

A black and white photograph of a damselfly nymph resting on a large, textured leaf. The nymph is positioned vertically, with its head at the top and its long, segmented abdomen extending downwards. Its wings are folded along its body. The leaf's veins are clearly visible, creating a complex pattern in the background.

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Programme and abstracts

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The logo features a stylized illustration of a damselfly nymph on the left, with its wings spread. To the right of the illustration, the text "European Congress on Odonatology" is written in a bold, sans-serif font. The word "European" is on the top line, "Congress on" is on the second line, and "Odonatology" is on the third line, which is the largest and most prominent.

**European
Congress on
Odonatology**

sampling adults, breeding adults, larvae and exuviae were compared. Nine retrodunal ponds within the "Migliarino, San Rossore, Massaciuccoli" Regional Park (Tuscany, Italy) were repeatedly sampled during May-September 2008. A total of 22 species were found when pooling all data. However, when analysed separately the methods yielded different results. Firstly, some species were only found using certain methods but not other. Secondly, univariate measures of diversity (α , β , γ -diversity, estimated number of species using the Chao2 method) obtained from the four sampling methods were considerably different. For example, the β -diversity index, which quantifies the difference in species composition among ponds, was lowest when considering adult dragonflies and highest when analysing exuviae. A reverse trend was observed for the other index. Furthermore when analysing which environmental feature was correlated to species richness among ponds, remarkably different results were obtained for the four methods. For example, when considering only adult dragonflies, species richness was significantly correlated to the amount of tree cover on banks of the ponds, while species richness of exuviae was positively correlated only to pH of the water. The presence of *Procambarus clarkii* (Girard 1852) influenced richness estimated for larvae.

Finally, differences in assemblage composition reconstructed using the different methods were also evident when the data were analysed using multivariate techniques (Mantel test, nonMetric-Multi Dimensional Scaling), and when environmental variables were fitted onto ordination plots using the ENVFIT method, different variables were selected as important to explain difference in assemblages composition. It is evident from the data analysed that the different survey techniques employed are not interchangeable and that monitoring of Odonata has to be based on carefully chosen method, which reflects the aim of the study.

The National Action Plan for Odonata: a French contribution to European conservation network for threatened dragonflies

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According to the IUCN, 14% of European dragonflies are in critical danger of extinction. In France, 50% of the area of wetlands has disappeared since 1950, mainly because of soil drainage or habitat destruction. We have mainly information on Odonata species distribution but the real conservation status is poorly known.

Within the framework of the National Strategy for Biodiversity, France decided to develop a national action plan for Odonata. The Office for Insects and their environment (OPIE) was assigned by the French Ministry of Ecology to define and implement this National Action Plan from 2010 to 2013. 18 species of endangered dragonflies are involved. Some of them are also endangered at European level.

The main objective of this plan is to assess and improve the conservation status of these species in our country. The plan relies on three kinds of actions: (1) knowledge improvement on ecology and conservation management requirements, and on species distribution, (2) conservation management at different landscape scales to increase population habitat quality and (3) communication and training of involved actors. For these actions, we establish priorities taking into account pre-existing knowledge and threat degrees. The highest priorities are:

- Document data on species,
- Organize a national monitoring of endangered species,
- Develop and Implement specific conservation projects,
- Develop a documentary resource centre,
- Training technical agents involved in aquatic areas management.

The national plan will be spread in 22 regions of metropolitan France. According to the national specifications, each region will draft its own action plan for Odonata. Each region has the possibility to expand this program to regionally endangered species. Every regional plan will be synchronized by a national operator to meet the objectives of the national action plan. Indeed, the conservation of specific populations should be considered on a trans-regional scale and, if necessary, on a trans-national scale.

Dragonflies and Seasonal Streams in the Sierra Morena Mountains (southern Iberian Peninsula)

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Observations of adults belonging to twenty species (seven Zygoptera) and eight families were carried out in two seasonal streams of the Sierra Morena mountain range, in the province of Cordova, Andalusia, southern Spain; thirteen of those spp were observed in both watercourses. Only two spp of libellulids with a vast range in African continent (*Crocothemis erythraea* and *Orthetrum chrysostigma*) were recorded. In the reaches visited there was not superficial water flow for three (La Cabrilla stream, LC, 30SUH200084, 395 m a.s.l.) or four months (Guadatiello stream, Gt, 30SUH252040, 290 m a.s.l.). On the banks riparian forest was very fragmented in both streams. No pollution source was identified. Nine and ten spp were recorded in June and July, respectively; in November four spp only. During spring or early summer reproductive activity (copulations, ovipositions) of *Erythromma lindenii* and *Orthetrum brunneum* was observed, and also emergence of *Onychogomphus forcipatus* (exuviae collected) and *Sympetrum striolatum* (teneral individuals). During the autumn profuse reproductive activity of *Lestes viridis*, *A. mixta* and *S. striolatum* was recorded. Teneral individuals of *E. lindenii* and *O. chrysostigma* observed in middle August could show bivoltinism at least in these two spp. *Oxygastra curtisii* (LC & Gt) and *Libellula depressa* (LC) were two interesting species recorded.

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