Editorial

Data paper publication in Arachnologische Mitteilungen – Goals, review criteria, editorial procedures, format, data management and mobilization

Florian Raub, Alexander Bach, Tobias Bauer & Hubert Höfer

Abstract. We present a new service of Arachnologische Gesellschaft – data publication in Arachnologische Mitteilungen / Arachnology Letters. A first exemplary dataset is published in this volume. Here we inform about the goals, criteria for acceptance of manuscripts and data, the foreseen editorial procedures, formats, the websites of the digital publication and the data repository ARAMOB used to archive, manage and mobilize the data.

Keywords: Araneae, database, data portal, ecological data, spiders

Zusammenfassung. Datenpublikation in den Arachnologischen Mitteilungen – Ziele, Begutachtungskriterien, redaktioneller Ablauf, Formate, Management und Mobilisierung der Daten. Mit diesem Editorial stellen wir ein neues Angebot der Arachnologischen Gesellschaft vor – die Publikation von Datenpaketen in Form von „data paper". Wir beschreiben hier Ziele, Kriterien der Annahme von Manuskript und Daten, den redaktionellen Ablauf, das Format, die Webseiten der Netzpublikationen sowie das Datenrepositorium ARAMOB, in dem die Daten archiviert, bearbeitet und verfügbar gemacht werden.

The society Arachnologische Gesellschaft (AraGes) is offering a new form of publication – Data papers, beginning with a first exemplary article/dataset published by the chair of the society Dr. Christoph Muster (Muster 2023). We offer the publication of scientific, i. e. systematically sampled data on spider assemblages (Araneae). Such a publication (data paper) includes one printed page in the journal with a DOI (Digital Object Identifier) which is also available in PDF format (Abstract document), one multipaged PDF file describing the content (Metadata document) and two data files (in csv format). All files are made available on two "landing pages" – the AraGes website and the BioOne digital library. The data will also be imported in the ARAMOB database of AraGes, eventually enriched and updated to the newest taxonomy (following the World Spider Catalog) and made available through the ARAMOB data portal. The ARAMOB database is managed by arachnologist of the SMNK under a cooperation agreement with AraGes in the database system Diversity Workbench which is regularly backed up and data are also archived by GFBio (German Federation for Biological Data). The data will thus be available also in a wider context together with comparable data. In this way several demands of the (civil) society and scientific community (represented by several scientific organisations, e.g. Deutsche Forschungsgemeinschaft, NFDI4BIODIVERSITY) on research and research data during the entire data life cycle will be met: open data, open access and data re-use (Forschungsdaten.info), fair use of data (FAIR Principles), uncovering dark data, combating the well-known scientific shortfalls which stand in the way of our knowledge about invertebrate biodiversity, ecology and their conservation and not least enabling data-driven approaches (knowledge discovery in databases).

Data papers are a unique type of manuscript used to present large or expansive data sets, accompanied by metadata, which describe the content, context, quality, and structure of the presented data set. Metadata should not contain statistical analysis of the data.

Criteria for acceptance of a data
To ensure the quality of the data in the context of the ARAMOB database and the goals described above, only systematically sampled species-based assemblage/community datasets, including more than one site repeatedly sampled, will be accepted. Methodological consistency (see below) is an important requirement. Authors should submit manuscripts electronically to the editors in form of at least four files: a one paged abstract document with author information, a metadata document and two data files. Only manuscripts in English are accepted.

Editorial procedures
After acceptance by the editors, the Data Paper manuscripts are subject to peer-review. The review process will evaluate the scientific significance and overall quality first and integrates the printed page as well as the summarizing metadata. Further, a technical and format review of the data ensures a high standard of data usability, especially with respect to the associated metadata.

The files associated with a Data Paper are separated into three categories:
• Data files
• Metadata document
• Abstract document

Data files. The data files have to be consistently formatted as non-proprietary comma-separated values [.csv] using the provided templates (plot & observation data template). The files must be given a name including the author name and year followed by "_obsdata" or "_plotdata". After thorough formatting the original data files are published as supporting information on the landing pages of Arachnologische Gesellschaft and BioOne digital library. Data will further be imported in the ARAMOB database and integrated in the Atlas of the European Arachnids.

Florian RAUB, Tobias BAUER, Hubert HÖFER, Staatliches Museum für Naturkunde Karlsruhe, Erbprinzenstr. 13, 76133 Karlsruhe, Germany; E-mails and ORCIDs: florian.raub@smnk.de, https://orcid.org/0009-0004-4226-2698, tobias.bauer@smnk.de, https://orcid.org/ 0000-0001-8007-1703 hubert.hoefer@smnk.de, https://orcid.org/0000-0003-3962-151X
Alexander BACH, RWTH Aachen University, Institute for Environmental Research (Biology V), Worringerweg 1, 52074 Aachen, Germany; E-mail: alexander.bach@bio5.rwth-aachen.de, https://orcid.org/0009-0001-3585-3148

Metadata document. Metadata fully describe the content, context and structure of the data. The Metadate file has to be prepared using the Metadata document template (.docx) and should be named according to the data files adding "_metadata". All fields must be completed. Questions about relevance of specific fields should be directed to the journal's editorial staff. This document is not copy edited or typeset and should be formatted for publication by the author. The Metadata document is converted to PDF format and also published as supporting information like the Data file.

Metadata include the motivation or purpose of the original research/data origin project. State the question(s) sought to be answered, and the background of the original study. Further, a method section is required including the following:

- A clear description of the sampling design, sampling procedures, and data editing procedures.
- Provide citations of literature (incl. websites) referring to standardized sampling methods and used for species identification and also for computer software (incl. version) and add a reference list at the end.
- Tables and figures could be embedded in the metadata where appropriate.

When preparing the metadata, particular attention should be paid to provide detailed documentation of the structure of the data as well as of quality assurance procedures employed. Contributors should provide comprehensive documentation of all descriptors that will facilitate secondary data use and interpretation. Before submitting, a thorough review of the metadata and verification that physical structure descriptors are enough to permit secondary usage of the data is advised.

Abstract document. The Abstract document is the only typeset part of the Data paper. Please use the template (.docx), name it "_abstract" and submit it together with the other files.

The Abstract page includes the Title, Authors full names (followed by affiliations/current positions and addresses, E-mail and ORCID), Keywords and a short description of the original research/data origin project.

Titles should be concise and informative. The maximum length is 180 characters (including spaces). For each author, state the relevant address, the institutional affiliation of the author during the period when all or most of the data were collected. The authors' present address, if different from this, should appear in parentheses. The abstract can contain a maximum of 800 words. This abstract should not contain references and literature as this information is provided in the metadata. Please provide up to 12 key words in alphabetical order.

Submission Checklist
Please:
1. Read Instructions to authors - ARAGES e.V. to gain an overview and assess if your manuscript is suitable for this journal.
2. Make sure that all issues about the objectives of data publication, editorial procedures, license and copyright agreement, data formats and data availability have been appropriately considered. Ensure that all authors have approved the content of the submitted manuscript.
3. Use the Microsoft Word templates (Abstract and Metadata document) and the csv templates (Plot data and Observation data) to prepare your manuscript.
4. For submitting, all files together should be placed in a single compressed folder (.zip or .rar) and meaningful named including at least (first) author and year.

References
Muster C 2023 Spider assemblages (Arachnida, Araneae) in conventionally managed versus extensively used or restored grass- and farmland sites in Mecklenburg-Vorpommern. – Arachnologische Mitteilungen 66: 1