TRANSACTIONS, ILL. STATE ACAD. SCI.
Vol. 68, No. 2 (1975)

USE OF A DISPOSABLE BEVERAGE CAN BY FRESHWATER CLAMS, SPHAERIUM SECURIS

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Abstract. USE OF A DISPOSABLE BEVERAGE CAN BY FRESHWATER CLAMS, SPHAERIUM SECURIS. A population inhabiting a disposable beverage can was collected from Waterford, Wisconsin. The population was maintaining itself via reproduction. A population of caddis fly larvae were also residing in the can. The populational interrelationships were discussed.

On 9 Aug. 1973 while sampling a riffle-rapid area of the Fox River approximately 15 m below the weir at Waterford, Wis., a partly corroded, disposable beverage can was collected. Examination revealed a large population of the clam, Sphaerium secris, inside. Though a normal inhabitant of sheltered parts of rivers (Baker, 1898), the S. securis population was able to maintain itself in the riffle area because the closed portion of the can faced into the current thus providing shelter from the current.

The dense aggregation of the clams and large variation in their size (Fig. 1) indicated an actively reproducing population. Pennak (1953) stated that immature Sphaeriidae develop shells and morphological features of the adults. It is apparent from the variation in size observed that mature and immature individuals were present.

In addition to S. securis many Trichoptera (caddis fly) larvae, mostly Hydropsyche bifida, had colonized the can. Clams benefited by this relationship since the trichopteran cases provided additional substrate and support for the clams. The clams probably derived food from the plankton and detritus entrapped by the tricopterans, while the larvae utilized the clams as portions of their loosely formed cases.

The use of trash as habitat, especially items such as disposable beverage cans, are being increasingly reported in the literature. Notable are reports of Kottcamp and Moyle, 1972 (fish) and Behrens, 1975 (Asiatic clam, Corbicula manillensis). The use of beverage cans as habitat can allow organisms, such as Sphaerium securis or those mentioned above, to colonize an area that they would normally not inhabit.

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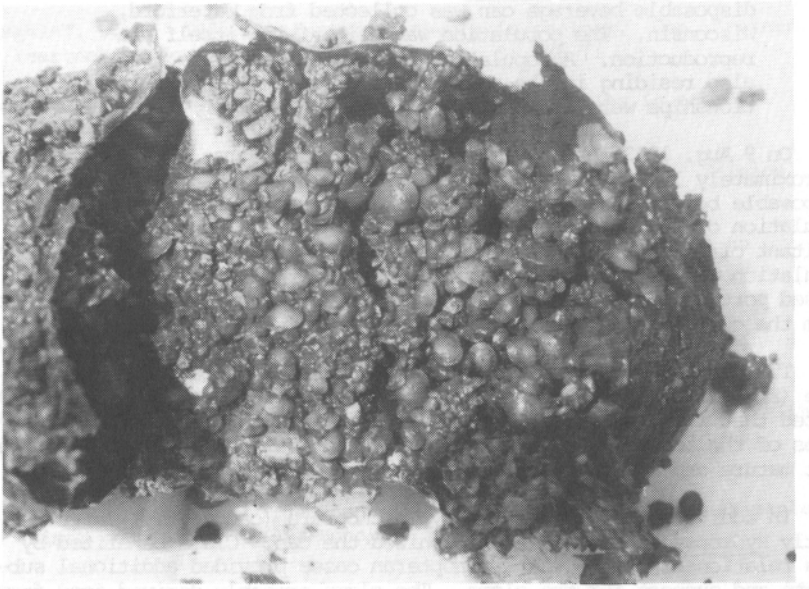

Figure 1. Populations of S. securis and H. bifida in an opened beverage container. Note the aggregation and size range of S. securis.