

By W. COLES-FINCH
(Resident Engineer, Chatham etc. Water Co.)

IV. MORE SUITABLE FISHES

IN the previous article illustrations were given of and reference was made to those specimens of fishes with which to first stock an aquarium—the Carp family (*Cyprinidae*), the Minnow (*Leuciscus phoxinus*), and the Golden Orfe (*Leuciscus orfus*). Having now gained some little experience in the management of his tank, the reader will do well to extend his interest to other hardy specimens suitable for the aquarium, presuming of course that success has so far followed his first effort and that the fish are healthy and happy in their new environment.

In the writer's experience the following fishes are suitable:—Roach (*Leuciscus rutilus*); Rudd (*Leuciscus erythrophthalmus*); Dace (*Leuciscus vulgaris*); Chub (*Leuciscus cephalus*); Gudgeon (*Gobio gobio* or *G. fluviatilis*); Loach (*Nemachilus barbatulus*); Tench (*Tinca tinca* or *T. vulgaris*) and Perch (*Perca fluviatilis*).

The Roach is a general favourite, and no aquarium can be considered complete without the inclusion of a specimen of this most attractive and graceful creature. It is silvery-white, with greenish back, the lower fins usually being tinged with red.

The Rudd resembles the Roach to some extent but is deeper in the body.

The Dace is another bright-silvery fish, but more slim in form than the Roach. It is a hardy fish and has quick and graceful movements. Its name is derived from the old English "Darse" or "Dart," by reason of its peculiar darting method of making headway against a swift-flowing current.

The Chub is closely related to the Dace and like the latter should find a place in the aquarium.

The Gudgeon is another fish admirably adapted for tank life. Its colour is brownish or greenish above and silvery or golden on the sides and below. Often it has small scattered brownish spots on the upper parts and a row of larger blackish spots along the middle of the side, with a series of small dark spots on the

dorsel and caudal fins.

The Loaches are closely allied to the Carp family, but have an ungraceful elongate body. They are of sluggish disposition, spending most of their time on the pebbly bottom of the tank. The six barbules at

the mouth give the fish an unpleasing appearance, which is very different from the generally sharp and graceful outlines of other fishes. The ugly appearance at any rate makes it easy to readily

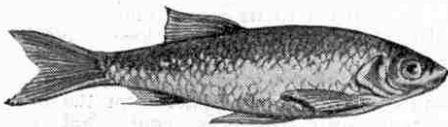
recognise the species, should its long straight body not have been a sufficient guide in this respect. The Loach should not be entirely overlooked on account of its appearance, for as a saving grace it may, in common with many other fishes, be readily tamed.

The Tench resembles the Loach in that it is a sluggish fish, spending its time in a similar lazy manner. Its iridescent scales of green-bronze, which seem to scintillate with every movement, offer ample compensation for its idle habits. It is often referred to as the "physician fish," for there is an old tradition that its touch cures the maladies of any fish with which it may come in contact. Indeed, its presence in the tank is said to keep away sickness from the other inmates. If only for the contrast they offer in company with the fishes of silvery-whiteness, the golden-tinged, olive-brown Carp and the darker bronzed Tench should be introduced in the aquarium whenever possible.

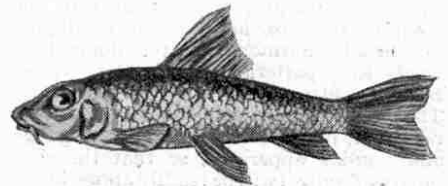
The Perch is a beautiful and attractive fish. It has a greenish-olive back, sides that shade to golden-yellow or white at the belly, and is marked along the sides with vertical bars of darker hue. It is a voracious fish, however, and does not readily adapt itself to life in the aquarium.

One final word in reference to "suitable fishes." Whenever the aquarium is large enough to accommodate them, a little shoal of Minnow should always be introduced. They are the life and soul of an aquarium, and to the writer a tank without them would present

In previous issues we have dealt with the making and preparation of an aquarium and have described some of the fishes suitable for tank life. In this instalment, after dealing with a few other suitable fishes, we pass on to the fascinating subject of pond life in the aquarium, which subject will be dealt with at greater length next month.



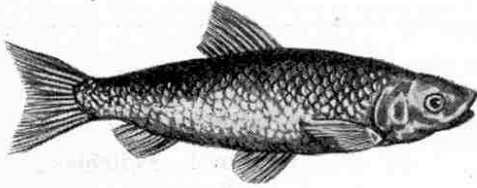
Dace
(*Leuciscus vulgaris*)



Gudgeon
(*Gobio fluviatilis*)

a very tame appearance.

All the fishes enumerated may be readily procured from the dealers, for doubtless the majority of readers do not live near to either a stream or a river. To those who are more fortunately placed in this respect, however, there is an added charm in capturing ones own specimens, or in accompanying an angler or fisherman with a like intent.



