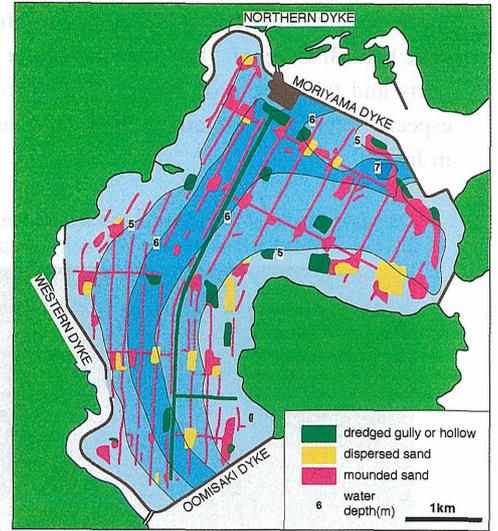


**STUDY OF THE PRESENT**

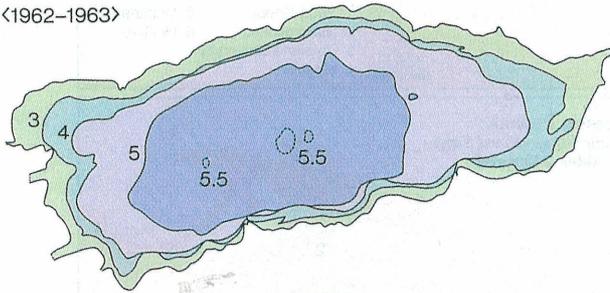
The Lakes Nakaumi and Shinji have been surveyed by various methods of echo-sounding. Lake bottom sediments have been sampled systematically and analysed sedimentologically and geochemically. Organic remains of mollusc, pollen, diatom, ostracod, foraminifer, etc. have also been studied.

	Water surface area	Mean depth	Max.depth	Average water level (TP)
L.Nakaumi	88.7 km <sup>2</sup>	5.4 m	8.4 m	+0.20m
L.Shinji	80.3 km <sup>2</sup>	4.5 m	6.4 m	+0.30m

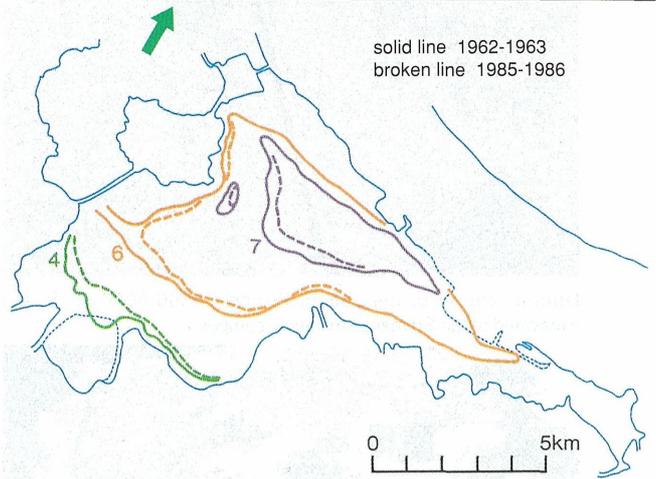
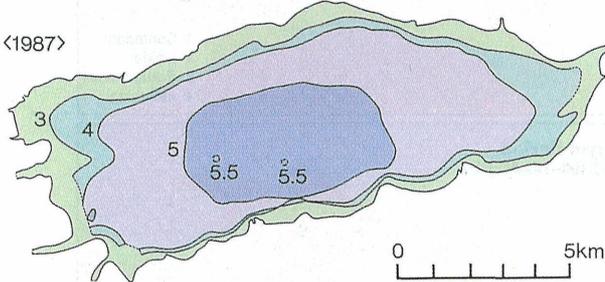


Change in bottom topography ( water depth in meter )

