

## = Potamon fluviatile =

Potamon fluviatile is a freshwater crab found in or near wooded streams , rivers and lakes in Southern Europe . It is an omnivore with broad ecological tolerances , and adults typically reach 50 mm ( 2 in ) in size during their 10 ? 12 year lifespan . They inhabit burrows and are aggressive , apparently outcompeting native crayfish .

P. fluviatile has been harvested for food since classical antiquity , and is now threatened by overexploitation . Many of the island populations are particularly vulnerable , and the Maltese subspecies has become a conservation icon . A population in Rome may have been brought there before the founding of the Roman Empire .

## = = Description = =

Adult Potamon fluviatile may reach a carapace length of 50 millimetres ( 2 @. @ 0 in ) , with females being generally smaller than males . As with other crabs , the body is roughly square , with the reduced abdomen tucked beneath the thorax . The thorax bears five pairs of legs , the first of which is armed with large claws .

The life span of P. fluviatile is typically 10 ? 12 years . Moulting does not occur in winter . Mating lasts between 30 min and 21 hours , with spawning usually taking place in August . Females carry the eggs on their pleopods ( appendages on the abdomen ) until they hatch directly into juvenile crabs , having passed through the larval stages inside the egg .

Potamon fluviatile is edible , as indicated by its alternative specific epithet edulis , and was known to the ancient Greeks ; it is probably this species which they depicted on medals found at Agrigento , Sicily . More recently , the species was depicted on the 5 ¢ coin in the last series of Maltese coins before the introduction of the Euro there in 2007 .

## = = Ecology = =

Potamon fluviatile has a generalist diet , feeding on vegetable debris , scraping algae from surfaces , or preying on frogs , tadpoles , and various invertebrates , such as insect larvae , snails or worms . No predator seems to specialise on P. fluviatile , but a number of animals take it opportunistically , including rats , foxes , weasels , birds of prey and jays . The most significant predator may be mankind , with individual prospectors able to catch 3 @, @ 000 to 10 @, @ 000 in one season .

Adults occupy burrows , while smaller individuals shelter under stones . The entrances to the burrows may be more than 5 m ( 16 ft ) from the stream 's edge and are always above water level . The burrows may be more than 80 cm ( 31 in ) long , and probably serve to protect the crabs from extreme cold .

Potamon fluviatile is an aggressive species , mostly attacking with the larger right claw , since 90 % of individuals are right @-@ handed .

In the Tosco @-@ Emilian Apennines , P. fluviatile is only found south of the watershed , in contrast with the crayfish Austropotamobius pallipes , which occurs on both sides on the mountains . Although their ranges overlap , the two species do not inhabit the same water courses , apparently because the crab outcompetes the crayfish , which is therefore forced to live in less favourable locations where the crab cannot survive . Non @-@ indigenous crayfish may pose a greater threat to P. fluviatile than native crayfish , although the greatest threats remain pollution , overfishing and the draining of wetlands .

## = = Distribution = =

The natural range of Potamon fluviatile is highly fragmented , and covers parts of many countries with a Mediterranean coastline . It is found in mainland Italy and on the Balkan Peninsula from Dalmatia to the Axios River in Greece . It is also found on a number of islands , including Sicily , Malta and Gozo , the Ionian Islands , Aegean Islands , Sporades and Andros in the Cyclades .

Although the species as a whole is widespread , it is declining in numbers , and these insular populations are particularly vulnerable .

== Italy ==

*Potamon fluviatile* is widely distributed in much of mainland Italy , especially in the provinces of Trento , Lombardy , Veneto , Liguria , Tuscany , Umbria , Lazio , Campania , Apulia , and Calabria , as well as on the island of Sicily . Although it used to be found as far north as Lake Garda , *P. fluviatile* no longer occurs north of the River Po .

In 1997 a population of *P. fluviatile* was discovered under the ruins of Trajan 's Forum in the heart of Rome , living in canals built by the Etruscans which connect to the Cloaca Maxima . Based on a genetic analysis , which demonstrated that these crabs were similar to those in Greece , researchers believe that they had been brought by the Greeks before the founding of the city , some 3000 years ago . The crabs ' unusual size , up to 12 cm ( 4 @. @ 7 in ) , and longevity ( up to 15 years ) are also interpreted as evidence of a long @-@ established population , by analogy with island gigantism .

== Malta ==

On the island of Malta , *Potamon fluviatile* is rare and restricted to a few locations in the west of the island . On Gozo , there is a single population which inhabits a stretch of river only 700 metres ( 770 yd ) long .

== Balkans ==

In the Balkan Peninsula , *Potamon fluviatile* is known to occur in Croatia , Montenegro , the Republic of Macedonia , Albania and Greece . There are four species of *Potamon* in the Balkans , and *P. fluviatile* is replaced by *Potamon ibericum* in northeastern Greece . In mainland Greece , *P. fluviatile* is found in the drainages of the Axios , Thyamis , Aheron and Arachthos , Pineiós , Píros @-@ Tethreas , Pamisos and Evrotas rivers .

In the Ionian Islands , *P. fluviatile* is known to occur at only one site on Corfu , as well as on Kefalonia , Lefkada and Zakynthos . In the Aegean Islands , it is found on Skiathos and Skopelos ( Sporades ) , on Euboea and Skyros , and at a single site on Andros in the Cyclades .

== Taxonomy ==

*Potamon fluviatile* is at the western distributional limit of the genus *Potamon* . Other species in the genus occur through Eastern Europe and the Middle East , and across Central Asia as far east as northwestern India . The populations of *P. fluviatile* on the Peloponnese , Kefalonia , and Zakynthos may represent a separate , cryptic species , and the population from the Peloponnese was described in 2010 as *P. pelops* .

*P. fluviatile* was formerly divided into three subspecies : *P. f. algeriense* , *P. f. berghetripsorum* and *P. f. fluviatile* . The first two of these live in North Africa , and were later combined and separated from *P. fluviatile* as the species *Potamon algeriense* . By 1983 , the nominate subspecies ( equivalent to the current circumscription of the species *P. fluviatile* ) had been divided into six nationes , or " tribes " . *Natio fluviatilis* was found in northern Italy , *natio tarantium* in southern Italy , and *nationes thessalonis* , *kühnelti* and *laconis* were found in parts of Greece . The geographical distribution of *natio leucosis* was not reported , and it was suggested that a further ( undescribed ) tribe inhabited the Greek island of Andros . Despite this wealth of infraspecific taxa , they are rarely used by scientists , and some have questioned directly the value of defining infraspecific taxa within *P. fluviatile* . In 1990 , the population on Malta was described as a separate subspecies , *Potamon fluviatile lanfrancoi* , and that taxon has become a conservation icon in Malta following its legal protection in 1993 , although not all scientists recognise the taxon .

