



Fig. 1. Rearing apparatus for insects having aquatic immature stages.

An Aquatic Rearing Apparatus for Insects

by ROBERT F. SCHNEIDER
Florida State Board of Health
Pensacola, Florida

During limnological studies immature stages of insects are often collected. In order to be certain of specific identification it is necessary to rear adults from these immature specimens. The rearing apparatus described in this paper was developed for mayfly nymphs, but it appears suitable for rearing other insects having aquatic immature stages.

The apparatus is inexpensive and easy to construct. In a piece of 10" x 18" x 1" styrofoam, fifteen holes are cut, each 1" in diameter (I prefer 3 rows with 5 holes per row). Fiberglass screen (# 30 mesh) is sewn with nylon thread into tubes 1" in diameter and 6" in length. A rubber stopper is placed securely in one end of each screen tube. The open end of each screen tube is pushed through one of the holes in the styrofoam, and allowed to protrude approximately 1" above the surface. The

rough texture of the styrofoam will hold the screen tube securely. The styrofoam, with the screen tubes in place, is floated in a standard 10 gallon laboratory aquarium, (20" x 11" x 12"). The rubber stoppers will help maintain the tubular shape of the fiberglass screen and they provide enough weight to hold the tubes erect. Plastic glasses (8 oz. size) are inverted and used to cover the open end of each fiberglass screen tube (Fig. 1). The bottom of each glass has a small perforation to allow air circulation and reduce water condensation on the inside of the plastic glass.

Immature insects, such as mayfly nymphs are placed in each tube, and the open end of the tube covered with the plastic glass, as described above. The fiberglass screen allows free movement of water through the tube. When the nymph reaches the later stages of the nymphal life it can crawl up out of the water on the screen tube, molt, and the adult is captured in the plastic glass.