

**Low divergence in rDNA ITS sequences among five species of *Fucus*
(Phaeophyceae) suggests a very recent radiation**

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Sequences from the two ribosomal DNA internal transcribed spacers (ITS1 and ITS2) were compared among five species of *Fucus*. Based on the present taxon sampling, parsimony analysis showed that *Fucus serratus* is the sister-group of the remaining *Fucus* species when *Ascophyllum nodosum* was used as an outgroup. The topology of the tree was (*Fucus serratus* (*F. lutarius* (*F. vesiculosus* (*F. spiralis* + *F. ceranoides*))). The extremely low variation observed suggests a very recent radiation of the genus which supports the view widely accepted that the Fucales are among the most evolutionarily advanced of the brown algae. We further note that sequence differences between *Fucus* and *Ascophyllum* were 28% : this does not rule out the utility of ITS sequences within the Fucaceae. The very low number of informative positions allows to demonstrate empirically that distance matrix methods group on the basis of symplesiomorphies.