

Guidelines for arachnological papers in Zootaxa 2.0 (2023)

Aim and scope

These guidelines are a supplement to the general Zootaxa author guidelines. They are intended to support the authors with preparation of manuscripts, to ease the communication between authors and editors, and to guarantee a consistent layout of published papers. Special attention is paid to issues that caused efforts and confusion during the past 20 years of Zootaxa editing. Opinions achieved by the community in the editor discussion forum and during a specific workshop at the 22nd ICA in Montevideo (5 March 2023) have been considered.

Before submission

Please check <https://www.mapress.com/zt/Araneae> [.../Opiliones; .../Scorpiones etc.] to find the actual corresponding editor for submission.

Implementation of general Zootaxa guidelines

Authors are requested to study and follow the latest version of author guidelines from the Zootaxa homepage (<https://www.mapress.com/zt/about/submissions>). Below we list some instructions that are often overlooked by authors [citations from the Zootaxa homepage are in green].

- The focus of Zootaxa is on comprehensive taxonomic studies. Short manuscripts with description of one or few species may be rejected without consideration, particularly in taxa with a large number of species but lacking modern revisionary/monographic work.
 “Very short manuscripts with isolated descriptions of a single species are generally discouraged, especially for taxa with large number of undescribed species.”
 If you nevertheless decide to submit a single species description, please explain the particular relevance in the cover letter to the editor and reviewers.
- Short manuscripts of 1–4 printed pages should be submitted as correspondence (no abstract, no key words, no major headings, not more than 20 references). As a rule of thumb: single-spaced texts of 10 point in A4 size will roughly convert to 1 printed page of Zootaxa (~5000 characters including spaces); plates and tables will be using about the same amount of space in final typeset as the original plates and tables.
- If full taxon names (with author and year) are cited in the text, these are full references and must be included in the list of references.
 “Author(s) of species name must be provided when the scientific name of any animal species is first mentioned (the year of publication needs not be given; if you give it, then provide a full reference of this in the reference list).”
- Take care of the correct use of dashes in Zootaxa: n-dashes for ranges (leg I–III; 12–14 May 2005; Figs 1–2, 4, 5–34; pp. 8–23), hyphens for words (fishtail-shaped), m-dashes to indicate breaks in the text or subject.
- Pay attention to the different use of ‘and’ and ‘&’:

„References should be cited in the text as Smith (1999), Smith and Smith (2000) or Smith et al. 2001 (3 or more authors), or alternatively in a parenthesis (Smith 2000; Smith & Smith 2000; Smith et al. 2001).“

Standards for manuscript preparation

Title

- Include the scientific name of the taxon, use a colon (:) between different levels of taxa, but use a comma (,) between the same levels, e.g. (Lycosidae: Lycosinae, Hippasinae).
- No full stop/period.
- Authors are encouraged to add common names for taxa. This will allow orientation for readers that are less familiar with the group.

Abstract

- All taxonomic changes (new descriptions, synonyms, transfers, etc.) have to be listed in the abstract.

Key words

- Do not repeat terms from the title! Key words are meant to aid in bibliographic searches, which will already search the title. They are an opportunity to provide additional terms to help more people find your article (e.g., common names, biogeographical region, applied methods, habitat, evolutionary or ecological context).
- List key words in alphabetical order or organised by content.

Material and methods

- List abbreviations in alphabetical order (you may separate collections and morphology).
 - A modest use of abbreviations is advocated. Use of abbreviated terms should shorten the text (main purpose of abbreviations). If a term is only used once or twice in the text it might be shorter to use the full letter version in the text. Do not list abbreviations here that are only used in figures and given in the figure captions, which latter is a must.
 - For museum acronyms use an official list (e.g., <http://hbs.bishopmuseum.org/codens/>) if the institution is included.
- Evenhuis, N.L. 2023: The insect and spider collections of the world website.
- Treatment of species in revisions must be organized in a logical and easy-to-navigate structure. Provide an explanation for the arrangement of species (e.g., systematic order, geography, via character sets, alphabetical sorting, or whatever it may be).
 - If leg spination is listed, please give reference to the system in use.
 - Geographic coordinates must be given consistently in a paper. Preferred format is decimal degrees 15.7797S, 47.9297W, or DMS 15°46'47"S, 47°55'47"W.
 - Authors are encouraged to deposit supplementary data (measurements, alignments, videos) in acknowledged repositories that provide DOI access. If new DNA data are published in the paper, deposition in GenBank, EMBL or BOLD is mandatory (accession numbers must be included in the manuscript). Please consider to submit relevant data to the World Spider Trait Database (<https://spidertraits.sci.muni.cz/>).

