

CONSERVATION OF *Unio aleroni*, A CRITICALLY ENDANGERED ENDEMIC NAIAD OF THE EASTERN PYRENEES

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Unio aleroni is endemic to the foothills and lowlands of the eastern Pyrenees in Catalonia.

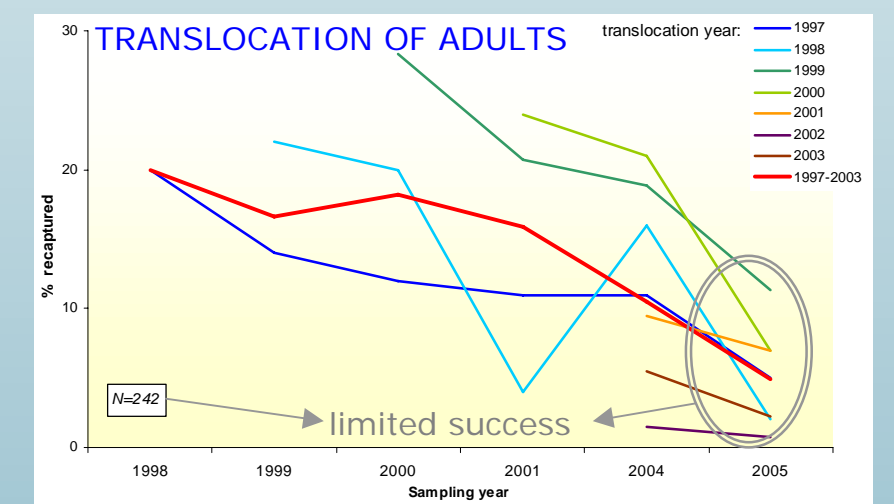
In the last three decades it has experienced a dramatic decline.

In 1992 a surviving population was discovered near the Zona Volcànica de la Garrotxa Natural Park.

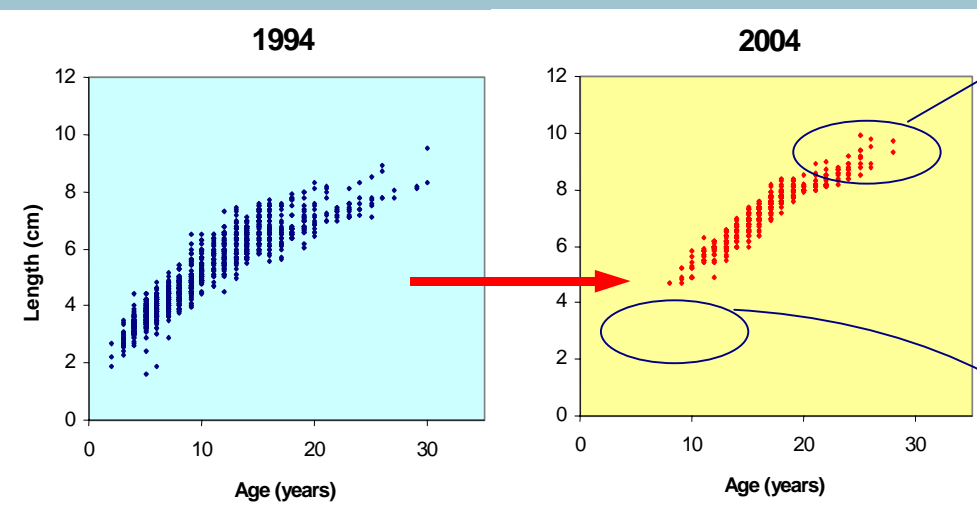
Since 1993, a conservation plan has been implemented:



DEMOGRAPHIC AND REPRODUCTIVE MONITORING:



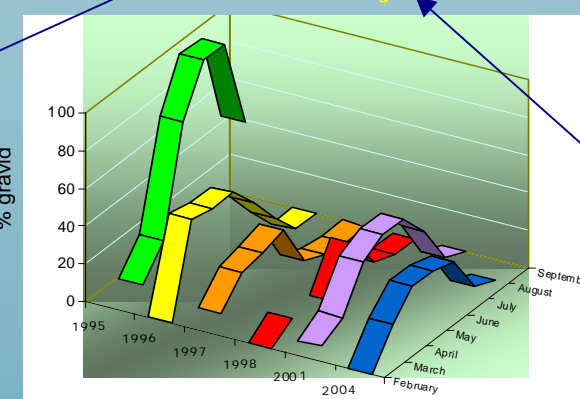
The size and age structure of adult naiads has steadily changed:



