

PORTFOLIO: FRESHWATER FISH

Out of bounds to most of us, the watery realm of fish

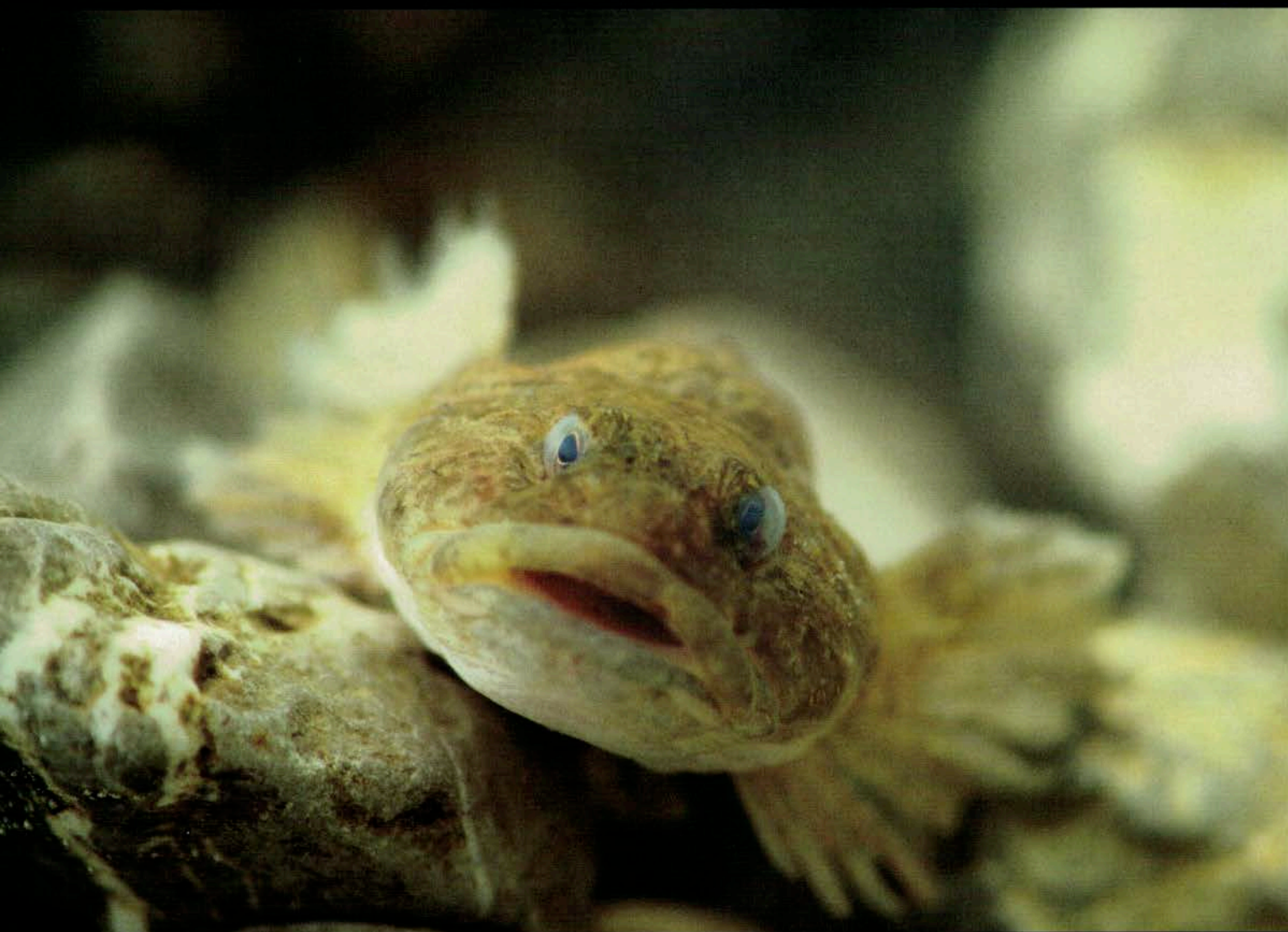
SWIMMING SLOWLY OVER a bed of algae, a group of common carp (*far right*) are in lazy mode. To their left, two equally sluggish tench keep close company. Note the thick, muscular 'wrists' of the tenches' tails. These provide the power for sudden explosions of speed, which is similar to seeing a hippo burst into a cheetah-like sprint.

Here, in a backwater of the Aare river in Switzerland, it is winter and the water is cold and clear. There is a thin layer of ice on the surface and the freezing temperatures have slowed the fish to a torpor, which is their best means of saving energy when there is little food around. But this time of year is also when algae can take advantage. Once the overhanging trees have shed their leaves, light can penetrate the icy depths and draw forth a lush green forest.



can be as enchanting as any spring woodland or summer meadow, as Michel Roggo's photographs reveal.





