

## **Executive Summary - Status Survey and Conservation Action Plan: Dragonfly**

Before there were dinosaurs there were dragonflies (Odonata). Today their size and beauty make them especially valuable subjects for research on insect behaviour and ecology and for art. As their larvae are aquatic, dragonflies can be used in making rapid assessments of water quality. In addition, because they are predators they have considerable potential for the biological control of mosquitoes which transmit diseases to human beings.

Over 5,000 species of dragonfly have been described and many more await discovery or description. Most species live in the tropics, mainly in rainforest. Our knowledge of them is very patchy. Much is known about the relatively few species which inhabit the temperate regions, where most specialists in dragonflies (odonatologists) live; on the other hand very little is known about hundreds of species in the tropics where there are very few odonatologists. The rapid destruction of rainforest makes the conservation of dragonflies a very urgent matter. This Dragonfly Action Plan faces these problems and outlines the necessary solutions. The strategy for conserving dragonflies contains three basic elements:

1. Establish protected areas (National Parks, nature reserves etc.)
2. Conserve habitats outside protected areas by modifying agricultural, forestry and industrial procedures.
3. Carry out measures to support 1 & 2. The principal ones are:
  - a) Research - notably taxonomy and studies of the distributions and biological requirements of species.
  - b) Pollution Control
  - c) Legislation - notably to provide protected areas to control development and to control pollution
  - d) Education and raising public awareness

Fortunately the action which would protect most dragonfly species does not require detailed information about species: there is good evidence to show that if viable examples of the main habitat types in each country are conserved; this measure would effectively conserve most dragonfly species. Therefore, by far the most important recommendation of this Action Plan is that Governments, statutory conservation bodies and non-governmental organisations which manage nature reserves should establish or complete networks of protected areas to cover all the main habitat types found in each country. This procedure is necessary to conserve all groups of invertebrate animals where, as with the dragonflies, there is not enough time or resources to study the distribution and habitat requirements of thousands of species. No country would consider undertaking the work for dragonflies alone, but when it is realised that it is an essential first step in maintaining the biodiversity of the world as a whole it becomes an entirely practical objective.

Apart from supporting this general measure, it is recommended that odonatologists make the maximal use of the facilities available to them to study particular 'centres of endemism' (areas containing large amounts of species which are unique to that area) and special species which are threatened. To assist them this Action Plan for Dragonflies provides guidance on which areas and which species should be given priority. By using The 1996 IUCN Red List of Threatened Animals as a starting point, the listing of dragonflies must be improved so that it can be used effectively as a guide to detailed conservation work. Proposed work on centres of endemism and species would involve the training of odonatologists where they are most needed. Finally, studies which contribute to the Odonata Conservation Database are proposed so that better use can be made of existing information in collections and publications. Individual entomologists and others have an important role in promoting this work, and industry in supporting it.