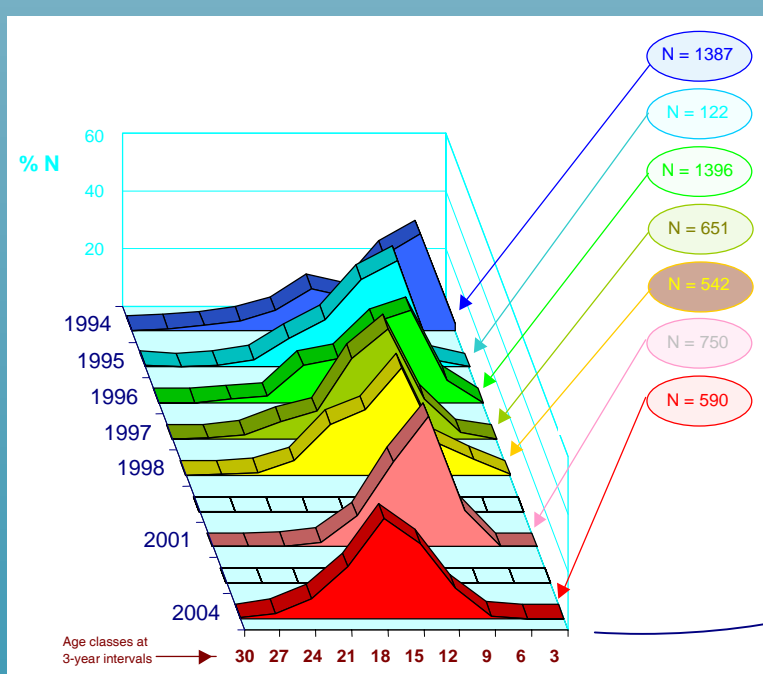
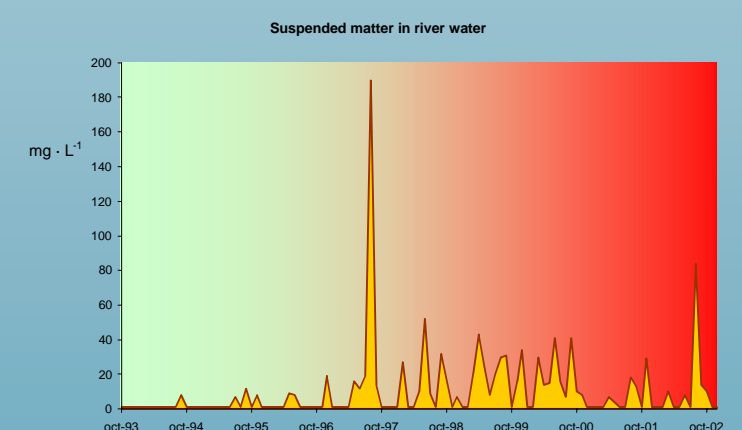
increased growth

reduced fertility

resource allocation out of reproduction



Pollution by livestock and urban sewage:



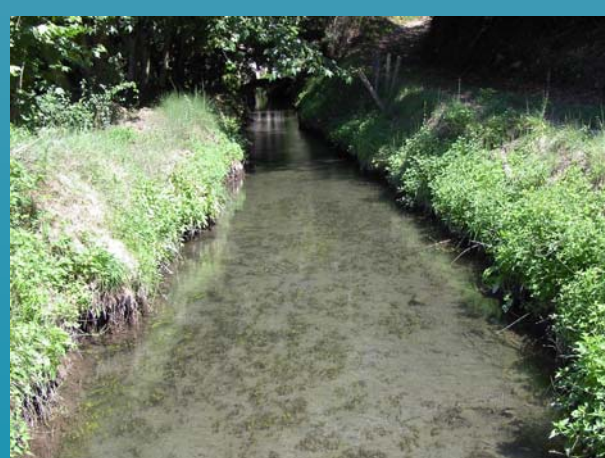
river bottom unsuitable for juveniles

Without enhanced protection, this population may become extinct in 15 years or less.



Several small populations have been discovered in limited areas in four drainages. However:

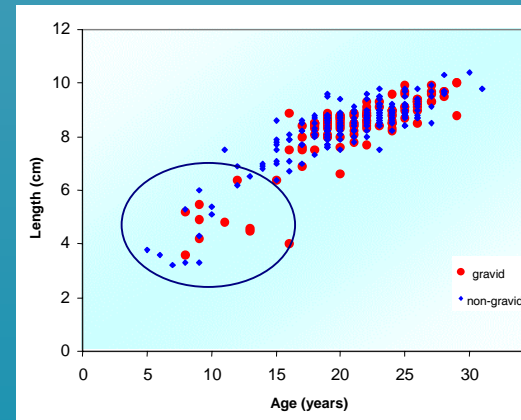
morphological and ecological differences among drainages



very localized, highly vulnerable



also reduced recruitment, due to pollution or virtual absence of fish hosts



Conservation of *Unio aleroni* requires:

- detailed knowledge of surviving populations
- development of captive breeding
- action plans for each drainage
- implementation of clean water directives
- strict protection of fluvial environments
- maintenance of adequate flow
- control of aquatic carnivores
- establishment of new populations