Terminology

- Use standard terminology for your taxon. For spiders, we recommend usage of the preferred names of morphological structures as listed in the Spider Anatomy Ontology (<https://bioportal.bioontology.org/ontologies/SPD>). If you deviate from this standard, the editor can request an explanation.

Ramírez, M.J. & Michalik, P. 2019: The spider anatomy ontology (SPD)—a versatile tool to link anatomy with cross-disciplinary data. *Diversity* 11(10), 202.

- Terminology should be consistent throughout the manuscript (e.g., epigyne, palp, pedipalp (anglicised form) or epigynum, palpus, pedipalpus (latinised form).
- Use anterior/posterior for structures at the main body, but proximal/distal for appendages and basal/apical for secondary structures such as tegular appendages, spermathecal heads etc. To indicate directions use distad, laterad, etc.

Principles for assignment and erection of new taxa

- Justification for assignment of new taxa to taxonomic categories (a particular family, genus, subgenus, species group, etc.) must be given (preferably synapomorphies, alternatively characteristic combination of characters).
- When new higher taxa are erected, authors have to provide rationales for the monophyly of the new taxon AND for the monophyly of the remaining part of the former taxon (i.e., the a new taxon must not render the original taxon paraphyletic).

Taxon names

- Author and year in taxon names are separated by comma.
- Indications of new taxa (spec. nov., sp. n., gen. nov., g. n., etc.) should be internally consistent within a paper. New taxa must be highlighted at the first mention, in the header of the description, and in comprehensive tables (we recommend **spec. nov./gen. nov.** in bold). Usage throughout the paper is optional.
- For new taxa, explain in etymology the derivation of the name (ICZN article 11.3), its grammar and usage as adjective, apposition etc. (important for endings in transferred species). If Latin terms are used make sure you use the correct forms. If you are not sure contact a specialist or use other terms.
- Author names of new species should be cited only if they deviate from the author(s) of the paper. Generally, embedded authorship (authors of a new taxon are a subset of the article authors) should be avoided. If practised, a short clarifying statement to explain author responsibilities for validating the new taxa is required (cf. ICZN article 50.1.1).

Synonymy lists

- Author and year are separated by comma if they are part of a taxon's name (reference to original descriptions). Don't use commas in subsequent citations.
- Do not simply copy synonymy lists from the World Spider Catalogue [WSC] (or other online catalogues). Your revision is a chance to detect remaining errors in these repositories.
- Take care of citations such as Mello-Leitão, 1940b copied from WSC. If your references contain only one paper by Mello-Leitão, then it reads Mello-Leitão, 1940.

Diagnosis

- Diagnosis is mandatory in descriptions of new taxa (ICZN article 13.1.1).
- Diagnoses must be differential: provide a set of characters or character combinations that distinguish the new (or revised) taxon from all others within that taxonomic category (or others with which it might be confused). Do not use random species for comparison but closely related species with similarly developed morphological structures.
- Diagnoses need to be as explicit as possible, indicating the character states that distinguish the taxon and the alternative states in closely related taxa, and preferably accompanied by figure citations e.g., "Species 1 is distinguished by its triangular conductor (Fig. 2) (conductor rounded in species 2 and 3, Figs 2–3)", as opposed to "This species can be distinguished by the shape of the conductor".

