

The organisation of dragonfly research in The Netherlands and North Rhine-Westphalia

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Introduction

On both sides of the border, there are many people looking for dragonflies, either just because they enjoy doing so, or because it is part of their work. These people, both volunteers and professional, form part of a larger organisation, allowing their dragonfly records to be collected and used.

The Netherlands

Dragonfly research in the Netherlands goes back to the beginning of the 19th century. The first dragonfly to be collected was a Migrant Hawker (*Aeshna mixta*) near Ginniken in 1823. An important step in the history of dragonfly research was the publication of "Odonata Neerlandica. De libellen of waternimfen van Nederland en het aangrenzend gebied" [Odonata Neerlandica, the dragonflies and damselflies of the Netherlands and neighbouring countries] by Lieftinck in 1925

and 1926. However, it was not until the 1970s that the Nederlandse Libellenonderzoekers (NLO) [the Dutch dragonfly researchers] was founded, uniting all those involved in dragonfly research into one organisation. In 1997 its successor, the Nederlandse Vereniging voor libellenstudie (NVL) [Dutch organisation for dragonfly research], was founded (Wasscher, 2006), this organisation works closely together with EIS-Netherlands and Dutch Butterfly Conservation. The next important publication after Lieftinck's was *De libellen van Nederland* (Odonata) [The dragonflies of the Netherlands] of Geijskes and van Tol which was published in 1983. The publication of a field guide (*Veldgids libellen*) in 1997 led to a growing popularity of dragonflies (Bos & Wasscher, 1997). In 2002, all information on dragonflies in the Netherlands known to date was published in the atlas of the Dutch dragonflies (*De Nederlandse Libellen*

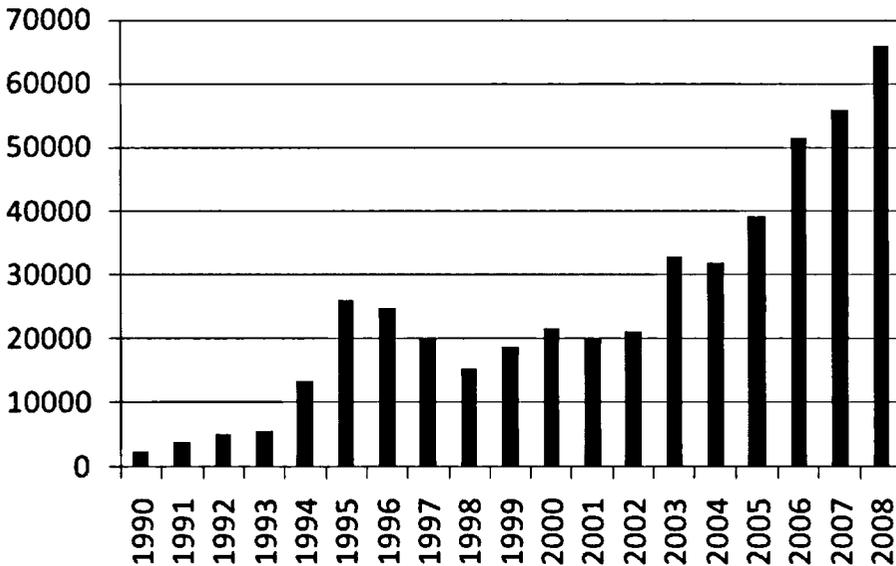


Figure 1. Number of dragonfly records each year in the Dutch dragonfly database.

(KNNV, 2002). The distribution maps in this publication were made with data up to 1997. In 2008 an actualisation on this atlas was made with new maps and ecological information (Bouwman et al., 2008)

Partnership for dragonflies

The Dutch database which contains all the data on Dutch dragonflies is the result of a co-operation between three organisations, each playing a different role within the partnership. This database is growing and growing. Today, it contains almost 650,000 records, with more than 500,000 after 1995 (figure 1). Since 1995, more than 1400 volunteers have been recording dragonflies, although it must be said that most of them do not do so on a regular basis (figure 2).



Nederlandse Vereniging voor Libellenstudie (NVL)

The Nederlandse Vereniging voor Libellenstudie (Dutch organisation for dragonfly research) was founded in 1997; at present there are about 415 members. Volunteers interested in dragonfly research form the backbone of the NVL. The main activities of the NVL are:

- Publishing the journal *Brachytron*
- Publishing a newsletter
- Members Day in March
- Excursions
- E-mail news alert



Dutch Butterfly Conservation

Dutch Butterfly Conservation, was founded in 1983. Up till 1997, it focused on the protection of butterflies and their habitats. Since 1997, dragonfly research has gained in importance

within the organisation. In 2003, this resulted in a new logo, a combination of a dragonfly and a butterfly.

The main activities of the Dutch Butterfly Conservation concerning dragonflies are:

- Coordinating the Dutch Dragonfly Monitoring Scheme
- Fundamental ecological research
- Formulating protection measures for endangered species



European Invertebrate Survey (EIS-Netherlands)

The Foundation European Invertebrate Survey-The Netherlands (EIS-NL) gathers data and maintains databases of distributional data of Dutch invertebrates. These data are collected by hundreds of entomologists who are associated with one or more of the 52 study groups. With these data, EIS-NL aims to increase the knowledge about the distribution and ecology of invertebrates, and to encourage the use of this knowledge in nature management and protection.

Dragonfly projects in the Netherlands

There are various dragonfly projects being carried out in the Netherlands, with one or more organisations working on them.

