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# Newsletter

# LIFE FOR LASCA

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In this issue of the Newsletter we present again two native fish species in decline whose survival is also supported by the Ticino Park thanks to various initiatives such as the project **LIFE TICINO BIOSOURCE** (<http://ticinobiosource.it/>) and the project **INTERREG SHARESALMO** ([https://interreg-italiasvizzera.eu/database\\_progetti/sharesalmo/](https://interreg-italiasvizzera.eu/database_progetti/sharesalmo/)).

## **THE MARBLE TROUT (*Salmo trutta marmoratus*)**

**Family:** Salmonidae

**Morphology:** the marble trout has a tapered body with a mouth of considerable size in a median position and with a well developed set of teeth. The livery of this fish is very characteristic: gray-yellow on the back and sides, with a classic marble pattern that gives it its name with irregular sinuous lines of gray, brown or greenish color. The belly, on the other hand, is yellowish or whitish. There is the adipose fin typical of salmonids, the dorsal and caudal fins are dark gray while the ventral, lateral and anal fins are light gray with yellowish shades.

**Size:** it can exceed 100 cm in length and exceptionally reach 20 kg in weight.

Marble trout - Photo archive Ticino Park



[www.lifeforlasca.eu](http://www.lifeforlasca.eu)

**Habitat and Behaviour:** the marble trout lives in the foothills of the streams, characterized by high flow rates and clear, fresh waters (normally at temperatures below 16 ° C) and well oxygenated, with sustained or moderate current, pebbly and gravelly bottoms. It prefers areas full of shelters and deep holes to hide but can also be found in resurgence channels and fountains thanks to the clear and fresh water that remains constant throughout the year. The tendency to remain hidden in shelters seems to be more evident than in other trout species and seems to be more accentuated in large individuals.

**Feeding:** it is an ichthyophagous species therefore it mainly eats fish, but in the first 2-3 years of life it feeds mainly on aquatic macroinvertebrates such as larvae and adults of insects, crustaceans and oligochetes. With advancing age and increasing size it begins to prey fish which gradually become the main diet.

**Reproduction:** sexual maturity is reached at 3 years for the male and 4 for the female. The reproductive period, in our waters, runs from December to January. The females go up the rivers in search of shallow stretches with a pebbly bottom, with the caudal fin they dig holes where they lay about 2300 eggs per kg of body weight. Once fertilized by the males, the eggs are covered with gravel so that the fry can remain hidden for about 2-3 weeks after hatching by reabsorbing the yolk sac.

**Distribution:** this salmonid is endemic to the left tributaries of the Po and the waterways that flow into the Upper Adriatic.

**State of conservation:** the marble trout has undergone a strong contraction throughout the area due to environmental degradation and hybridization with the brown trout. Originally the range of the two species was distinct, but man has introduced brown trout into the stretches of the river where the marbles were present, making them meet. The two species can cross and originate hybrids capable of reproducing, due to this we are losing the pure genetics of the marble trout.

## THE EUROPEAN BULLHEAD (*Cottus gobio*)

**Family:** Cottidae

**Morphology:** the body is spindle-shaped and without scales, with a large and flattened head, small eyes and a very wide mouth. The bottom livery can vary from reddish-brown to greenish-brown with large irregular dark spots that can join to form transversal bands on the sides and back. The belly, on the other hand, is whitish in color. The livery of the males in the reproductive period darkens. The pectoral fins are very developed and the anal fin is very long, like the second of the dorsal fins. The dorsal, pectoral and caudal fins are light with dark spots arranged in regular and specular rows, absent in the other fins. In adults, a hump is easily noted between the nape and the origin of the first dorsal fin.

**Size:** it reaches a maximum length of 15 cm and a weight of 40 g.



European bullhead, detail of the muzzle – Photo G.R.A.I.A. srl

**Habitat and Behaviour:** the European bullhead prefers clear, fresh and well oxygenated running waters, with temperatures no higher than 16 ° C. It generally frequents areas with a mixed bottom of boulders, gravel, pebbles and sand. It can also be found in lakes with cold waters and rocky or gravelly shores. There are also populations living at the mouths of rivers, in areas with low salinity. It has sedentary habits and rarely makes short trips during the scrub period to search for areas suitable for reproduction. Some specimens can coexist in the same stretch of the watercourse, but during the scrub period the males become territorial and tolerate only the presence of the females. It is generally active at dusk, at night or on cloudy days while hiding during the day.

**Feeding:** it feeds on aquatic invertebrates, fry and eggs of other fish, eggs and larvae of amphibians. It changes diet depending on the stretch of the river and the season. Most frequently, it feeds on crustaceans and insect larvae (such as ephemera, trichoptera, plecoptera and diptera), leeches, earthworms and molluscs.

**Reproduction:** it reaches sexual maturity at 1-2 years. The reproductive period begins when the water temperature rises above 12 ° C, between February and May. The male sets up a nest, usually under flat stones or using natural cavities. The female, attracted by the courtship ritual, enters the nest and overturns to lay the eggs, which adhere to the vault of the cavity. Males court every female that enters the territory, so eggs in various stages of development may be present in the nest. Deposition is followed by fertilization by the male. The eggs hatch after about 3-4 weeks. Each female can lay from 200 to 600 eggs.

**Distribution:** it is widespread throughout Europe, with the exception of the southernmost regions. In Italy it is found throughout the Alps in torrential waters, in the Po Valley in resurgence waters and in some Apennine waterways.

**State of conservation:** the European bullhead is considered of lesser concern in the IUCN Red List, but its range is in sharp decline especially in resurgence areas with numerous local extinctions.