

This document lays out the stance of the BDS in relation to observing, catching and collecting dragonflies in Britain and is commended as best practice by the British Dragonfly Society.

Definition: The term 'observing' throughout this document means the watching and/or photographing of dragonflies. The term 'catching' means the temporary capture, examination and release of live insects for identification, scientific or education reasons. The term 'collecting' means the taking of individual dragonflies for the formation of temporary or more permanent study collections, which necessitate killing and/or preserving specimens.

All those observing, catching or collecting dragonflies, especially BDS members, are expected to abide by this Code.

Dragonflies have been in existence for at least 300 million years as members of the global ecosystem, but today human activities including environmental pollution and the destruction and modification of habitats pose grave threats to their continued survival. The BDS is strongly committed to the conservation of these important and beautiful insects and acknowledges that dragonflies have the right to exist independently of human requirements. The BDS promotes the study of dragonflies in ways that minimise interference with their behaviour and ecology. The encouragement of study and furthering of knowledge goes hand-in-hand with conservation. The main concern is to prevent significant damage to populations, especially those of rare and vulnerable species.

General guidance on observing, catching and collecting

Catching or collecting must not be carried out in contravention of any national Law, International Convention or Directive on the conservation of species or habitats applying to the area; Bye-laws and rules affecting catching and collecting on nature reserves and protected areas must be observed. Permission from the landowner or occupier and any other relevant body must always be sought in advance and any conditions laid down by the grantors of permission must always be respected. Details of the species noted and any other relevant data should be supplied to those responsible for managing sites.

Everyone involved in dragonfly activities must be sensitive to the incidental damage and disturbance that fieldwork may cause and sites should ideally be left as they were found. Only those specimens necessary for any purpose should be collected. Specimens (other than exuviae) should not be collected for exchange or disposal to other collectors, or for commercial purposes (e.g. for general sale or for use in decorative artefacts).

Whenever catching or collecting is done in front of an audience, for example the Press and Media, a BDS Field Meeting, or simply those assembled to watch, there is potential for adverse reaction. A clear explanation of the scientific, identification or education purpose of any intended catching or collecting must therefore be given to the onlookers. When a decision is made to temporarily capture a vagrant individual in order to confirm its identity, then advance notice of this should be given with a warning that on release the dragonfly may move away from the area. Adverse public relations could quickly damage the BDS and are to be avoided wherever possible; therefore catchers and collectors should exercise judgement on whether or not to proceed if objections from those present persist. The best interests of the BDS as a national body promoting conservation should be the over-riding consideration of BDS members at all times.

Dragonfly observers, and BDS members in particular, should be polite and respectful to other naturalists and entomologists they encounter. Some of these may be involved in capturing or collecting specimens of various kinds. These activities may be entirely legitimate and should not automatically be assumed not to be. The BDS endorses the Invertebrate Link/JCCBI 'Code of Conduct for Collecting Insects and Other Invertebrates'.

Principle 1: Live dragonflies should only be held captive for good reasons.

Unlike species in less well observed parts of the world, all UK dragonfly species and migrants can be identified as adults or larvae without killing, using external features and good identification guides. Many identifications can be achieved by direct observation, good quality photography, collecting exuviae (larval skins) or by scientific DNA studies. In the field, it is sometimes necessary to make close examination of specimens in the hand for identification or education reasons, and very occasionally this may require live specimens to be temporarily removed from site. All specimens should be released at their site of origin as soon as possible after capture.

- 1.1 When netting adult dragonflies, use techniques that minimise risks of killing them: sweeping upwards from behind or below is safest. There is always a small risk of death or damage to adult dragonflies (especially to the head) during netting, so this needs to be considered carefully. The insect welfare implications of capture and handling should be explained to others present, especially children. It is best to avoid netting and handling teneral, but if necessary they should be handled with extreme care to avoid damage.
- 1.2 Following longer-term projects, such as captive rearing, specimens should be returned to the wild whenever possible, at appropriate sites, in appropriate numbers and at suitable seasons. Rearing of larvae under conditions that could result in premature emergence should be avoided where possible.
- 1.3 Translocations and re-introductions which involve moving live specimens from one site to another should only be carried out after a thorough assessment of the feasibility of such proposals. Advice of appropriate conservation bodies, including the BDS Dragonfly Conservation Group, must always be sought. The BDS Guidelines for Re-introductions should be followed.

Principle 2: Dragonflies should only be killed for justifiable and useful scientific purposes.

National and major regional museums with entomological staff need to hold study collections of dragonflies. These serve to ensure that material from different time periods and geographical areas is available in the long term for research. It is therefore valid that specimens from recent periods are added to these collections. The BDS supports the continued existence of such collections as part of the entomological science of the UK.

Voucher specimens of adults or larvae are occasionally needed to ensure the accurate identification of a difficult or unexpected species, when alternatives such as field notes and/or photographs alone would not suffice. These specimens provide permanent physical evidence enabling identifications to be reconsidered by experts at different times, and in the light of developing knowledge.

In addition, certain scientific research and survey projects, for example water quality biological sampling or research relating to taxonomic issues, may require a number of specimens to be taken.

- 2.1 Voucher specimens: in any one instance a single specimen, male if possible, will often suffice. Such specimens should be permanently deposited in public collections.
- 2.2 Where tissue sampling (e.g. for molecular analysis) is a practicable alternative to killing, this should always be considered. DNA can be extracted from legs or exuviae.
- 2.3 Research specimens and any associated documentation from scientific research and survey projects should be deposited in an appropriate public institution whenever possible. The results of such research should be published and, if possible, the BDS Dragonfly Conservation Group should be informed of any significant discoveries.

The legal and conservation status of dragonflies in Great Britain

Norfolk Hawker *Aeshna isosceles* and Southern Damselfly *Coenagrion mercuriale* have full legal protection under the Wildlife and Countryside Act 1981 (as amended), so catching or collecting them is

illegal without a permit from Natural England or Natural Resources Wales. Southern Damselfly is also listed in the Bern Convention, the EC 'Habitats and Species' Directive and the IUCN 'Red List of Threatened Species' (IUCN 2008). Irish Damselfly (Irish Bluet) *Coenagrion lunulatum* has full legal protection in Northern Ireland under Schedule 5 of the Wildlife and Natural Environment Act (Northern Ireland) 2011.

Southern Damselfly and Norfolk Hawker are the only dragonflies on the UK Biodiversity Action Plan (2007), although other species are the subjects of Biodiversity Action Plans at local level. Northern Damselfly *Coenagrion hastulatum* is on the list of Priority Species in the Scottish Biodiversity Action Plan.

The Odonata Red Data List for Great Britain (Daguet *et al.*, 2008) gives information on the conservation status of all British species.

For advice on the interpretation of this code and any further information, please contact the BDS Conservation Officer and/or the Convenor of the Dragonfly Conservation Group.