

Fishes Caught in Neuston Samples  
in Buzzards Bay, Massachusetts, in 1979

by

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Neuston sampling for larval lobsters in Buzzards Bay was conducted by Northeast Fisheries Center personnel in 1976-81. The 1976-79 results are reported by Lux, et al. (1983), who describe sampling methods. The net, 2 m in width, sampled the layer of water from the surface to a depth of about 0.5 m. Sampling was done at, roughly, weekly intervals and consisted of a 30 min. tow at each of 6 stations. For the 1979 samples, taken May 3- November 5, fishes as well as larval lobsters were sorted from the catches, identified, counted, and measured. This report deals primarily with the fish component of these catches.

Table 1 lists the fishes caught and the ranges in length. Early stage larvae were poorly sampled because many were extruded through the 1.0 mm mesh of the net; we therefore considered only fish  $\geq 5.0$  mm total length. While most of the fish caught were post-larval and juvenile stages, adults of some small species also occurred (Table 1).

All of the 26 species listed are common to the Buzzards Bay area, at least in some seasons, although some are more abundant than others. Observations and notes <sup>on fishes</sup> made during lobster larvae sorting of catches in the other years sampled indicated that the species composition was similar from year to year. The area therefore is considered to be a spawning and/or nursery

ground for all fish listed.

Since sampling in 1979 was conducted over only 6 months of the year, the list of species in Table 1 likely is incomplete. In addition, there are many other fishes common to the area whose young did not appear in the neuston catches. Results from a Northeast Fisheries Center otter trawl survey in shallow waters in the vicinity (Lux and Nichy, 1971) list some of these.

Fish eggs also were found in many of the neuston tows. While most of these were unidentified, the most common kind found was that of the Atlantic mackerel, Scomber scombrus, which occurred in great numbers in May tows in each year. Only a few juvenile mackerel were caught, however, in all of the years sampled and none was taken in 1979.

In addition to the fish and lobster larvae, the young and/or adults of many invertebrates appeared in the catches in each year. These included copepods, amphipods, isopods, decapods, and polychaetes. The young of decapod crabs were especially numerous, with those of rock crab, Cancer irroratus; green crab, Carcinus maenus; calico crab, Ovalipes ocellatus; and porcelain crab, Porcellana sp., predominating. Small numbers of blue crab, Callinectes sapidus, post-larvae also were caught.

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Lux, F. E., and F. E. Nichy. 1971. Number and lengths, by season, of fishes caught with an otter trawl near Woods Hole, Massachusetts, September 1961 to December 1962. U.S. Dept. Comm., Spec. Sci. Rep.-Fish. No. 622, 15 p.

Lux, F. E., G. F. Kelly, and C. L. Wheeler. 1983. Distribution and abundance of larval lobsters (Homarus americanus) in Buzzards Bay, Massachusetts, during 1976-79. U.S. Dept. Comm., Spec. Sci. Rep.-Fish. No. 775, p 29-33.

Table 1.--Fishes caught in neuston tows in Buzzards Bay, Massachusetts in May-November 1979.

Species	Length range mm
American eel, <u>Anguilla rostrata</u>	53
Atlantic menhaden, <u>Brevoortia tyrannus</u>	16-17
Atlantic herring, <u>Clupea harengus</u>	13-28
Bay anchovy, <u>Anchoa mitchilli</u>	14-36
Fourbeard rockling, <u>Enchelyopus cimbrius</u>	5-39
Atlantic cod, <u>Gadus morhua</u>	6
Pollock, <u>Gollachius virens</u>	6-34
Red hake, <u>Urophycis chuss</u>	5-35
Spotted hake, <u>Urophycis regius</u>	30-54
White hake, <u>Urophycis tenuis</u>	23-57
Mummichog, <u>Fundulus heteroclitus</u>	8
* Atlantic silverside, <u>Menidia menidia</u>	5-91
* Threespine stickleback, <u>Gasterosteus aculeatus</u>	9-44
* Northern pipefish, <u>Syngnathus fuscus</u>	14-186
Bluefish, <u>Pomatomus saltatrix</u>	16-42
Scup, <u>Stenotomus chrysops</u>	5-8
Cunner, <u>Tautoglabrus adspersus</u>	5-20
Snake blenny, <u>Lumpenus lumpretaeformis</u>	6-14
Sand lance, <u>Ammodytes americanus</u>	7-42
Butterfish, <u>Peprilus triacanthus</u>	5-47
Northern searobin, <u>Prionotus carolinus</u>	6-14
Seasnail, <u>Liparis</u> sp.	5-9
Windowpane, <u>Scophthalmus aquosus</u>	5-10
Yellowtail flounder, <u>Limanda ferruginea</u>	10
Winter flounder, <u>Pseudopleuronectes americanus</u>	5-7
Northern puffer, <u>Sphoeroides maculatus</u>	5-20

\* Includes both young and adults.