

Pseudorasbora parva



| Taxon | Family / Order / Class / Phylum |
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| <i>Pseudorasbora parva</i> (Temminck & Schlegel, 1846) | Cyprinidae / Cyprinodontiformes / Osteichthyes / Chordata |

COMMON NAMES (English only)

Stone moroko
Toupmouth gudgeon

SYNONYMS

Leuciscus parvus Temminck & Schlegel, 1846

SHORT DESCRIPTION

This zooplanktivorous fish has an elongated body, slightly flattened on sides, resembling that of the species of the genus *Gobio*. Maximum size up to 110 mm, though most individuals are 80-90 mm in length and 17.1-19.2 g in body mass. The coloration is similar in both sexes, with grey back, light sides and belly passing from yellowish-green to silver.



Close-up of *Pseudorasbora parva*

Photo: R.Gozlan

BIOLOGY/ECOLOGY

Dispersal mechanisms

Accidental introduction or natural expansion of the range through river systems

Reproduction

Spawning takes place when one year old. In the Amur River basin the spawning starts when the water reaches the temperature of 15-19°C (May-August), whereas in Europe it spawns earlier – in April-June. It can produce from a few hundred to a few thousand eggs. The spawning is multi-litter and takes place in the littoral zone. The eggs are laid on plants, sand, stones, mollusc shells and other substrata. Before spawning the female carefully cleans the substratum for egg-laying. During one act it lays up to several dozen eggs. One male may spawn with a few consecutive females. The male guards the eggs until hatching, and aggressively drives away other, often larger fishes.

Known predators/herbivores

Predatory fishes are pike (*Esox lucius*), pikeperch (*Sander lucioperca*), perch (*Perca fluviatilis*).

Resistant stages (seeds, spores etc.)

Unknown.

HABITAT

Native (EUNIS code)

C1: Surface standing waters, C2: Surface running waters, C3: Littoral zone of inland surface waterbodies.

Habitat occupied in invaded range (EUNIS code)

C1: Surface standing waters, C2: Surface running waters, C3: Littoral zone of inland surface waterbodies. In both its original distribution range and in secondarily invaded areas, the stone moroko inhabits shallow lakes, carp ponds, irrigation canals, ditches and slow sections of lowland rivers.

Habitat requirements

Minimum temperature for reproduction is 15-19°C.

DISTRIBUTION

Native Range

East Asian region including the basins of the rivers Amur, Yang-tze, Huang-ho, Japanese islands, western and southern parts of the Korean Peninsula and Taiwan.

Known Introduced Range

In Europe it was first recorded in 1961 from southern Romania and Albania. In 1972 the species was recorded from the European part of the former USSR – the Danube delta and Dniester. In slightly over 40 years it has almost entirely colonised Europe, proceeding rapidly from east to west, including Hungary, Czechoslovakia, France, Austria, Germany, Belgium, the Netherlands, Bulgaria, northern Greece, Turkey and the western part of the Balkans, Poland, Italy, England and Denmark.

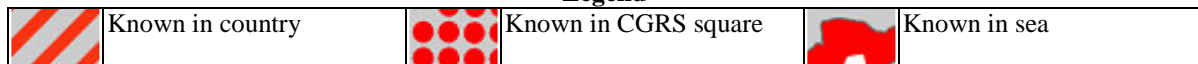
Trend

It is increasing.

MAP (European distribution)



Legend



INTRODUCTION PATHWAY

It has been intentionally introduced through aquaculture. It was introduced in Europe with stocking material of herbivorous fishes (*Ctenopharyngodon idella*, *Aristichthys nobilis*, *Hypophthalmichthys molitrix*) imported from China.

IMPACT

Ecosystem Impact

It competes for food with farmed fish species. It feeds on juvenile stages of many locally valuable native fish species. Being a vector of infectious diseases (including *Spherotecum destruens*), it constitutes a serious threat to both native and farmed fish in Europe.

Health and Social Impact

No human health effects have been reported.

Economic Impact

In the open waters of southern Europe it has probably contributed to a decrease in abundance or even disappearance of some autochthonous cyprinids such as *Scardinius erythrophthalmus*, *Carassius carassius*, *Rhodeus sericeus*, *Gobio gobio* and *Leucaspis delineatus*. In ponds, during a mass occurrence, it depletes the food supplies of farmed species like carps, decreasing their productivity.

MANAGEMENT

Prevention

Stocking material imported for fish farms or in order to stock open waters should be checked especially carefully to ensure the absence of this invader. Additionally, using the stone moroco as live bait for predatory fish should be stopped.

Mechanical

Unknown.

Chemical

Unknown.

Biological

In pond carp farms it is recommended, before introducing carp, to leave alone for a short time and then remove native predatory fishes.

REFERENCES

Britton JR and Brazier M (2006) Eradicating the invasive topmouth gudgeon, *Pseudorasbora parva*, from a recreational fishery in northern England. *Fisheries Management and Ecology* 13 (5):329-335

Pinder C, Gozlan RE and Britton JR (2005) Dispersal of the invasive topmouth gudgeon, *Pseudorasbora parva* in the UK: a vector for an emergent infectious disease. *Fisheries Management and Ecology* 12 (6): 411-414

Witkowski, A. (2006): NOBANIS – Invasive Alien Species Fact Sheet – *Pseudorasbora parva*. – From: Online Database of the North European and Baltic Network on Invasive Alien Species – NOBANIS www.nobanis.org, Date of access x/x/200x

OTHER REFERENCES

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