<1962-1963>

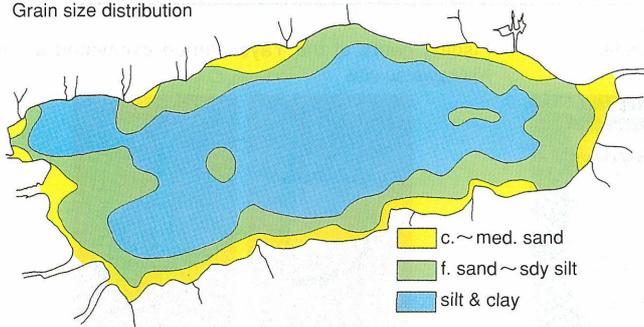


<1987>

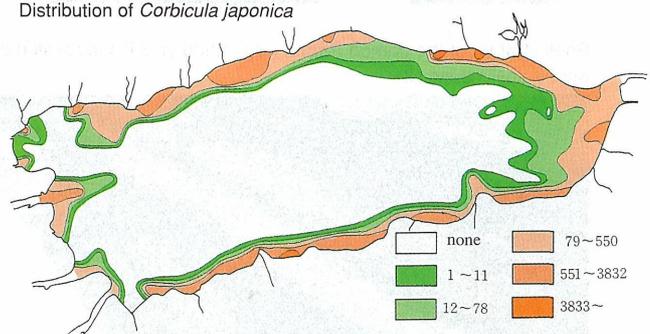


Present bottom characteristics of Lake Shinji ( surveyed in 1982 )

Grain size distribution

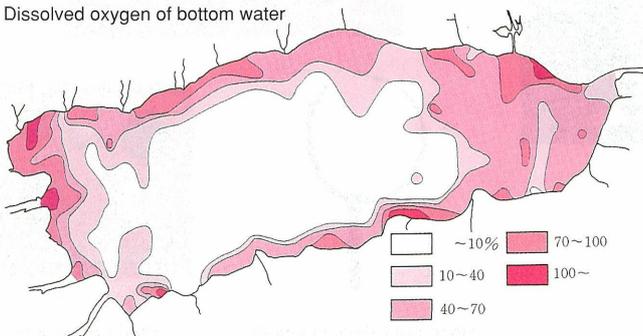


Distribution of *Corbicula japonica*

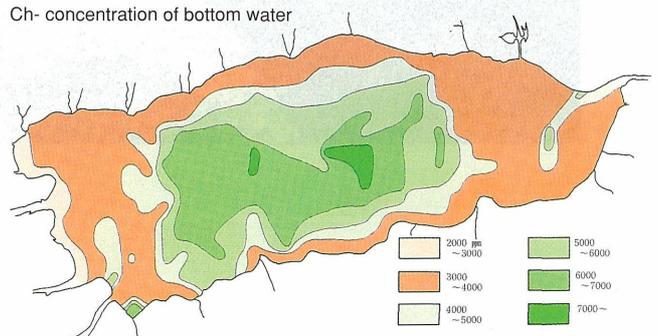


*Corbicula japonica* is a dominant molluscan species in brackish lakes. Lake Shinji accounts for about 60% of the production (30 billion Yen, 25million US\$ ) in Japan. The scene of fishermen working Lake Shinji early in the morning is one of the beautiful scenes in Matsue, a famous sightseeing place.

Dissolved oxygen of bottom water



Ch- concentration of bottom water



As a part of the studies on the biological diversity of estuaries and coasts, studies on several endangered aquatic macrophytes are ongoing from the viewpoint of ecological conservation.

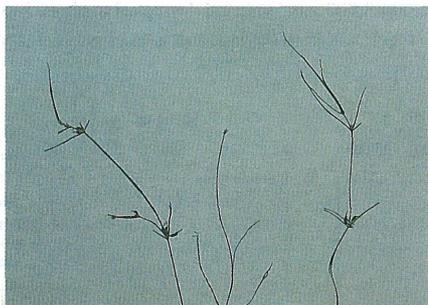
*Sparganium* sp.



