

# Grasshopper conservation in Europe

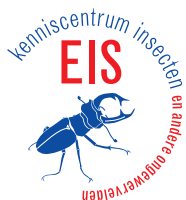


Published on the occasion of the  
third European Congress of Orthoptera Conservation  
in Leiden, the Netherlands (2020)



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## GERMANY

*Thomas Fartmann*

Research on grasshoppers in Germany goes back to the mid 19th century. The first comprehensive overview over biology, ecology and distribution was provided by Harz (1957, 1960). He also founded the scientific journal *Articulata* in 1975, which is published since 1989 by the German Orthopterists' Society (DGfO). The publication of the first field guide by Bellmann (1985) strongly encouraged distribution surveys and scientific research on grasshoppers. The current knowledge on biology and ecology of German grasshoppers has been compiled by Ingrisch & Köhler (1998).

### Atlas projects

The first distribution atlas was already published in 1979 for the German federal state of Hesse by Ingrisch (1979). Since then many others followed. Among them are some that became reference books. This is especially true for those of Baden-Württemberg (Detzel 1998), Bavaria (Schlumprecht & Waerber 2003) and Rhineland-Palatinate (Pfeifer et al.



Kurt Harz in 1983.



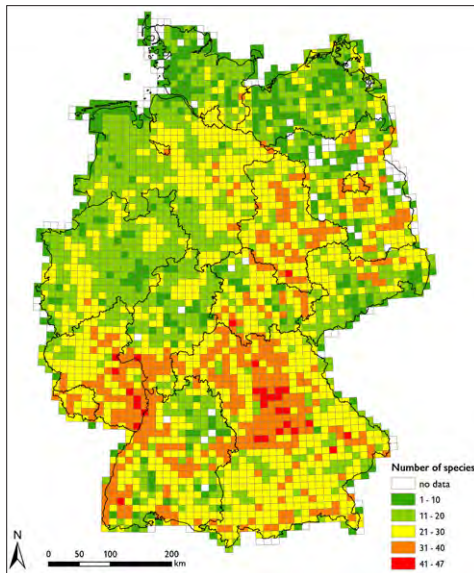
With the modern field guide of Fischer et al. (2016) identification of German grasshoppers has become much easier.

2011). The first distribution atlas for the whole of Germany was published by Maas et al. (2002).

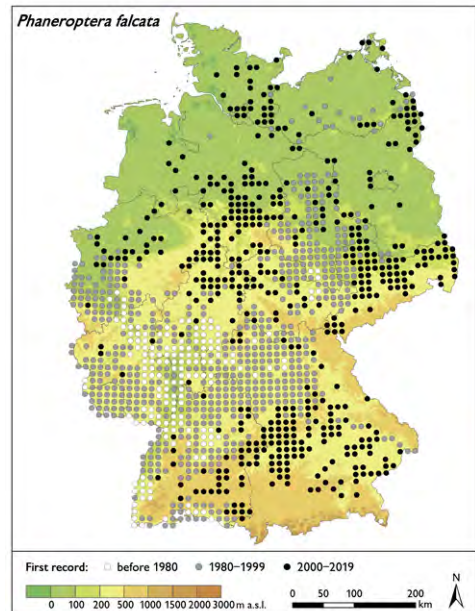
### Conservation and monitoring

Red Lists are available for all German federal states. The most recent one for the whole of Germany was published by Maas et al. (2012) and a new one is in preparation. Due to the (i) high sensitivity to environmental change, (ii) the ease with which they can be sampled and (iii) the high standardization of the sampling techniques, grasshoppers are a group of insects that is particularly suited for monitoring. Two German federal states (Baden-Württemberg, North-Rhine Westphalia) have already started with a standardized monitoring scheme in representative plots. In 2020, monitoring will be established at a national scale, too.





Grasshopper diversity in Germany (Fischer et al. 2016).



The Sick-bearing Bush-cricket *Phaneroptera falcata* is one of the species that recently expanded its range in Germany.

### Outreach

With Fischer et al. (2016) a modern field guide, including distribution maps for all species, is available. Now even amateurs are able to identify most species in the field. Current distribution maps are provided on the webpage of the German Orthopterists' Society (Dgfo-articulata.de).

### Future plans

During recent decades the distribution of grasshopper species in Germany has strongly changed. Many species, especially habitat specialists, have experienced severe range losses during the second half of the 20th century. In contrast, since the 1990s many thermophilous habitat generalists have recently expanded their range (Poniatowski et al. 2018). In 2019, the online recording scheme OrthopteraWeb (Daten.heuschrecken-portal.de) was launched to generate real-time data on the distribution of the species. In future the system will be connected with other relevant data bases, such as Observation.org and MultiBaseCS, to provide a complete overview.

Within this year's field season, recording via an app will also be possible.

### Key publications

Bellmann 1985, Bellmann et al. 2019, Fischer et al.

2016 – Field guides

Detzel 1998 – Handbook Baden-Württemberg

Harz 1957 – Handbook Central Europe

Harz 1960 – Handbook Germany

Ingrisch 1979 – Atlas Hessen

Ingrisch Köhler 1998 – Biology Central Europe

Pfeifer et al. 2011 – Handbook Rheinland-Pfalz

Poniatowski et al. 2018 – Range changes

Maas et al. 2002 – Atlas and Red List

Maas et al. 2012 – Red List

Schlumprecht & Waeber 2003 – Handbook Bayern

Thomas Fartmann

Osnabrück University, Department of Biodiversity and Landscape Ecology

Thomas.Fartmann@biologie.uni-osnabrueck.de