落合照雄：塩沢鉱泉（長野県）の珪藻類－特に *Navicula erifuga* Lange-Bert.の個体変異について－

Teruo Ochiai : Diatom flora of Shiozawa salt spring, Nagano Prefecture － special reference to morphological variation of *Navicula erifuga* Lange-Bert.

Abstract

Shiozawa mineral spring is situated in the northwestern part of Nagano City, Nagano Prefecture. The author studied the diatom flora of this spring from March 1953 to March 1954. Shiozawa mineral spring is a salt water spring containing 885-893 mg/l Cl^- with a water temperature of 14.0-23.4℃, and a pH of 6.8-7.0. Diatom species consisted of 7 taxa, two of which, *Navicula erifuga* Lange-Bert. and *Surirella ovalis* Bréb., were salt tolerant. *Navicula erifuga* was the dominant species. The morphological characteristics of *Navicula erifuga* were observed. The valve length and breadth of 50 living cells were measured monthly within the previous recorded ranges, and no seasonal change was noted. In this mineral spring, elliptic-lanceolated valves of *N. erifuga* were the commonest, and their edges were often cuneate and subrostrate. They slightly out-numbered the other shapes. Some noted differences were seen in the shape of the central area and the number of striae that converge on the area between the central pores. The central area of most observed valves is rectangular on the primary side and lanceolate on the secondary side (71%). About 25% of the observed valves are lanceolate on the secondary side (71%). About 25% of the observed valves are lanceolate on both sides. Less than 5% of the observed valves are rectangular on both sides. About 40% of the valves that have a rectangular shape on the primary side and lanceolate shape on the secondary side or a lanceolate shape on both sides have three striae on both sides ; and 90% of the valves that have a rectangular shape on sides have three striae on the primary side and two striae on the secondary side. These individuals are dominant in each group. Striae number was 12-14 in 10μm.

Key index words
diatom flora, *Navicula erifuga*, salt spring