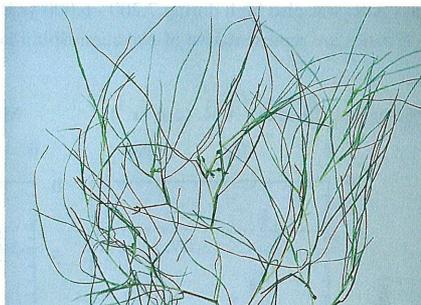
*Monochoria korsakowii*



*Zannichellia palustris*



*Ruppia maritima*



### Change of the molluscan assemblages in Lake Nakaumi caused by reclamation project

Before the closing of the northwest area, distribution of the molluscan assemblages was controlled by the anticlockwise invasion of high saline water. After the closing, the assemblages distributed in the north to west area of the lagoon were entirely extinct and the other assemblages have been subjected only to the water flowing through the Nakaura Water Gate.

Summer in 1944  
(Compiled from Miyadi *et al.*, 1945)

-  *Velemolpa micra*
-  *Fulvia hungerfordi*
-  *Theora lubrica*

1965-1966  
(Mizuno *et al.*, 1969)

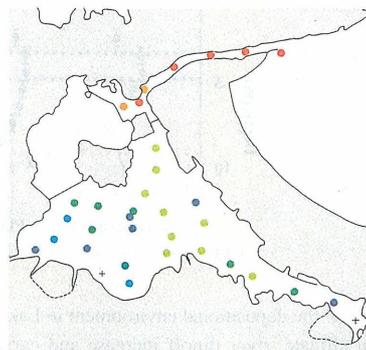
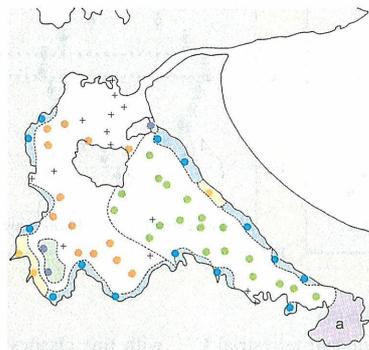
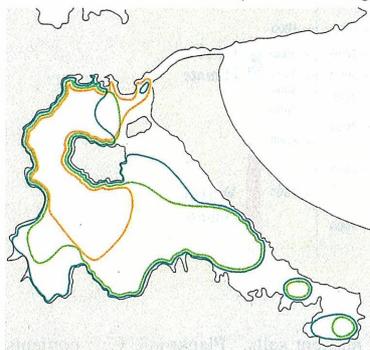
-  *Scapharca subcrenata*-*Paphia undulata* A.
-  *Raetellops pulchella*-*Theora lubrica* A.
-  *Corbicula japonica* A.
-  *Musculista senhousia* A.
-  *Laternula marilina* A.

- a Scarce occurrence
- + Assemblage unknown

Summer in 1986  
(Takayasu *et al.*, 1987)

-  *Fulvia hungerfordi*-*Velemolp amicra* A.
-  *Fulvia hungerfordi*-*Fulviocongula nipponica* A.
-  *Fulvia hungerfordi*-*Micro-gastropoda* sp. indet. A.
-  *Fulvia hungerfordi*-*Musculista senhousia* A.
-  *Theora lubrica*-*Musculista senhousia* A.
-  *Musculista senhousia* A.
-  *Theora lubrica* A. + Scarce occurrence

(A : Assemblage)

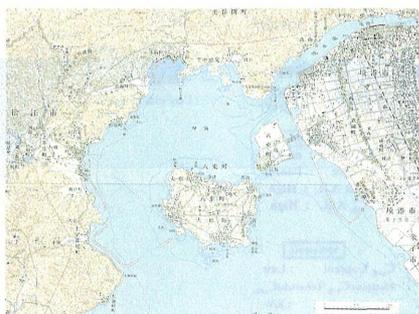


### Artificial changes of the northern part of Lake Nakaumi by reclamation project

1947



1975



1988

