

Diatom 20: 133-143 (英文)

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Abstract

Attached diatoms and water samples were seasonally collected from Szu-Tsao mangrove wetlands, in southwestern Taiwan, from autumn of October 1999 to summer of July 2001. In the 48 micro-algal samples collected from six sites, 35 diatom taxa were identified, and mainly were divided into eight dominant or codominant diatom groups for comparing with the ecological factors by statistical analysis. The eight groups in these wetlands were (1) *Achnanthes* spp. including *A. brevipes* and *A. exilis*, (2) *Amphora* spp. including *A. granulata*, *A. holsatica*, *A. normanii*, *A. exigua* and *A. strigosa*, (3) *Cocconeis* spp. including *C. placentula* var. *euglypta* and *C. scutellum*, (4) *Mastogloia exigua*, (5) *Haslea* sp., (6) *Navicula* spp. including *N. angusta*, *N. cryptocephala* var. *veneta*, *N. cincta* and *N. margalithii*, (7) *Pleurosigma normanii*, and (8) *Nitzschia longissima*. The results showed that mangrove dominant diatoms could do as bioindicators of water condition, for example, *Amphora* spp, *Navicula* spp. and *Pleurosigma normanii* were regarded as the most adapted to the pH value from 7.4 to 9.0, In addition, statistical analysis showed that environmental variables of salinity and nutrient resources of nitrogen and phosphate were the important factors which impacted the growth of diatom groups.

Key index words : bioindicator, diatom, mangrove, wetland