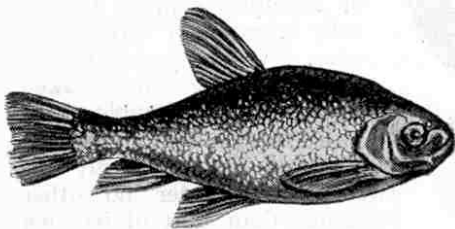
Chub
(*Leuciscus cephalus*)

It is the writer's privilege to live near the river Medway and its

delightful tributaries, and the manner in which many of his fishes are obtained may be of interest. At certain times of the year the fisherman (not the anglers) pursue their calling in the higher reaches of the river. Here, perhaps they net the delicate Smelt or other fishes that travel beyond the salt tidal waters to where the fresh water from the hills intermingles. These fisher folk are a kind and genial set of men, ever ready to help in this matter. If one gets on friendly terms with them they will readily look out for desired specimens and, when hauling in their nets, instead of throwing back into the river these little wanderers from the upper waters, place them in the "well" of the boat or in some receptacle for the aquarium enthusiast. Fine healthy specimens are often obtained in this manner.

Before proceeding to deal with the introduction of pond life into the aquarium, it will perhaps be of general interest to give a few additional hints based upon a host of queries received. Several readers who have written to the Editor have failed to keep fish in their aquarium solely through introducing them before the material used in the construction of the tank had become sweet and before the plants had established themselves. In this matter the instructions given in the first of this series of articles, under the heading of "General Hints," must be strictly followed.

Other readers seem in difficulty on the matter of the temperature of the water. Provided the water never sinks absolutely to freezing point, fishes prefer cold to heat. Even if the water be ice-cold they will be perfectly happy. It may be of interest to mention an experiment to test this, but it is advisable that the reader should not attempt to repeat it unless it is

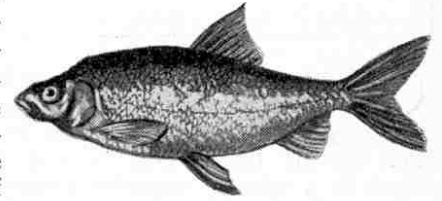


Tench
(*Tinca vulgaris*)

convenient for him to guard against actual consolidation into ice of the mass of the water taking place, with the inevitable result of a burst tank!

The writer set his tank where it could be partially protected, but where a sharp freezing current of air could play upon one side of the tank only. From this

exposed side long spears of ice spread out across the tank in a most fantastical manner, radiating in fanlike form, each separate spear resembling the blade of a carving knife with saw-like edges. The fishes were not unduly alarmed and appeared to be merely wondering what was happening in their home, and, in no way perturbed, they threaded their way in and out of the icy spears. Indeed, although some of the fish became entangled between the spears and plates of ice and were unable to move for many hours, when the ice melted they were no worse for their imprisonment.



Roach
(*Leuciscus rutilus*)

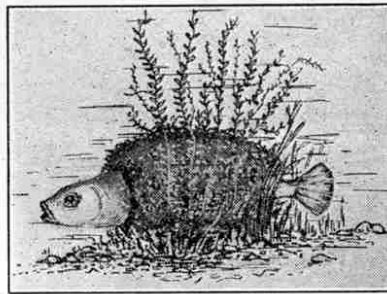
Curiously enough, during this experiment no film of ice appeared upon the surface of the water in the tank. As the cold draught beat against one exposed side only, it was from this point the icy spears originated and, extending into the slightly less cold water in the other half of the tank, almost reached the opposite side.

Fish certainly prefer cold to heat, for the simple reason that the warmer the water the less its capacity for dissolving and retaining in solution the necessary gases. It is obvious that less oxygen is available under these conditions, so that the water becomes more quickly exhausted and the fishes suffer accordingly. It is therefore wise to avoid extremes of either heat or cold, maintaining as even a temperature as possible, erring in preference on the side of low temperature.

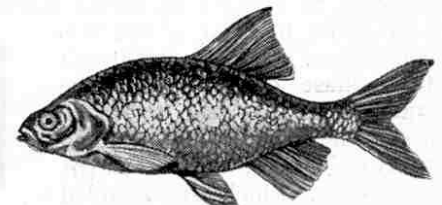
With water at a low temperature fishes become less active and less inclined to take food, but as they are undoubtedly happy, this is all that matters. In cold weather the inmates certainly demand less attention, and the revivifying of the water should scarcely be needed through the winter months, if plant life is thriving and the tank is not overstocked.

The aim should be to keep and preserve the fish in such healthy and congenial surroundings in their now diminutive water-world that they are enabled to live happily for many years. Further, by careful and thoughtful attention it is possible to train the fish so that, when one approaches the tank, the inmates will come towards the side of the tank and, as a tempting morsel is proffered, rise to the surface and take it from the fingers, or nibble at the friendly fingers in playfulness.

This should be a full compensation and reward for the little effort that has to be made to successfully keep an aquarium, and as a lover of fishes I would add: If it is not possible to devote this small amount of care and attention, do not start an aquarium, but turn your attention to a hobby in which suffering will not



Stickleback and Nest



Rudd
(*Leuciscus erythrophthalmus*)