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Identifying milkfish fry

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IDENTIFYING MILKFISH FRY

The term "fry" is often used loosely to refer to different, often undefined, sizes or stages of young fish and shrimps caught from coastal waters (shore, estuaries, lagoons, swamps). Used to stock culture ponds, "fry" is synonymous with "seed" in frequent usage.

Milkfish fry (Fig. 1) are late post-larvae 10-17 mm in total length (average about 14 mm) which are caught from shore waters when they are about 2-3 weeks old from the time of spawning. Fingerlings are 15-100 mm long, about 1-2 months old, which are occasionally caught in inland waters fronting the fry collection beaches, but are more commonly produced in nursery ponds stocked with fry, as in the Malabon area in the Philippines. In countries like Sri Lanka, Kiribati, and Fiji, both the fry and the fingerlings are collected from natural waters and used as seed for ponds.

Upon capture from shore waters, milkfish fry have transparent, elongate bodies like those of larval anchovy and sardines and some gobies (Fig. 2). In the collector's basin, milkfish fry can be readily picked out by their energetic movements and their conspicuous eyes. They swim together and circle continuously in the same direction. They are able to stay alive where the fry of most other fish species in the same catch have died. Under the microscope, milkfish fry can be seen to have a straight gut without transverse foldings of the intestine, unlike in anchovy and sardine larvae where the intestines appear striated (Fig. 2). A single line of pigments runs along the lower edge of the abdomen from the throat almost to the anus. The liver is large and sometimes looks like yolk, which is why the fry have been mistaken to be newly hatched when they are in fact 2-3 weeks old.

After one day or more in storage, milkfish fry show a dark spot and a bubble in the middle part of the body - this is the pigmented, inflated swimbladder. With longer storage, the fry gradually develop a dusky coloration over the body and silvery coloration on the abdomen. The pelvic fins on the lower side are absent at capture but develop 5-6 days later. Within one month of capture the scales develop, the body becomes bright silvery, and the fingerlings develop the typical milkfish shape and appearance. At this time, the fingerlings are ready for stocking in grow-out ponds. Fry and fingerlings produced in the hatchery are heavier at a given length than those from the wild, but there are no significant differences in growth and survival performance in ponds.

Milkfish fry are often confused with the larvae of tarpon (buan-buan, Megalops cyprinoides), ten-pounder (bidbid, Elops machnata) and some gobies. The larvae of tarpon and ten-pounder are larger (25-35 mm) and have flatter, ribbon-like bodies, relatively smaller eyes, and slightly amber body color (Fig. 2). Goby larvae have shorter guts than milkfish fry, a conspicuous swimbladder, and two dorsal fins. In the collector's basin, goby, anchovy, and sardine larvae do not school or swim together continuously in the same direction; they also die more readily.

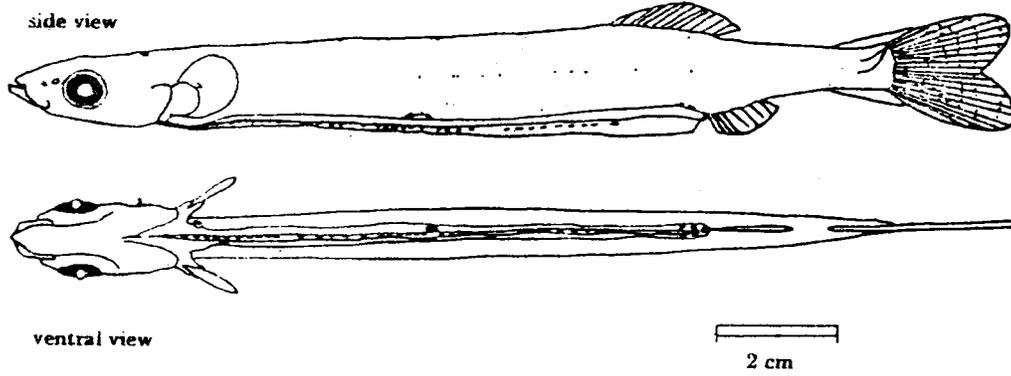


Fig. 1. Milkfish fry from shore waters.

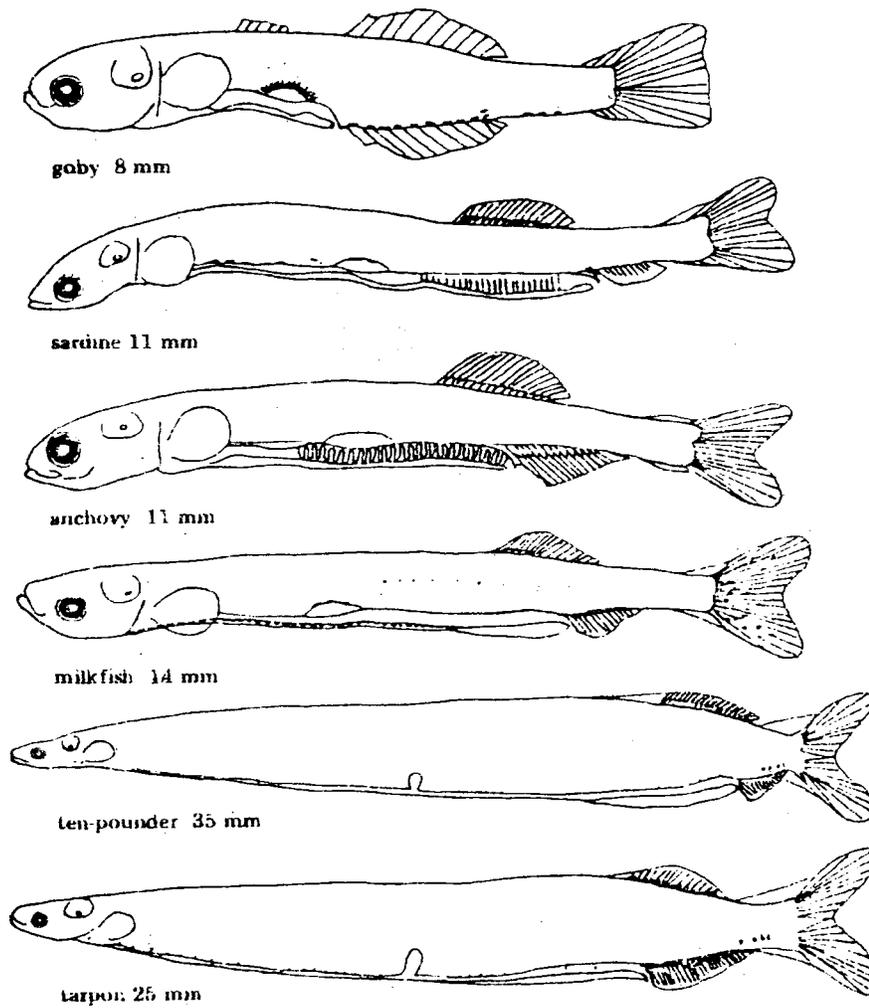


Fig. 2. Larvae of other species of fish that are often confused with milkfish fry.

Source: Bagarinao TU, Solis NB, Villaver WR, Villaluz AC. 1986. Important Fish and Sirimp Fry in Philippine Coastal Waters: Identification, Collection, and Handling. Aquaculture Extension Manual No. 10, SEAFDEC Aquaculture Department, Tigbauan, Iloilo.