

Discovery of the Threespine Stickleback (*Gasterosteus aculeatus*) (Pisces: Gasterosteidae) in the Lake Michigan Drainage, Illinois

Carol E. Johnston
Center for Biodiversity
Illinois Natural History Survey
Champaign, Illinois 61820

The threespine stickleback (*Gasterosteus aculeatus*) occurs throughout much of the Northern Hemisphere in marine and fresh waters. In North America its range includes the Pacific coast from Baja California north to the Aleutian Islands and the Atlantic coast from Chesapeake Bay north to Hudson Bay and Baffin Island (Burgess and Lee, 1980). Historically, the species was restricted in the Great Lakes drainage to waters below Niagara Falls. It recently was collected in Lake Huron and the Straits of Mackinac and since gaining access to the upper Great Lakes appears to be rapidly expanding its range (Smith, 1985). The threespine stickleback, previously unknown from Illinois, recently was collected from four localities in the Lake Michigan drainage.

Records of *Gasterosteus aculeatus* deposited in the Illinois Natural History Survey Fish Collection (INHS) from the Lake Michigan drainage, Illinois include:

- INHS 64211 (4) Trident Harbor (Lake Michigan Dr.)
Lake County, Illinois, T46N, R12E, sec. 2; 6 July 1988
P. Vidal and T. Trudeau
- INHS 64481 (1) Chicago Sanitary and Ship Canal (Lake Michigan Dr.),
Cicero Avenue, Chicago
Cook County, Illinois, T37N, R13E, sec. 3; 19 April 1988
S. Dennison
- INHS 64482 (1) North Shore Channel (Lake Michigan Dr.), Sheridan Avenue,
Wilmette
Cook County, Illinois, T42N, R13E, sec. 35; 7 July 1988
S. Dennison

- INHS 59309 (1) Calumet River (Lake Michigan Dr.), 130th Street, Chicago
Cook County, Illinois, T37N, R14E, sec. 36; 21 July 1989
S. Dennison

The threespine stickleback has also been collected from the following four localities in the southern Lake Michigan drainage, Michigan and Wisconsin:

- UWZM 8269 (1) Lake Michigan (Great Lakes Dr.) 10 km from Grand Haven
Ottawa Co., Michigan; 25 April 1983
R. Nash, A. Geffan and C. Lie
- UWZM 9093 (1) Milwaukee Harbor (Lake Michigan Dr.) Juneau Park
Milwaukee Co., Wisconsin, T7N, R22E, sec. 21; 9 July 1986
T. Trapp
- UWZM 9094 (1) Milwaukee Harbor (Lake Michigan Dr.) Juneau Park
Milwaukee Co., Wisconsin, T7N, R22E, sec. 21; 15 July 1986
T. Trapp
- UWZM 9727 (1) trib., Lake Michigan (Great Lakes Dr.)
Kewaunee Co., Wisconsin, T22N, R24E, sec. 25; 10 May
1989
J. Lyons, P. Cochran and field crew

These records suggest that populations of *Gasterosteus aculeatus* in Lake Michigan, including those in Illinois, have been established as the result of a natural range expansion from other portions of the Great Lakes.

ACKNOWLEDGEMENTS

I wish to thank S. Dennison for sending specimens to the Illinois Natural History Survey Fish Collection, K. S. Cummings, L. M. Page and C. A. Phillips for reviewing the manuscript, and an anonymous reviewer for the University of Wisconsin Zoological Museum records.

LITERATURE CITED

- Burgess, G. H. and D. S. Lee. 1980. *Gasterosteus aculeatus* Linnaeus, threespine stickleback. pp. 563-564 in D. S. Lee, et al. Atlas of North American Freshwater Fishes. North Carolina State Museum of Natural History, Raleigh. i-x + 854 pp.
- Smith, C. L. 1985. The inland fishes of New York State. New York State Department of Environmental Conservation. Albany. 522 pp.