

THE FRESH-WATER JELLYFISH, CRASPEDACUSTA
SOWERBYI IN ILLINOIS

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ABSTRACT:—Distribution of *Craspedacusta sowerbyi* in Illinois, with extensions of the range into the northern portion of the state.

The fresh-water Jellyfish (*Craspedacusta sowerbyi*) is widely distributed throughout the world. Kramp (1950) and Sowerby (1941) present evidence relating to the origin within the Yangtze River valley in China. The dissemination of this species throughout the world is attributed to shipments of aquatic plants from China.

Summaries of the geographical distribution and seasonal occurrence of this species within the United States are available in papers by Dexter et al. (1949), Lytle (1960, 1962) and Pennak (1956). The medusa has been reported from 29 states and the District of Columbia in the United States. In some states, Ohio, Pennsylvania, and Michigan, *Craspedacusta* has been taken from numerous localities, but the remaining states only one to several localities are established.

Craspedacusta sowerbyi has been reported predominately from fish ponds, quarries, reservoirs and abandoned gravel pits. This tends to limit the distribution through natural drainage systems.

In recent years the occurrence of *C. sowerbyi* in streams has become more frequent. Garman (1916) first reported medusae from a creek in Kentucky; Baird (1932) from a river in Ohio; Dexter (1949) from a stream in Pennsylvania, while Bushnell and Porter (1967) added thirteen new distributional records for the state of Michigan. Three of these localities; Swan Creek, Allegan Co.; Augusta Creek, Kalamazoo Co., and Red Cedar River, Ingham Co., add additional stream habitats.

In Illinois and Wisconsin the distributional pattern and habitat are poorly known. Illinois is represented by only five localities, extending into the central portion of the state, while Wisconsin lacks recoveries.

Van Cleave (1936) first reported the medusae within the state, from Vandalia, Fayette County, and Carmi, White County. Schmitt (1939) cites another visual record from Vandalia,, while Steagall

(1937) records a medusa taken from the State water tank at Anna, Union Co., Illinois.

Moore (1954) summarized the distribution of *C. sowerbyi* within Illinois, and added two new localities, and the first for central Illinois. All previous stations having been from the southern portion of the state. On 1 September 1952, Moore collected five specimens from Sunset Pond, one and one-half miles southeast of Oakwood, Vermilion Co., Illinois, and on 5 September 1953 a large number were observed (thirteen collected) at Fairmount, Vermilion Co., Illinois. Both of



FIGURE 1.—Records of *Craspedacusta sowerbyi*.

these localities are from strip-mining quarries.

The present report adds two additional localities, and the first records for northern Illinois (Figure 1).

On the evening of August 22, 1966, *C. sowerbyi* was first noticed by Mr. Ivan Sams of Sandwich, in the Sheridan Rod & Gun Club quarry, one-half mile north of Sheridan, LaSalle County, Illinois. Mr. Sams stated "thousands of specimens were visible on the surface of lake", and twenty were collected and brought to me for identification. All the specimens were females, measuring no less than 15-25 mm.

At 1800 hour, 15 September 1966 we revisited the quarry, and collected fifty-five additional specimens. The water was clear and calm, with medusa so abundant at the surface, that it was almost impossible to miss collecting specimens with a dip-net. The medusae seemed to congregate near shore, and were noted to slowly surface, turn over and float downward.

The Sheridan Rod & Gun Club lake is an abandoned gravel quarry, no less than 50 years old, covering 40 acres. The average depth is 12 feet, with a bottom consisting of sand covered with silt. The only aquatic plants noted were along the north and west margins of the quarry, and consisted of *Nitella* sp., *Equisetum fluviatile*, *Ranunculus trichophyllus*, *Nuphar advena*, *Sagittaria latifolia*, and *Potamogeton* species.

On September 5, 1966, twelve medusae were taken from a small gravel quarry, 5 miles southwest of DeKalb, DeKalb County, Illinois. Only a few specimens were noted at this site, and collecting was limited due to the abrupt drop-off near shore.

Additional specimens were collected on 12 September 1967 at the LaSalle County station, although since that time I have been unable to relocate this species in northern Illinois.

Specimens are deposited in my private collection, and the Northern Illinois University Invertebrate Collection, under Dr. C. K. Mathers.

LITERATURE CITED

- BAIRD, R. L. 1932. The fresh-water medusae of Vermilion River, Ohio. *Ohio J. Sci.*, 32:323-324.
- BUSHNELL, J. H. and T. W. PORTER. 1967. The occurrence, habitat, and prey of *Craspedacusta sowerbyi* in Michigan. *Trans. Amer. Microsc. Soc.*, 86 (1):22-27.
- DEXTER, R. W., T. C. SURREARER and C. W. DAVIS. 1949. Some recent records of the fresh-water jellyfish *Craspedacusta sowerbyi* from Ohio and Pennsylvania. *Ohio J. Sci.*, 49:235-241.
- GARMAN, H. 1916. The sudden appearance of great numbers of fresh-water medusae in a Kentucky creek. *Science*, 44:858-860.
- KRAMP, P. L. 1950. Fresh-water medusae in China. *Proc. Zool. Soc. London*, 120:165-184.
- LYTLE, C. F. 1960. A note on distribution patterns in *Craspedacusta*. *Trans. Amer. Microsc. Soc.*, 79:461-469.
- _____. 1962. *Craspedacusta* in the southeastern United States. *Tulane Stud. Zool.*, 9:309-314.
- MOORE, T. E. 1954. Notes on fresh-water jellyfish, and new records for Illinois. *Nat. Hist. Misc.*, No. 132; 1-4, q.
- PENNAK, R. W. 1956. The fresh-water jellyfish *Craspedacusta sowerbyi* in Colorado with some remarks on its ecology and morphological degeneration. *Trans. Amer. Microsc. Soc.*, 75:324-331.
- SCHMIDT, W. L. 1939. Fresh-water jellyfish records since 1932. *Amer. Nat.*, 73:83-89.
- SOWERBY, A. DE C. 1941. The romance of the Chinese fresh-water jellyfish. *Hong Kong Nat.*, 10:186-189.
- STEAGALL, M. M. 1937. Another occurrence of a fresh-water medusa. *Trans. Ill. Acad. Sci.*, 30:317-319.
- VAN CLEAVE, H. J. 1936. Fresh-water jellyfishes in Illinois. *Science*, 83:443.

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