Figures

- Figures should be numbered consecutively throughout the manuscript. The use of letters (e.g., Figs 1A–C) is also possible, but requires more care with figure references. Maps should be numbered as figures.
- Use Fig./Figs for reference to figures in your own manuscript, but fig./figs for figures in cited papers.
- Illustrations must clearly show the relevant diagnostic characters. Authors of new species are encouraged to prepare drawings of important structures, as these often show differential characters better than photographs. If the quality of images is not sufficient to show the details, authors may be requested to improve the photo quality, or alternatively prepare line drawings.
- Plates should be neatly arranged making the best possible use of space; i.e., illustrations should be as large as possible while avoiding the plate to be overcrowded; unnecessary blank spaces should be avoided.
- Important diagnostic structures should be labelled in at least one figure. Additional structures may be indicated on subsequent plates. Lettering should not cover too much of the original illustrations.
- All taxonomic figures must be supplemented by scales (not necessary for habitus illustrations).
- Figure legends must follow the principle of stand-alone comprehension: explain abbreviations, scales; highlight new taxa.
- Please reduce size and resolution of submitted figures to the required format. The printable area in Zootaxa is 25 x 17 cm, final resolution should be 600 dpi for line drawings and 300 dpi for photos. Please use LZW compression for tiff files (see <https://mapress.com/zootaxa/support/final-files.pdf>).

Checklists

Checklists of species occurring in a single or small area are discouraged, as they may be sent to specific, regional journals. Checklists of species occurring in larger areas of political or biogeographic relevance (e.g., a country or ecoregion) may be considered for publication, especially if done in a revisional/historical context. Please refer to previously published checklists to understand how such a manuscript may be formatted (e.g., <https://doi.org/10.11646/zootaxa.2461.1.1>; <http://dx.doi.org/10.11646/zootaxa.3671.1.1>).

Suggestions for the preparation of checklists:

- Species should be arranged taxonomically by family in alphabetical or phylogenetic order; each recorded species should be listed in its present combination, and the papers with the original record should be cited.
- A small summary on the global or regional distribution of each species, or relevant taxonomic comments, may be included.
- A section on rejected or misidentified records may be included at the end of the checklist, explaining why the records are being rejected.
- The checklist should not be a mere list of species, but also include a historical or biogeographic discussion.

References

- Authors are encouraged to include the DOI at the end of the citation. If you give DOIs, provide them for all articles with existing DOI links. Everyone can search for available DOIs under <https://doi.crossref.org/simpleTextQuery>
- Subvolumes (in parentheses) should only be given if each subvolume starts with new page numbering.

Suggested template for genus description (including formatting)

LINYPHIIDAE Blackwall, 1859

Stemonyphantinae Wunderlich, 1986

Pecado new genus

Type species: *Labulla impudica* Denis, 1945

Etymology. Derived from the Spanish word 'pecado' (sin) in reference to widespread practice of erecting monotypic genera, especially in the Linyphiidae, in absence of a phylogenetic justification. The noun is masculine in gender.

Diagnosis. Males of *Pecado* can be distinguished from other linyphiids by the presence of two cymbial processes (Fig. XX – arrow; Denis, 1945: figs 26–28), one at the base of and the second in the dorsal median region of the cymbium (other stemonyphantine genera have only one process), the bladelike projection of the proximal branch of the paracymbium (Fig. XX), absent in other stemonyphantines, lack of an embolic membrane (present in most linyphiids) and the unusual coiling direction of the embolus. In *Pecado impudicus* the embolus coils anticlockwise (left palp, ventral view) for about one turn and then clockwise for almost its remaining length (Fig. XX). Females can be distinguished from other stemonyphantines by the numerous coils (ca. 12) of the copulatory duct, tightly stacked and arranged forming a column (Fig. XX; Bosmans 2006: fig. 32; Barrientos et al. 2022: fig. 8)

Description. Male:

[the following structure is an example, subdivision and terminology are flexible]

Prosoma, carapace.

Eyes

Sternum.

Labium.

Chelicerae.

Legs.

Opisthosoma.

Pedipalp (Figs XX).

Female: [see male]

Phylogenetics. *Pecado* is not a close relative of *Labulla*, the genus where its type species was originally classified. A new genus is needed to place *impudicus* and two new species. *Stemonyphantes* is the sister group of *Pecado* and both genera are reciprocally monophyletic (Ref.). The monophyly of *Pecado* is supported by the following four putative morphological synapomorphies: a rounded cymbial apex, presence of a suprategular marginal apophysis, and absence of both embolic membrane and lamella characteristic. The placement of *Pecado* in the subfamily Stemonyphantinae is supported by the presence of an embolic process (Ref.) as well as by the molecular analyses of REF. and REF.

