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**Planktonic ciliate community structure and
relationships to environmental variables
in eutrophic coastal waters**

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Planktonic ciliate community structure was investigated to evaluate as biological indicator of environmental conditions in Korean coastal waters. Their species composition, distribution, dynamics, diversity and dominant species were determined based on summer and winter-spring data. Ciliate abundance had no correlation with water quality. However, integrated planktonic ciliate community could generally discriminate the pollution levels of the coastal waters. The total number of species of ciliate community observed in each of the four stations concurred well with the water conditions. Margalef diversity index was assessed as a simple and effective ecological index of environmental conditions. 12 dominant species were determined and some of them displayed restricted distribution along special environmental variables. *Tintinnopsis mortensenii* is the one that positively correlated with COD. *Tintinnopsis baltica*, *Favella ehrenbergii* and *Strombidinopsis sphaera* were significantly restricted to lower total phosphate and higher dissolved oxygen. *Uronema marina* was an indicator of high eutrophication level and low dissolved oxygen. Based on the present survey, there were compositional shifts from the oligotrichous (=choreotrichous) ciliate dominance to gymnostomatid, then to scuticociliatid dominance at higher trophic states. In addition, there were also functional shifts of algivores dominance shifted to nonselective omnivores dominance, then to bactivores-detrivores dominance along the increase of eutrophication.