameter) part from. The stoloniferous region is cylindrical and its tranverse section (Fig. 1) shows a two celled layer meristoderm, whose cells are 10 - (15) - 20  $\mu$ m long and 7 - (10) - 12  $\mu$ m wide. It presents an outer cuticle of 7  $\mu$ m wide. A bulky cortex is placed inner. The outer part of it is formed by polygonal cells 18 - (25) - 29  $\mu$ m long and 13.5 (19.5) - 22  $\mu$ m wide. Among them, some little mucilage ducts can be seen (Fig. 2), 70 - 84  $\mu$ m diameter. As we go inner, polygonal cells are bigger 12 - (32) - 53  $\mu$ m diameter.

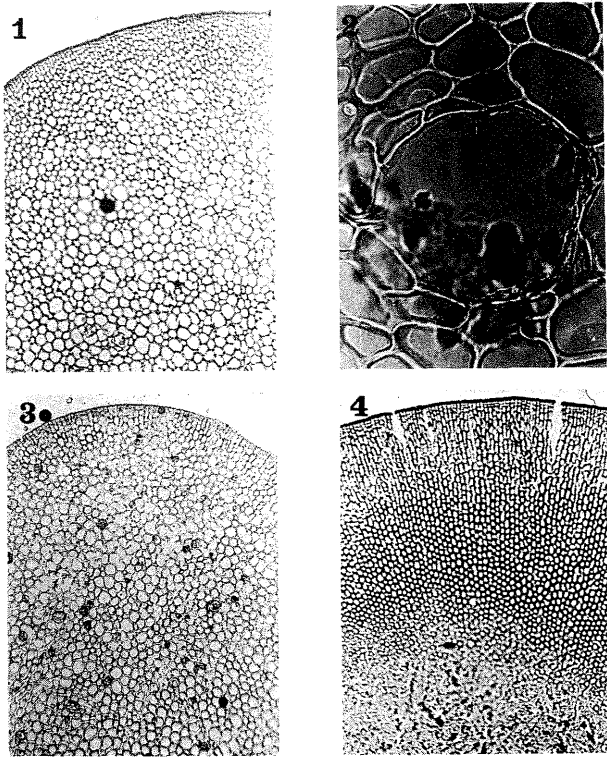
The hapteres transverse section (Fig. 3) is similar both in composition and cell size to rhizome section. On inner cortex cell end walls we have observed 8 - 12 pits.

Stipe transverse section, 3 - 4  $\mu$ m diameter, (Fig. 4) shows a 2 - 4 layered meristoderm. This meristoderm is formed by 12 - (16) - 21  $\mu$ m long, 7 - (10) - 14  $\mu$ m wide rectangular cells. A bulky outer cuticle, 8  $\mu$ m wide, appears. The outer cortex is formed by polygonal cells, 17 - (26) - 30  $\mu$ m long and 8.5 - (13) - 17  $\mu$ m wide. It lacks of mucilage ducts; the inner cortex is formed by circular cells of 10 - (15) - 24  $\mu$ m diameter. The medulla is formed by elongated filaments.

In the blade 3 cellular zones can be distinguished: epidermis, one layer of 9 - (9.5) - 10.5  $\mu$ m long and 5 - (6) - 6.5  $\mu$ m wide cells; cortical zone whose outer cells are more little, 13 - (15.5) - 17  $\mu$ m diameter, than inner cells, 29 - (35) - 40  $\mu$ m diameter; a thin medulla (70  $\mu$ m wide) with elongated filaments.

There are significant differences between stipe and rhizome anatomy. On the other hand, the occurrence, diameter, quantity and distribution of *L. rodriguezii* mucilage ducts, as well as cell pit quantity, is different in other laminariales.

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