



Red List of

Mediterranean Dragonflies



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Key facts

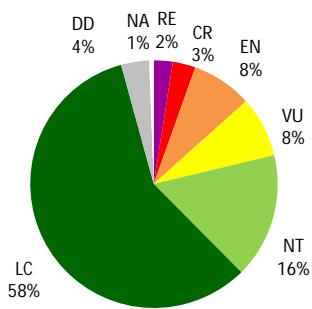
- Dragonflies and damselflies (odonata) are a well known group of insects whose life depends strictly on the presence and good quality of wetlands. It is in fact in running and still waters where they spend the most important phases of their life history: the reproduction and the larval development. This is why they are often used as indicators of environmental health and conservation management, for the evaluation of long and short term environmental changes.
- The Mediterranean region is known to host the world's highest level of endemism and the highest portion of threatened dragonflies. Mediterranean dragonflies' species richness distribution largely coincides with precipitation patterns. It is in mountainous areas that it reaches its highest level, also influenced by the greater diversity of habitats there found.
- Out of these 166 dragonfly species occurring in the Mediterranean basin, 19% (31 species) is classed as threatened with extinction. Furthermore, several species are only marginally present in the Mediterranean basin and four are already regionally extinct, and cannot be found in the basin anymore.
- Some 23 (14%) of the assessed species are endemic, being unique to the region. Of these, nine are threatened and one is classed as Data Deficient, which underlines the importance of conservation measures to prevent a global extinction.
- Habitat loss and degradation caused by humans is the main threat to dragonflies affecting 110 species. Long-term coordinated actions are required at regional, national and international level to integrate biodiversity conservation into all policy sectors. Though some species are already receiving some conservation attention under international laws, others are not protected at all, despite their high risk of extinction.

The IUCN Red List of Threatened Species™



Conservation Status Assessment

Almost a fifth (19%) of the total species assessed is threatened with extinction, with 3% Critically Endangered, 8% Endangered, and 8% Vulnerable. A further 16% are Near Threatened and 6 species are Data Deficient, due to lack of sufficient information to assess their status. Four species are listed as Regionally Extinct (*Agriocnemis exilis*, *Ceriagrion glabrum*, *Phyllomacromia Africana* and *Rhyothemis semihyalina*) and one has been assessed as Not Applicable, a migrant.



Categories	No. of Species
RE Regionally Extinct	4*
CR Critically Endangered	5
EN Endangered	13
VU Vulnerable	13
NT Near Threatened	27
LC Least Concern	97
DD Data Deficient	6
NA Not Applicable	1
Total	166

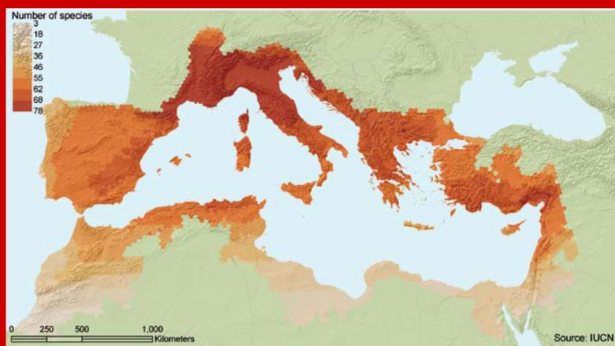
Main Threats

Habitat degradation and water pollution caused by human activities are currently affecting 97% of the 31 threatened species. In addition, natural disasters involving the disappearance of breeding habitats due to drought have the next biggest impact, affecting 75 of these Mediterranean species. An example of the effects of habitat degradation due to intensification of agricultural practices is the strong decline of the Spotted Darter (*Sympetrum depressiculum*), a species that used to be common in the Mediterranean and is now Vulnerable according to the IUCN Red List. Improving the monitoring is also a future challenge.

*The Regionally Extinct species *Agriocnemis sania* was recently found in Egypt during the IUCN African dragonflies workshop (April 2009) and is in the process of being re-categorized (temporarily listed as CR)

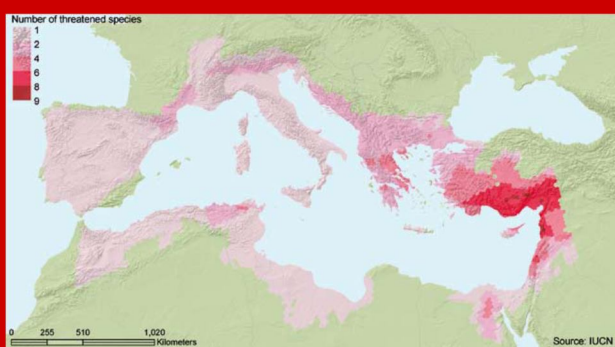
Species richness

Dragonfly diversity is greatest in the northern parts of the region as both Mediterranean and more boreal species can be found in the same area. The highest number of species is held by Italy, due to its particular shape allowing the presence of North African species in the south and alpine species in the north.



Species richness of dragonflies in the Mediterranean basin

Concentration of dragonfly threatened species is particularly high in the southern Balkans, northeastern Algeria and the Levant with the adjacent southern parts of Turkey. The highest number of endemics is found in the Maghreb and in the Levant whereas the smaller numbers are found in the southern Balkans, Crete and the Western Mediterranean.



Species richness of threatened dragonflies in the Mediterranean basin

Conservation Actions

To ensure that Mediterranean species are secure in the long term, this needs to be combined with the political will to integrate biodiversity conservation into all policy sectors is needed. The priorities identified in this study include addressing the threats, such as the destruction and degradation of freshwater habitats, and the need to improve monitoring, surveys and studies in some important areas of the Mediterranean Basin. With this aim, five areas of high conservation concern were selected (Maghreb, The Levant, Crete, Southern Balkans and Western Mediterranean) and, for each one, conservation actions prioritized.

For More Information

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The Status and Distribution of Mediterranean Dragonflies

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