THE MOLLUSCA OF CANADARAGO LAKE AND A NEW RECORD FOR *LASMIGONA COMPRESSA* (LEA)

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Canadarago Lake is located in Otsego County, New York (42°50'N, 75°00'W). The lake is 3 miles long, averages 1 mile in width and has a surface area of 761 hectares. It is shallow and turbid with the greatest depth being only a little over 12 meters and secchi transparencies averaging less than 2 meters. Summer epilimnion temperatures attain 25°C. Oxygen is absent from the hypolimnion during these periods and varies near saturation at the surface. Hydrogen ion concentration is extremely erratic, varying from about 4.5 to 10 in both surface and profundal waters (Fuhs, 1972). Canadarago would be expected to be a moderately eutrophic lake in its natural state but is now highly eutrophic as a result of sewage input from the village of Richfield Springs and from summer camps. Blue-green algal blooms are common and the undersides of cobbles are covered with fungi and bacteria. Turbid waters prevent the extensive growth of rooted macrophytes, although *Myriophyllum* is abundant in the shallows. Common emergent plants are *Scirpus, Nuphar, Nymphaea, Pontederia, Typha,* and *Sparganium.* A eutrophication study of the lake was begun in 1968 by the New York State Department of Health and the New York State Department of Environmental Conservation. As a result, a tertiary sewage treatment plant was installed at Richfield Springs and was activated in February 1973.

This survey of the molluscan fauna was undertaken for the acquisition of base line data that can be used for comparison with studies in future years to indicate possible improvements in water quality. Samples were made at 9 stations in both deep waters and littoral areas. It appears that Canadarago once supported dense populations of mollusks that are now severely depleted. We found an abundance of empty shells of *Lymnaea humilis, L. palustris, Gyraulus parvus, Helisoma anceps, Ferrissia parallela, Physa* spp., *Viviparus georgianus, Amnicola limosa, A. integra, Valvata tricarinata, Lampsilis radiata,* and *Pisidium* spp. Only a few living specimens of *L. humilis, G. parvus, F. parallela, Physa* sp. and *Pisidium* spp. were collected. All *Physa,* empty shells and living specimens, were so small as to prevent confident determination to the species level. One living specimen of *Lasmigona compressa* (Lea) (Unionidae) was found at the entrance of Herkimer Creek into the lake. This is the first record of this species in the Susquehanna River watershed.

After noting the condition of the molluscan fauna in the Lake we made collections along 5 miles of Oaks Creek, the outlet of Canadarago, to ascertain if water quality improved downstream from the lake. The only snail found was an immature *Physa* sp. A few living specimens of the bivalves *Lampsilis radiata, Elliptio complanatus* and *Strophitus undulatus* were found. Empty shells of all the mollusks found in Canadarago Lake were collected.

LITERATURE CITED

Fuhs, W. 1972. Canadarago Lake eutrophication study. Lake and tributary surveys 1963-1970. Methodology and Data. N.Y.S. Dept. of Environ. Cons., Research and Development Unit. 292 pp.