

IMPRESSIONS OF THE WORKSHOP "EUROPEAN ODONATE MAPPING SCHEMES: PROBLEMS AND PROGRESS", PARIS, 1985

J. VAN TOL and M.J. VERDONK

Rijksmuseum van Natuurlijke Historie, Postbus 9517, 2300 RA Leiden, The Netherlands

Abstract — A report on the Workshop, with a summary of discussions on methodological problems (grid system, reliability of records, recording of permanent populations) and a brief outline of the forthcoming projects.

Introduction

The workshop "European Odonate mapping schemes: problems and progress" was held during the 8th International Symposium of Odonatology in Paris, on Wednesday, 21 August from 16:00 to 18:30 h. More than 30 odonatologists, almost exclusively from Europe, attended the meeting in the Laboratoire d'Entomologie.

The production of atlases has made good progress in the last five years. New or updated versions have been produced in Finland (VALTONEN, 1980), Great Britain and Ireland (HAMMOND & MERRITT, 1983), the Netherlands (GELJSKES & VAN TOL, 1983), several states of Western Germany (ALTMÜLLER, et al., 1981; KIKILLUS & WEITZEL, 1981; NIEHUIS, 1984). New or updated versions of atlases may be expected within the next few years for the Odonata of at least Finland, Ireland, France, Switzerland and Portugal.

Although current activity is thus most stimulating, there remain problems to be solved before the final distribution of European dragonflies can be published.

Methodological problems

The following problems were discussed in Paris.

(1) There are huge differences in the number of observations per entity of surface. Most

parts of the Balkans and some parts of other southern European countries have been investigated very poorly, but also in relatively well investigated areas there usually exist important unexplored areas, e.g. in Great Britain, as was communicated by Norman Moore.

(2) There is no generally accepted system to present the distributions maps. Several countries (Norway, Finland, the Netherlands and Belgium) have accepted the use of the Universal Transverse Mercator grid system to present their maps (10x10 or 50x50 km squares). Other countries (France and Switzerland) use their national grid system. The European Invertebrate Survey has agreed to use UTM-gridded maps at least at the 50x50 km level, but it is also argued to use these for national mapping schemes. This problem can relatively easily be solved when computers are used for data storage. Coordinates can be translated into another coordinate system, although this may cause loss of information.

(3) Reliability of records was extensively discussed. Bastiaan Kiauta emphasized the difficulties that may arise when European distribution maps have to be prepared, since the reliability of the respective regional and local maps is very different. Some maps include all available records, other ones only records documented by reference specimens. He stressed the importance of making collections, which, however, becomes more and more difficult in Europe by legal conservation acts.

- (4) Eberhard Schmidt stressed the particular importance of the recording of the presence of permanent populations. Although this view was generally accepted, it was mentioned that difficulties may arise in practice, since only single observations are available for large areas. Perhaps the use of separate symbols may solve this problem. Eberhard Schmidt will prepare a proposal for methods to detect the presence of permanent populations.
- (5) There appeared to be no "general aim behind the maps" in different parts of Europe. Gary Cleland gave a sketch of the enthusiasm of amateurs in Great Britain to "make just maps". Also conservationists prefer to have detailed and up-to-date distribution maps, but e.g. biogeographers seem to need less detailed but very reliable maps.
- (6) Two important methodological problems were raised by Peter Mill, viz. how to gather and present negative information on the presence of species, and how to delete wrong records from a database. Both these questions have to remain for a more extensive discussion. Also in our experience updating of databases is so time-consuming, that it usually gets low priority.

Current projects and planning

One of us (MV) had prepared distribution maps of three dragonfly species which were chosen by the European Invertebrate Survey for general and consecutive recording, viz. *Coenagrion armatum*, *Gomphus flavipes* and *Macromia splendens*. These maps, however, were prepared on bibliographical references only, since no extensive mapping scheme within the framework of the European Invertebrate Survey exists at this moment. Several additions could be made. These preliminary maps will be published separately with a short comment added. We proposed a follow-up of this project with a mapping of the gomphids of Europe, but after some discussion it was decided that this project should only start after some years of preparation. We will now first try to prepare a final version of the maps of the three pilot species. Eberhardt Schmidt agreed to write a paper on the field identification and the habitats of all European species of Gomphidae. Only after two

to three years this mapping scheme will start, but during the next few years all European odonatologists are urgently requested to collect as many records as possible, so that the preparation of the maps may take only a relatively short time.

According to a message by Jean-Louis Dommanget the Commissariat de Flore et Faune of the Muséum National d'Histoire Naturelle in Paris has offered to work up all our data and to produce distribution maps by computer on any scale and in any grid system we ask for. A preliminary map of the distribution of *Rana temporaria* was demonstrated. The offer was unanimously accepted.

Finally it was decided that a meeting on this topic, within 2-3 years somewhere in the centre of Europe, would be most welcome, since the next International Symposia of Odonatology in India and in the USA are unlikely to be attended by many European "dragonfly mappers". Anyone who is interested in such a workshop is requested to contact Jan van Tol; a preliminary announcement will be made late in 1986.

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References — ALTMÜLLER, R., J. BÄTER & G. GREIN, 1981, *Beih. SchrReihe NatSchutz Landschaftspf. Niedersachs.* 1: 1-244; — GEIJSKES, D.C. & J. VAN TOL, 1983, *De libellen van Nederland*, Kon. Ned. Natuurh. Ver., Hoogwoud; — HAMMOND, C.O. & R. MERRITT, 1983, *The dragonflies of Great Britain and Ireland*, Harley, Martins; — KIKILLUS, R. & M. WEITZEL, 1981, *Grundlagenstudien zur Oekologie und Faunistik der Libellen des Rheinlandes*, Pollichia Buch 2, Bad Dürkheim; — NIEHUIS, M., 1984, *NatSchutz Ornithol. Rheinl.-Pfalz*, 3(1): 1-203; — VALTONEN, P., 1980, *Notul. ent.* 60: 199-215.

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