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Present state, threats and conservation of dragonflies (Odonata) in Poland

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Abstract: 72 species of dragonflies have been recorded in Poland so far. The present state of knowledge of Odonata is generally moderate and unequal with reference to the particular regions. The main current picture of dragonfly fauna has been drawn, with special attention to the increased abundance and the broadened ranges of some Mediterranean and southeastern species (e.g. Aeshna affinis, Orthetrum albistylum), and to the falling numbers, the increasing scatter of localities and the narrowing ranges of some other species, mainly stenotopic (e.g. Nehalennia speciosa, Coenagrion armatum, Coenagrion ornatum). Threats and their mechanisms of affecting dragonflies are analysed in all the main water habitats in Poland. The species typical of small running waters and habitats connected with Sphagnum are the most endangered. It must be stressed, however, that generally the state of Polish dragonfly fauna is fairly good. The main forms of conservation of dragonflies, currently used or proposed for use in Poland, are analysed: passive (species and territorial protection, red list, umbrella species) and active (reintroduction, creating new waterbodies, interference in succession of waterbody). The choice of species protected in Poland is partly inappropriate in comparison with the present situation of dragonfly fauna. The Polish Red List, comprising 16 species, is discussed in comparison with the red lists of other European countries. It is stressed that no species has become extinct in Poland. The proposed list of umbrella species for particular habitats is given. The Wildermuth's rotation model is suggested for the management of some habitats. All issues described in the article are presented synthetically and illustrated with the data and examples from Poland.

Key words: Odonata, diversity, zoogeography, habitats, life factors, conservation, Poland.