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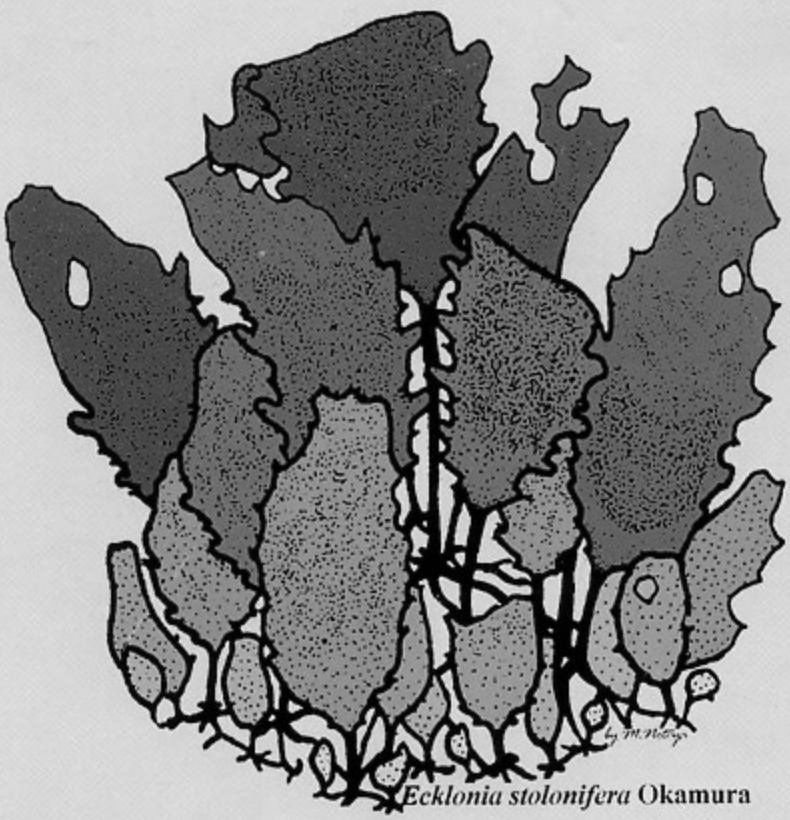
PROGRAM & ABSTRACTS



Ecklonia stolonifera Okamura

Organaized by
The Japan Seaweed Association (JSA)
The Japanese Society of Phycology (JSP)
The Japanese Society of Marine Biotechnology (JSMB)

F_m values between *F. vesiculosus* from different salinities will be discussed.

131 ADVANCES IN THE INVASION GENETICS OF THE BROWN SEAWEED *SARGASSUM MUTICUM*

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The genus *Sargassum* is one of the largest genera of brown algae with representatives in tropical, subtropical and temperate zones of both hemispheres. They are one of the most conspicuous algae in tropical and subtropical waters and play an extremely important ecological, problematic and or commercial role in the systems they inhabit. However, hardly any studies have been conducted on their genetics, both at phylogenetic and population levels. In order to test hypotheses regarding invasions of *Sargassum muticum* both in the USA and Europe we are developing microsatellite markers. We constructed a CT enriched genomic library of 960 clones of which 132 gave a positive signal after hybridisation with a CT probe. This resulted in 61 candidate microsatellite sequences consisting of 53 dinucleotide, 5 trinucleotide, 2 tertranucleotide and 1 pentanucleotide microsatellite repeat motifs ranging from 8 to 18 repetitions. A subset of these microsatellite primers were designed and their degree of polymorphism was tested on 19 *S. muticum* samples from throughout the species distribution. Test were performed on an automated sequencer using a fluorescent labelled nucleotide. Here we report our advances and preliminary results on the invasion genetics of this brown invader.

132 A PHYLOGENETIC APPROACH OF THE ORDER NEMASTOMATALES (RHODOPHYTA) IN THE AZORES AND GULF OF MEXICO

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The red algal order Nemastomatales comprises two families of gelatinous representatives with heteromorphic life histories, the Nemastomataceae and Schizymeniaceae. Recent deepwater collections from the Azores and throughout the Gulf of Mexico have greatly increased the species diversity for the region. The order is especially well represented in the Gulf of Mexico, with several new species of *Titanophora* and *Predaea* to be described. Comparative *rbc*L sequence analysis has revealed that the external habit morphology of vouchers within select species is remarkably variable and cannot be used to distinguish species. Several new taxonomic decisions are proposed: for example, *Schizymenia dubyi*, described from Atlantic France, may be wrongly reported from other parts of the world, and reports of *Platoma cyclocolpum* outside the N. Atlantic are in most likelihood *Platoma chrysymenioides*. New records of *Predaea* and *Titanophora* species for the Gulf of Mexico will also be discussed. Although a firm biogeographic link between the Azores and the Gulf of Mexico is here firmly established with respect to the Nemastomatales, additional taxa from the Macaronesian islands and the Indian Ocean are necessary to correctly assess the global biogeography of the Order.

133 CONTEMPORARY BOUNDARIES OF MACROPHYTE COMMUNITIES IN THE COASTAL ZONE OF THE SOUTHWESTERN SAKHALIN ISLAND (SEA OF JAPAN)

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Since 1950 through 2006, the diving counting algae surveys have been annually conducted along the