Abstract
This study examined the diatom assemblages in the surface sediments of two brackish lagoons, Lake Shinji and Lake Nakaumi. The results of this paper are summarized, as follows.

(1) There are distinct differences in composition of diatom assemblages between the two lakes. In Lake Shinji, Cyclotella caspia is dominant, and shares more than 80%. On the contrary, in Lake Nakaumi Cyclotella caspia, Thalassionema nitzschoides, Thalassiosira spp. and Fragilaria flavovirens appear together. Paralia sulcata, one of typical diatom species, which commonly appears in inner bays and brackish lagoons, occurs very rarely only in Lake Nakaumi.

(2) Skeletonema costatum and Chaetoceros sp., which are dominant species in the living planktonic diatom floras of these lakes (Akiyama, 1976-1985 ; Date, 1976-1985), are not found in sediments. The diatom valves of those species are broken easily soon after their death and hardly deposit in lake floors.

(3) Most of fresh water diatoms which are brought into lakes by rivers are deposited within 2km apart from mouths of rivers. However some species (for example, Synedra ulna) are sometimes brought far from mouths of rivers.

Key Index Words
Brackish lake, Depositional Process, Diatom, Lagoon, Lake Shinji, Lake Nakaumi