

Shipping Eggs of the Killifish
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During the last few years there has been a surge of interest in the group of fish as Killifish or Panchax. Since dealers do not generally stock members of this group and only rarely handle more than the most common members, fanciers of this group have become very active in exchanging both fish and eggs. The exchange of eggs through the mail is not new, but it is only recently that relatively large numbers of fanciers have participated. Because of the relatively long incubation period for eggs of all members of this group, it is possible to ship eggs satisfactorily to any part of the world. As with most aspects of fish keeping there are certain basic rules which must be followed if any degree of success is to be achieved. I will describe methods which have given me a degree of success. I am sure that each individual will be able to devise improvements as he gains experience.

Eggs of the plant spawners are the most difficult to ship because they need special handling both before and after shipping. Eggs are collected in the usual fashion and placed in clean water to incubate. All infertile and fungused eggs must be removed as soon as they are detected. When the embryos have begun to develop, and before the seventh day of incubation, the eggs are ready for shipment. By waiting for obvious development in the eggs, dead eggs are eliminated, thus reducing the chances of fungus developing during the shipment and the chances of shipping dead eggs. If eggs are held beyond the seventh day before shipping, development will be too far along and the eggs may hatch or be broken during shipment. The eggs tend to soften as development nears completion and pressures exerted by packing and changes in air pressure in flight cause the egg shells to rupture. During the early stages of development the egg shells are stronger and withstand shipping better.

A four inch square of very fine mesh nylon cloth makes a satisfactory packing material. Avoid colored cloth in order to prevent possible damage to the eggs from the dye. Wash the cloth thoroughly and rinse to remove all traces of soap. Squeeze out all excess water until the cloth is merely damp then spread it out on a clean, flat surface. The eggs are placed on the cloth, one at a time, with a medicine dropper. They should be at least one quarter of an inch apart. Arrange them in the center of the cloth so that the edges can be folded over to cover all of the eggs. After the eggs are placed, remove all excess water with the medicine dropper and carefully fold over the edges of the cloth.

Needless to say, this operation should be as rapid as possible. Small plastic boxes make ideal shipping containers. In order to keep the wrapped egg stationary in the box, a small amount of slightly damp peat moss can be used. Only enough should be used to prevent the bundle of eggs from moving without putting pressure on the eggs. All excess water should be avoided in order to obtain the maximum survival of eggs. I always seal the box with tape to prevent it from opening en route or allowing water leakage. The box can be rolled in a three-quarter inch thickness of corrugated cardboard to afford some insulation and shock absorption. The package will be very light and can be mailed first class to minimize the length of time in shipment.

Upon receipt the package should be opened immediately and the good eggs put in water. All dead eggs should be discarded. The resulting eggs are handled in the customary manner for plant spawners. Frequently eggs which have been shipped are more likely to require force hatching than eggs of the same species which are allowed to incubate undisturbed.

Shipping of eggs of the bottom spawners which have been incubated in peat moss is considerably less difficult. Allow the eggs to incubate for the full period necessary for the particular species. The easiest way to estimate how many hatchable eggs are present in the peat moss is to pre-test the peat before shipping any of it. Place at least a quarter of the batch of peat in water for hatching the fry. A count of the number of fry hatched will indicate how many might be expected from the remainder of the peat. It can then be divided according to the number desired for shipping and this portion placed in a plastic bag. This can be rolled in corrugated cardboard and wrapped for mailing. Upon receipt, the peat moss need only be placed in water for hatching.

While the mailing of eggs is an excellent way of getting new species to fanciers in distant places, there is a certain amount of risk involved. Eggs may be frozen or overheated en route. Eggs which die and fungus may cause the remaining eggs to fungus. There is good reason to believe that some of the embryos are weakened by shipping. However, with some experience fanciers can learn to ship eggs with few losses and hatch the eggs received. Because of the difficulty in obtaining new species of Killiefish, fanciers should practice the exchange of eggs when they are fortunate enough to obtain species that others have not yet collected.