THE BULLHEAD, OR miller's thumb as it is sometimes called in Britain, is one of the few species – along with the brown trout – that can survive the fast-flowing oxygen-saturated waters of mountain streams. It manages by living on the bottom, where its reduced swimbladder prevents it from being swept away. But this also means that it's a weak swimmer, which can sometimes be its undoing, as I discovered.


I found this individual while exploring a creek high in the Swiss Alps. It wasn't in the stream, but flapping pathetically in a puddle on a nearby path, having been stranded after a very heavy flood. I put the fish in a well-oxygenated aquarium that imitated its stream habitat and took some shots while the poor creature recovered. Then I released it back into the river. It was the first and last time that I have photographed a fish in an aquarium, but I think we were both happy with the results.



ONE OF EUROPE'S rarest fish, the marble trout survives in a few rivers that drain into the northern Adriatic Sea, such as here on a tributary of the Soca in Slovenia. Now, at the end of November, it is spawning time, and the fish are showing off their bright breeding colours. The female in the foreground has already excavated a depression in the gravel and is waiting for the male to stimulate the release of her eggs with undulations of his body. He will release milt – sperm – simultaneously to fertilise them, but must also remain vigilant and chase away any rival males.

This species came close to disappearing from the Soca due to the introduction of brown and rainbow trout. The former hybridises with the marble trout, while the latter out-competes it for food and spawning sites. Local scientists then discovered a few pure marble trout in the headwaters of the Soca's tributaries and, after many years' work, successfully reintroduced the species to the main river. Anglers are allowed to catch the alien species, but not the marble trout, and this is helping to redress the balance.





BACK ON THE Aare river in Switzerland, it was the end of winter. The algal blooms had formed impressive green towers and I immediately saw the possibilities for an interesting composition. So I installed a camera on the riverbed and waited until these two carp swam into the perfect position... three days later. It was worth it. By summer, the green towers will have decomposed into a less inspiring dark brown gloop.

This backwater is a very special place. Just a few years ago, it was stagnant and overgrown. Once bulldozers were used to reconnect it to the main river, it was almost instantly recolonised by plants, fish, frogs, snakes, birds and beavers.



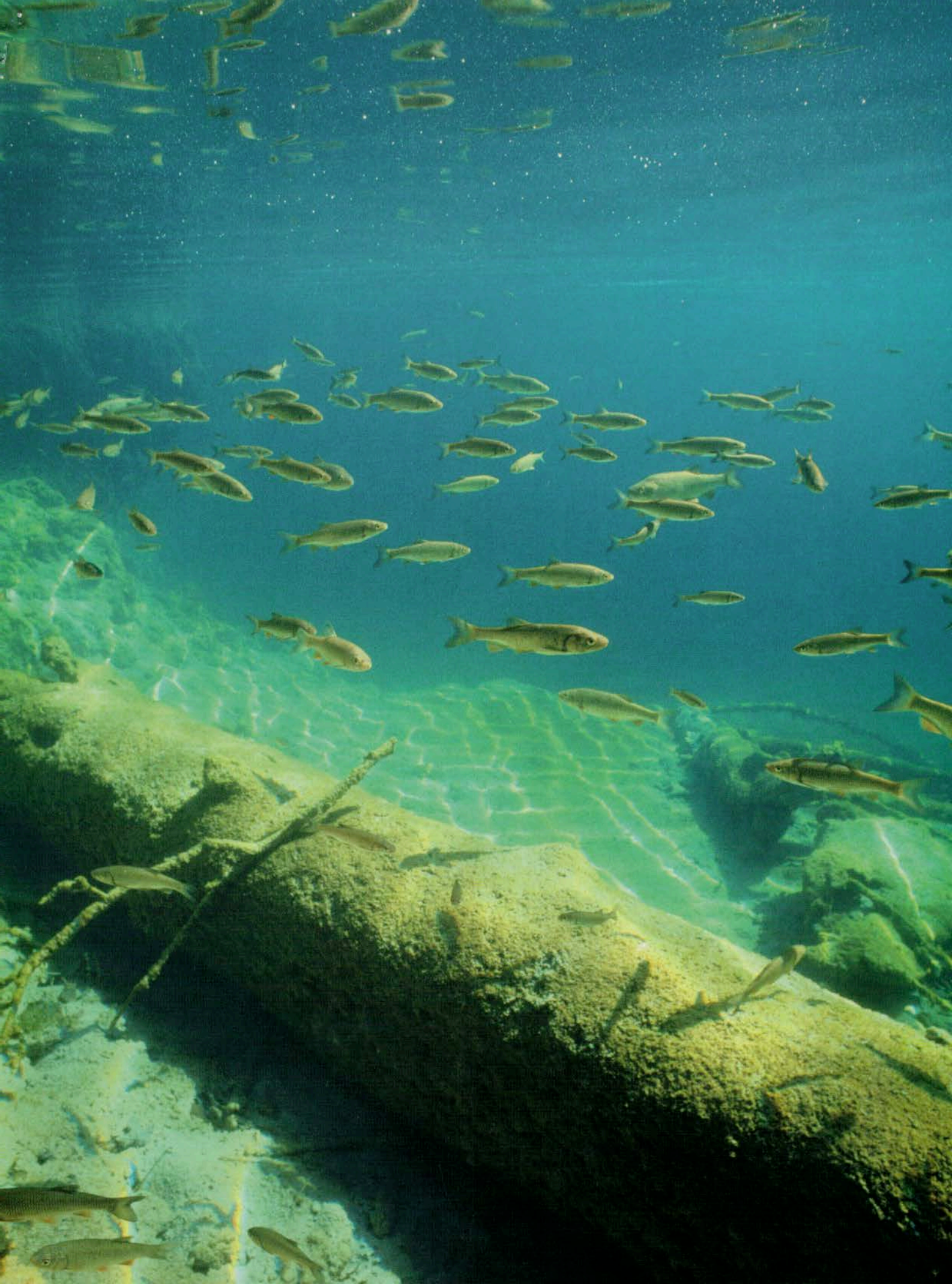
▲ **NORMALLY A MONSTER** of murky rivers and lakes, the wels catfish is occasionally driven into the light by the urge to breed. For many years, I tried to photograph this magnificently grotesque creature at spawning time in the shallow parts of Swiss lakes, but the water was always too muddy. Then I received a promising phone call.

