

**A202** An Immunological Study on Phycoerythrins of Three *Ceramium* Species (Ceramiaceae, Rhodophyta) from Korea

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The three *Ceramium* species, *Ceramium boydenii*, *C. japonicum* and *C. kondoi* have been used in comparison of phycoerythrin (PE) by absorption spectroscopy, SDS-PAGE and Ouchterlony double diffusion. The absorption spectrum of PE from *C. japonicum*, showing peaks at 500 < 536 < 566 nm, was different from those of *C. boydenii* and *C. kondoi*, showing peaks at 498 < 540 < 566 nm. The subunits of PE from all species showed very similar mobilities in SDS-PAGE. This represented that the comparable subunits of phycoerythrins from all examined species were stable on their molecular weights. Ouchterlony test on polyclonal antibody of PE from *C. kondoi* also showed the antigenic identities with *C. boydenii* and *C. japonicum*. These results indicate that the basic protein structures of PE from the three examined species are highly conserved.

**A203** A Taxonomic Study on the Genus *Porphyra* (Bangiales, Rhodophyta) in Korea

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Twelve species and two forms of the genus *Porphyra* including a new species and a newly recorded species in Korea were examined for delimitation and systematic relationships of the taxa by morphological comparisons, numerical (principal components and cluster analyses) and allozyme analyses. 33 characters were examined on 212 individuals for morphological comparisons and numerical analyses, and 16 enzyme loci on 22 populations for allozyme analysis. As results, *P. suborbiculata* should be rejected because there were no evidence to separate it an independent form. In addition, *P. okamurae* and *P. suborbiculata* were not recognized as separated taxonomic species, so that they were treated as subspecies under the same species. Therefore, the genus *Porphyra* in Korea were rearranged into 11 species and 2 subspecies: *P. dentata* Kjellman, *P. ishigecola* Miura, *P. kataadae* Miura, *P. kuniedae* Kurogi, *P. lacerata* Miura, *P. pseudolinearis* Ueda, *P. seriata* Kjellman, *P. suborbiculata* Kjellman subsp. *suborbiculata*, *P. suborbiculata* Kjellman subsp. *okamurae* (Ueda) Hwang et Lee stat. nov., *P. tenera* Kjellman, *P. venusta* Hwang et Lee sp. nov. and *P. yezoensis* Ueda.