The species

The naiad *Margaritifera margaritifera*, also known as freshwater pearl mussel, and *Galemys pyrenaicus*, also known as Iberian desman, are the species on which the actions of the project Margal Ulla are going to be centred. Both species appear in the Galician Catalogue of Endangered Species (Decree 88/2007, April 10th). The first one is classified as "endangered", whereas the second one appears as "vulnerable", although there is great uncertainty about its real degree of threat.

Within the Galicia scope, these species have counted on a technical proposal for a Recovery Plan of *M. margaritifera* (L.) and for a Conservation Plan of *Galemys pyrenaicus* (G.) since June, 2009. Both proposals were drawn up by the initiative of the Galician Nature Conservation Department, *Dirección Xeral de Conservación da Natureza*, in order to be used as instruments of planning from which many measures of conservation were established. These measures will be now launched within the framework of Margal Ulla.

In addition, these measures of conservation will also benefit many other species which are related to the fluvial environment and that require bank forest habitats properly preserved and good quality of water. Other species that appear within the Annex II of the Habitat Management Committee –such as *Macromia splendens*, *Coenagrion mercuriale* (Odonata) or *Chioglossa lusitanica* (Amphibia), and *Narcissus cyclamineus*, among the plants– will be specially benefitted.

Margaritifera margaritifera (L.):
The freshwater naiad is a bivalve mollusc which is similar in shape to the thick sea water mussel. It can achieve a length of even 12 centimetres. This mollusc belongs to the Unionoida order, which comprises the freshwater big bivalves that are characterized by having a complex life cycle in which, far from the typical plank tonic larva, they develop a variant known as glochidium. If it is to successfully grow, the glochidia need to be temporarily attached to a suitable host fish, which also serves as their means of transport and contributes to the spread of the colonies throughout the river.

*Margaritifera margaritifera needs*clean, oxygenated, cold water and fast-flowing streams with low calcium content. It can be found on both sides of the Atlantic, in the oligotrophic rivers of the Northern hemisphere. During a long time, it was very abundant in all the European rivers which flow either into that ocean or into the Arctic. Recent research shows that this specie has suffered a dramatic decline within all its rank of distribution since the last century. It is considered as one of the bivalves most endangered in the world.

It is characterized by an exquisite specificity of the host of its glochidia, since only those attached to the salmonids' (salmon, trout and whitefish) gills will be viable. That is why their conservation status is conditioned by the survival of the salmonids.

The causes of its decline are varied and common to the causes of other species from the aquatic environment. Some examples are industrial and urban pollution; the decline of salmonid populations: the actions in the fluvial watercourse; hydroelectric installations; changes in the fluvial morphology; deforestation operations; forest fires; agro-livestock activities; acidification as well as direct effluents coming from activities which are near the rivers, farms and fish farms.








Galemys pyrenaicus (G.):
Galemys pyrenaicus is a small semi-aquatic mammal that belongs to the Soricomorpha order and its aspect is unmistakable. With a length between 11 and 13, 5 centimetres, it is somehow similar to a mole, although its elongated head is conical and ends in a mobile and prominent snout with nostrils in dorsal position. This desman has characteristic hind legs, which are powerful, big and webbed, and a long scaly tail, which is compressed in its distal end, in order to help propel it through the water.

The Pyrenean species lives along fast-flowing mountain streams and river banks. It seeks shelter in rock crevices, under the roots of big trees or they take advantage of other animals' burrows. It is an excellent diver that lives mainly on small invertebrates that live in the river-beds. This desman captures its preys by means of its highly developed sense of smell and taste and, in particular, thanks to its extraordinary sense of touch, which is found in the small hairs of its trunk. These hairs are very sensitive to variations in the water pressure and they can detect obstacles or preys at a distance of 1 metre, quite in the same way as a sonar works.

The freshwater mole is a soricomorph mammal, which is endemic to the Iberian Peninsula, with a geographical distribution that includes the Atlantic arch within the same territory. Populations of this species can be found in Spain, Portugal, France and Andorra. It is about the only representative of this genus, which along with the Russian freshwater mole (*Desmana moschata*), comes from an evolutionary lineage that is peculiar to mammalian insectivores adapted to semi-aquatic life.

Since it is a nocturnal animal without conspicuous habits, the study of this species presents great difficulty and, current information available about it is very limited. However fragmentary or incomplete they may be, the current available data agree that an important regression to their area of distribution and a severe fragmentation of their populations have been occurring during the last decades.