Natural history.

Composition. Three species, *P. impudicus* (Denis, 1945), *P. perniciosus* n. sp. and *P. mortal* n. sp.

Distribution.

Suggested template for species description (including formatting)

***Mesabolivar cyaneus* (Taczanowski, 1874)**

Figs 100–101, 108–109

Pholcus cyaneus Taczanowski, 1874: 103, pl. 2, fig. 6 (lectotype male and paralectotype male from **BRAZIL: Amapá**: Rio Uaçá [“Uassa-Guyane française”], ~4.13°N, 51.53°W, #Date, leg. K. Yelski [MIZW #Reg.No], designated by Huber & Zhu 2001, examined).

Blechnoscelis cyanea (Taczanowski): Mello-Leitão 1940: 175.

Blechnoscelis rubristernus Caporiacco, 1947: 22 (syntypes, 2 males and 1 female from **GUYANA: ‘Demerara’**: Baboon Camp, October 1931, leg. Beccari [MZUF, sample 520 according to Berdondini & Whitman 2003], examined). Caporiacco 1948: 627, figs 19–21.

Mesabolivar rubristernus (Caporiacco): Huber 2000: 204, figs 796–800.

Mesabolivar cyaneus (Taczanowski): Huber 2000: 190; Huber & Zhu 2001: 152 (synonymy of *M. rubristernus*).

[Provide as much information as possible about the type material and its examination status]

Other material examined. COUNTRY1: State1: Locality1, geographic coordinates, 2 males, 18 January 1934; 1 male, 2 females, 2 February 1935, leg. A. Smith (Collection and registration no.). Locality 2, geographic coordinates, 1 female, 28 May 1960, leg. B. Williams (Collection and registration no.). **State 2:** Locality3, geographic coordinates, etc.

Etymology.

Diagnosis. For requirements see standards above.

Remarks. Taxonomic remarks concerning identity or position of the new taxon [may also stand at the end of the species description].

Description. Male (from locality; collection registration no.):

[the following structure is an example, subdivision and terminology are flexible]

Prosoma, dorsal shield.

Eyes (Fig. #).

Sternum.

Labium.

Chelicerae.

Pedipalp (Figs 4, 7–9).

Opisthosoma.

Legs.

Female (from locality; collection registration no.): [see male]

Measurements. May be included in description above.

Variation. Indicate range of measurements, color variation etc. from multiple specimens.