Spain's River Ebro is famous for its giant wels, and some had emerged from its dark depths to spawn in a small, clear tributary. This one was curled up under submerged branches along the riverbank, resting before moving on to its spawning grounds at the end of the day. On a short stretch of the river, I found about a dozen, some up to 2.4m long, together with carp and barbel that were spawning at the same time. This is dangerous as the predatory wels will attack and eat the smaller fish if they stray within range.

► **MORE LIKE A** tropical sea than a European waterway, this is the River Korana in Croatia. A shoal of chub, a typically nimble river-dwelling species that tends to hang just below the surface, waits near the riverbank to catch any invertebrates that fall from the overhanging trees.

This river flows out of the famous Plitvice Lakes, a UNESCO World Heritage Site famed for its turquoise water. As it sweeps through a basin of limestone-rich karstic rock, layers of calcite crystals called travertine are deposited on the riverbed and even on plants or submerged trees.

These chub were probably originally introduced by fishermen who used them as live bait to catch the once famous but now almost extinct brown trout of Plitvice. As the chub multiply, they – along with the introduced rudd – compete for space and food with the trout.







DO NOTHING BUT wait is the mantra of the pike, and this particular hunter is haunting a forest of horsetails until something edible hovers into view. Its great tail and rear-set dorsal and anal fins enable it to rocket from cover. But if its strike is unsuccessful, it will seldom chase prey.

In Europe, the pike usually hunts other fish and frogs, but here, in an unnamed lake in British Columbia, Canada, its prey seemed to comprise pike and nothing else. I saw no other species here, just a vast number of these predators in every size. The smaller pike hunted in the shallows, while the monsters of 1m or more stalked deeper channels.

The lake can only be reached by seaplane and I was actually working on another project when I visited. But the idea of a species that must eat itself to survive was too good to miss.

THE PHOTOGRAPHER: MICHEL ROGGO



I took up photography quite late in life, at the age of 30. After travelling to Kenya, I went to Alaska where I was inspired by the red

sockeye salmon on their spawning grounds. Year after year, I returned to see them, developing and improving my own special system of photography. Placing my camera on the riverbed, I sit on the bank and watch what's going on below the surface on a screen, waiting for that special moment. And, 25 years later, I'm still using much the same technique and even the same camera housing. I mostly specialise in fish, but I have also used this method to photograph brown bears and Nile crocodiles – great fun, but not particularly smart...

THE LOCATION

As a photographer who concentrates on freshwater habitats, I have to travel a great deal in search of rivers with good fish populations. Most of the rivers in Europe are in bad shape, polluted or scarred, and interrupted by dams or navigation channels. Worryingly, most fish populations have declined dramatically over the past 25 years. But there is hope; plants and animals swiftly return to revitalised rivers.