Some of the most important recent publications are:

- Protection Plan *Aeshna viridis* (DE JONG ET AL., 2001)
- Dutch dragonfly atlas (NVL, 2002)
- Dutch dragonfly monitoring scheme (KETELAAR & PLATE, 2001)
- Species protection plan *Somatochlora arctica* (KETELAAR ET AL., 2005)
- Action plan *Coenagrion armatum* (BOUWMAN & RUITER, 2004)
- Protection of *Calopteryx virgo* and *Cordulegaster boltonii* (GROENENDIJK, 2002)

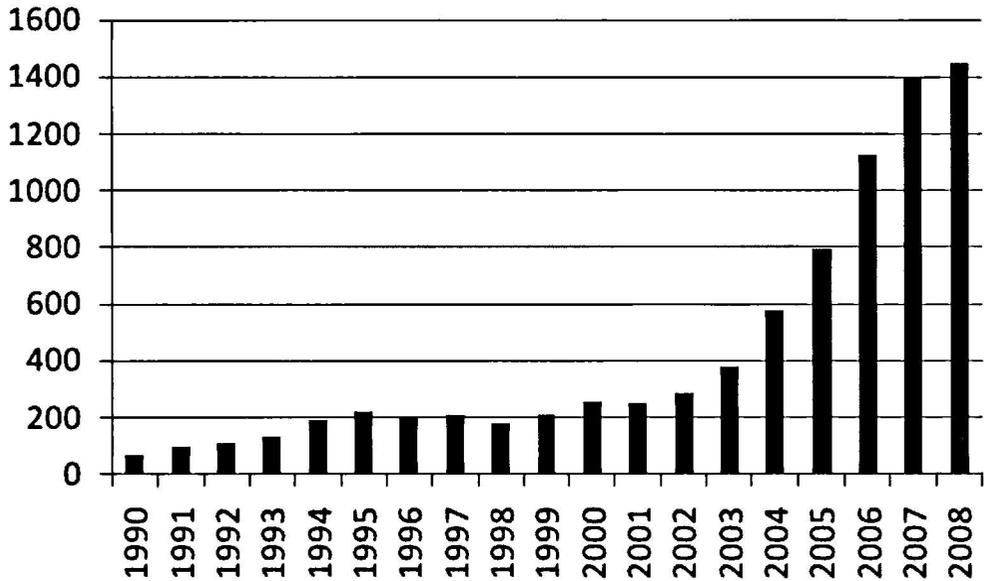


Figure 2. Number of volunteers recording dragonflies in The Netherlands.

- Mapping FFH-species (BOUWMAN EN KALKMAN, 2004)
- Protection plan for *Coenagrion hastulatum* in the province of Noord-Brabant (TERMAAT, 2006)



North Rhine-Westphalia (NRW)

Historical overview and organisation

The Arbeitskreis (AK) was founded in 1996 in Wesel as a working group for the protection and recording of dragonflies in North Rhine-Westphalia. In the mean time, it comprises about 200 people or institutions from all over NRW; at least 50 of these are active members. About fifteen people organise the work and are responsible for the databank. The databank has about 150,000 records and this number is growing.

The AK organises an annual meeting for its members both for presenting and exchanging information. Each member also receives a circular letter and mailings concerning the latest news on dragonflies. The internet site www.ak-libellen-nrw.de is also an important source for information. Here you can read interesting about dragonfly sightings or download the recording manual, consult the most recent Red List, a bibliography, or the dates of coming events. The AK also organises training days for the identification of adult dragonflies as well as exuviae. There is also an exhibition which can be hired as a presentation to raise public awareness of dragonflies.

Partnership for dragonflies

The Arbeitskreis (AK) is working in an efficient network with the major governmental institution for ecology and nature conservation in NRW, the LANUV (Das Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen), the Biological Stations (Biologische Station - institutions for nature conservation at district level), the GdO (Organisation of German-speaking Odonatologists) and other working groups, such as AK herpetofauna NRW.

Dragonfly projects in North Rhine-Westphalia

The most important project at the moment is the atlas, which is planned to be published in 2010. Maps of each species are ready. They are also available on www.ak-libellen-nrw.de, although these are not the latest version. A short text has been written on each species in NRW regarding the historical and present situation, the habitats used in NRW, the threats to their survival and measures for their protection. Also these texts have to be brought up to date. For example, for *Coenagrion scitulum* only historical data from the Rietberger Fischteiche in Westphalia was available. In 2002, some Dutch colleagues rediscovered this species in the Eifel (GREBE ET AL., 2006). Since then, *C. scitulum* has also been found in at least one other location. Another example is *Somatochlora flavomaculata* a very rare species with only a handful of locations known in the whole NRW; it was found in Westphalia in 2005 after an absence of more than 30 years.

Furthermore, more work is needed concerning texts on important areas for dragonflies in NRW, as well as on general topics, such as the climate and climate change and the development of the landscape of NRW. Other projects concern the monitoring of protected species, such as *Coenagrion mercuriale*, a species of the annex II, FFH-directive, as well as *Somatochlora flavomaculata*, a highly endangered species in NRW. This is being carried out by members of the AK in cooperation with the LANUV. Moreover, the AK supports a number of dissertations, for example, one on the differences between restored and canalized river segments as habitat of *Gomphus vulgatissimus*.

Conclusion

Although North Rhine-Westphalia and the Netherlands are organised in their own particular way, there are some similarities. One of the most important similarities is that there are many volunteers working on dragonflies. Their work forms the basis for all dragonfly research and conservation. Without the help of these volunteers, something as beautiful and useful as a distribution atlas would be impossible to make.

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