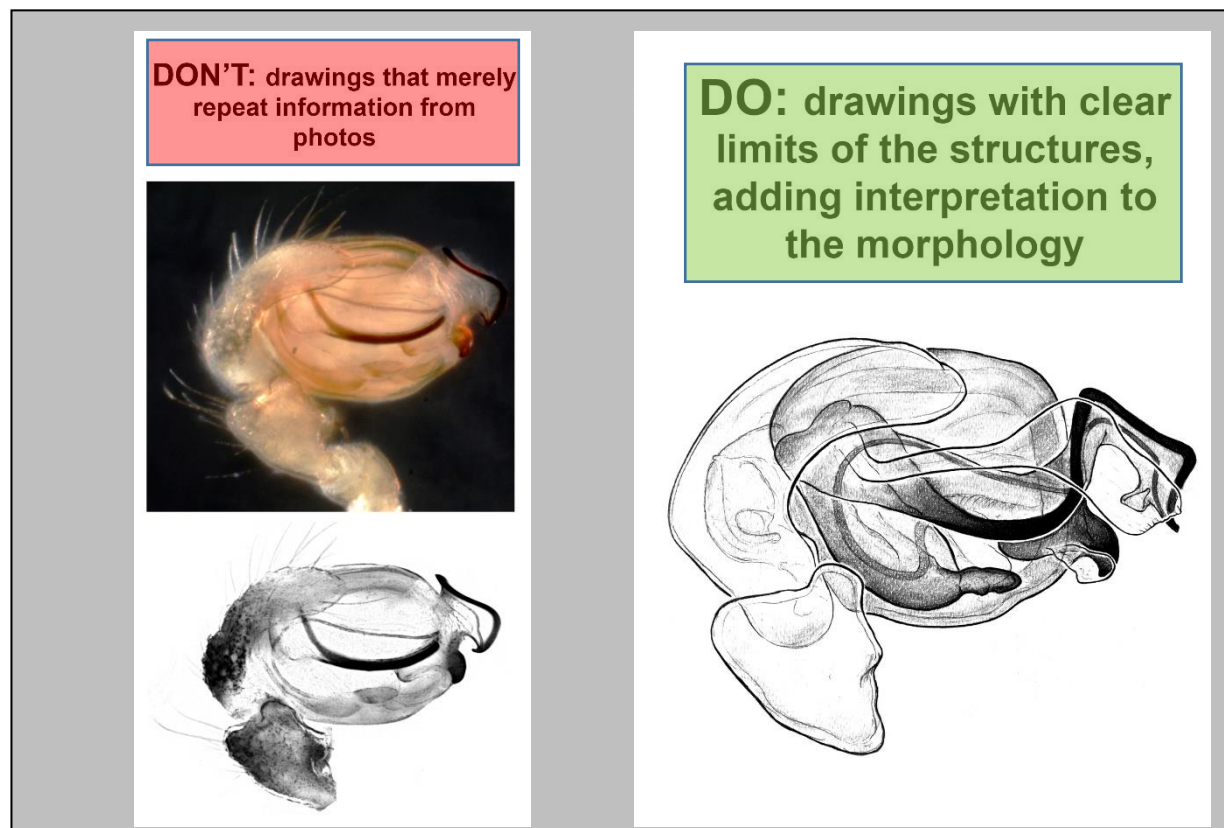
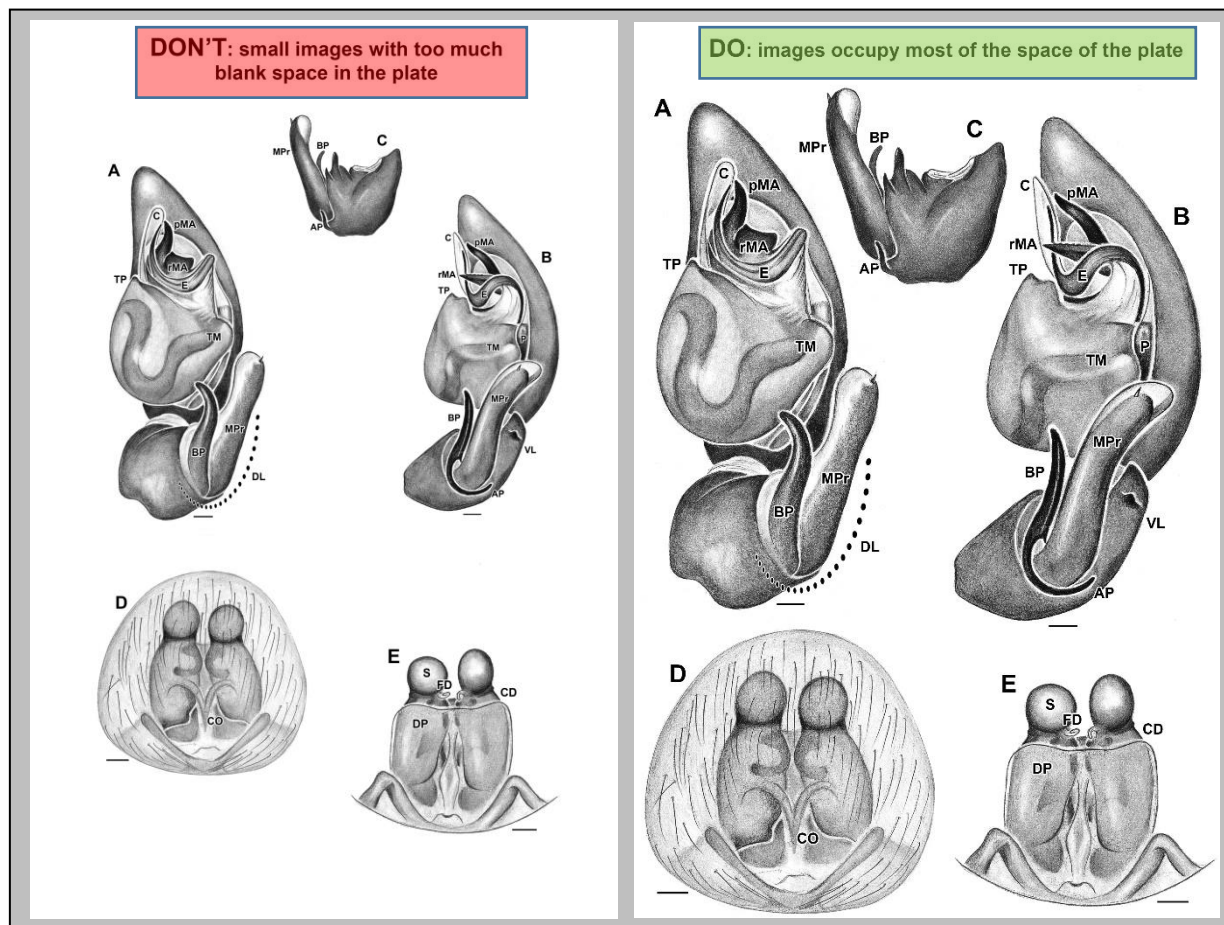
Distribution.

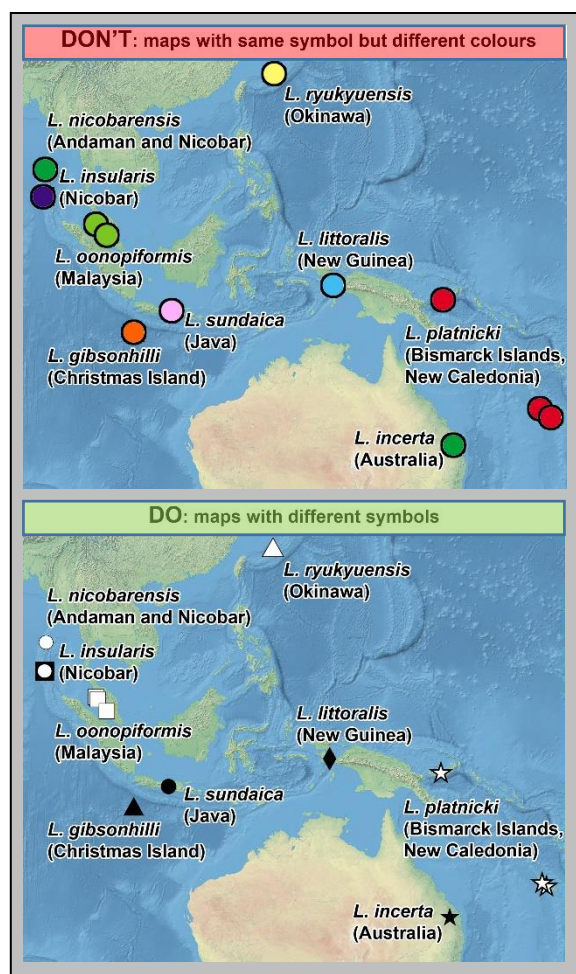
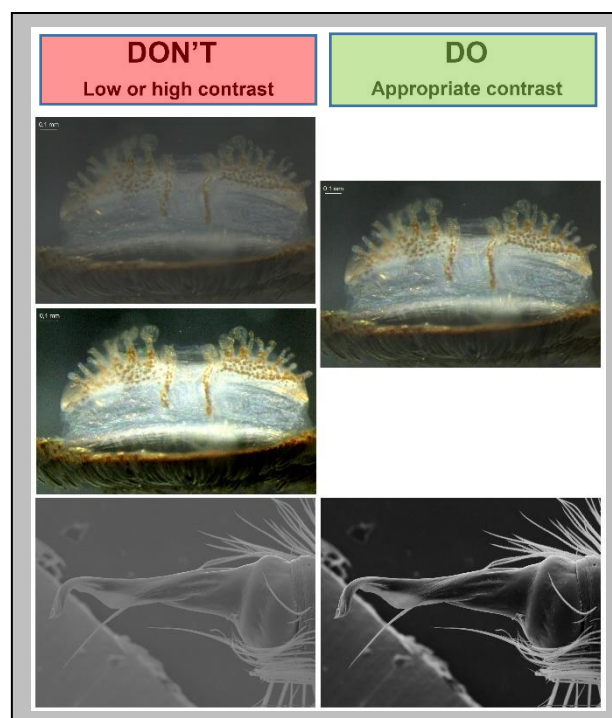
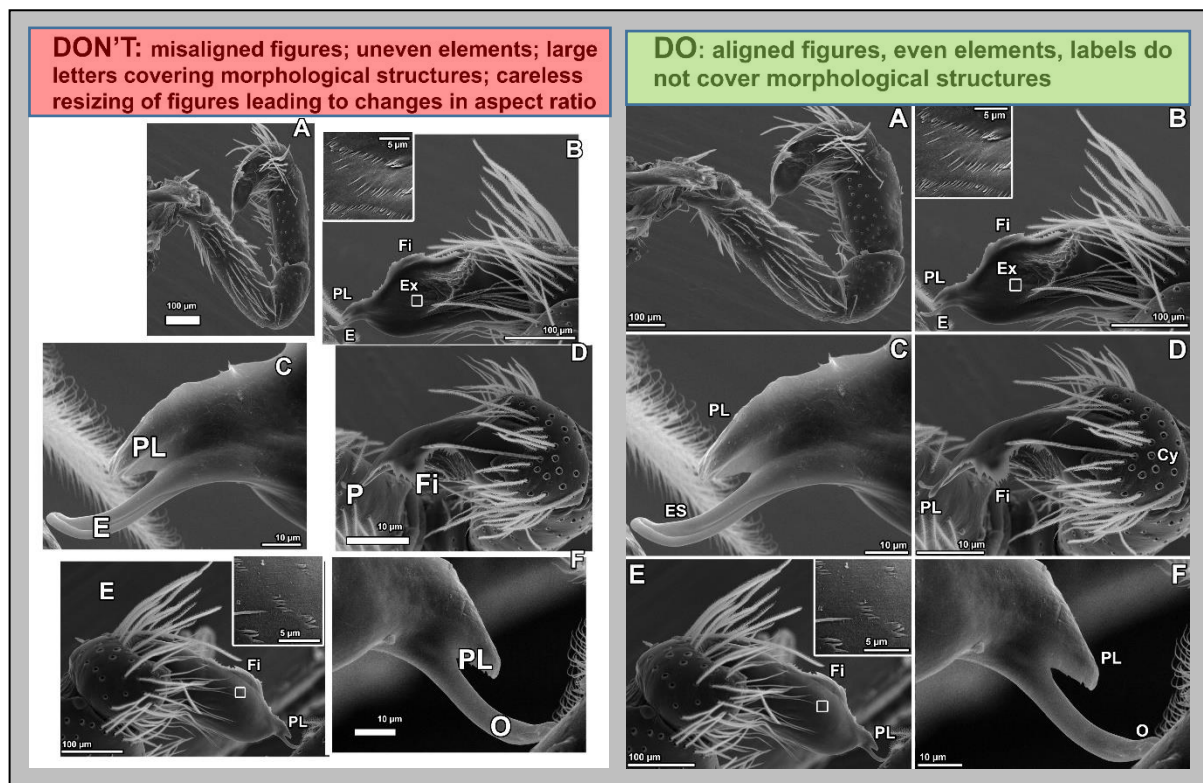
Natural history.

Template for figure legends (including formatting):

FIGURES 1–6. (dot in bold) *Taxon name*. 1 (without comma or dot) Prosoma, dorsal view; (semi-colon) 2–4 Left pedipalpus (2 prolateral, 3 ventral, 4 retrolateral view). Scales: 1 mm.

Assistance for figure preparation





These guidelines have been prepared by Christoph Muster and Peter Jäger (2023) based on a former draft proposed by Peter Jäger and Volker Framenau (2006). The document has been discussed and improved by Email correspondence among all current Zootaxa editors in the Arachnida section (except for Acari), and during a special workshop at the 22nd ICA in Montevideo (5 March 2023). All acting editors have seen and approved the final version. Major contributions came from Ivan L. F. Magalhaes (assistance for figure preparation) and Gustavo Hormiga (genus description template).