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## **Manuscript preparation**

### **1. General guidelines**

- Manuscripts are accepted only in English. Any consistent spelling style may be used. Although editors will try to help correct some grammar and syntax, we cannot correct or rewrite an entire manuscript and will not be able to send out manuscripts for peer review that are not largely in correct English. Authors not fluent in English should have their manuscripts checked for correct use of language before submission.
- A typical manuscript will not exceed 6,000 words (excluding abstract and references). Manuscripts that greatly exceed this will be considered on their merits but will be critically reviewed with respect to length and their date of publication may be adjusted to avoid exceeding space limitations for an issue. Authors should include a word count with their manuscript.
- **Manuscripts should be compiled in the following order: title page; abstract; keywords; main text; acknowledgments; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figure caption(s) (as a list).**

- If appropriate to the subject matter, the body of the text should be arranged as following: Introduction, Materials and methods, Results, Discussion, Acknowledgements, and References.
- The present tense is appropriate mainly in the Introduction and Discussion sections. The past tense should be predominantly used in the other sections of the paper.
- **Abstracts** must not exceed 250 words and are required for all manuscripts submitted.
- Each manuscript should have a maximum of 10 **keywords** and should always include the words 'Odonata' and 'dragonfly', unless these already appear in the title. Faunal listings and short notes are **not** within the scope of the journal.
- If your paper introduces new zoological taxa at family-group level or below you will be prompted to +at proof stage in order to validate electronic publication of these taxa. Individual new taxa need not be registered before publication; this can be done subsequently should you wish. After publication, you will need to amend your ZooBank record of your paper to reflect the date of publication.
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- You may use call out boxes for definitions and similar material. See Norling, U. 2021. Growth, winter preparations and timing of emergence in temperate zone Odonata: control by a succession of larval response patterns. International Journal of Odonatology, 24:1-36pp. ([https://doi.org/10.23797/2159-6719\\_24](https://doi.org/10.23797/2159-6719_24)) for an example.
- Please supply all details required by any funding and grant-awarding bodies as an Acknowledgement in a separate paragraph as follows

*For single agency grants*

This work was supported by the <Funding Agency> under Grant <number xxxx>.

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This work was supported by the <Funding Agency #1> under Grant <number xxxx>; <Funding Agency #2> under Grant <number xxxx>; and <Funding Agency #3> under Grant <number xxxx>.

- For all manuscripts non-discriminatory language is mandatory. Sexist or racist terms must not be used.
- Authors must adhere to [SI units](#). Units are not italicized.
- When using a word which is, or is asserted to be, a proprietary term or trade mark, authors must use the symbol ® or TM.

## 2. Style guidelines

### Title Page

Include a title page containing the following information and formatted as in the example:

#### Title

Author1 name<sup>a</sup>, Author2 name<sup>b</sup>, Author3 name<sup>c</sup>

<sup>a</sup>affiliation; email

<sup>b</sup>affiliation

<sup>c</sup>affiliation

Orcid ID's (where applicable)

<sup>a</sup>Orcid ID

<sup>b</sup>Orcid ID

<sup>c</sup>Orcid ID

where \* indicates corresponding author

Abstract

**Key words:** key word 1, key word 2, key word 3

**WDA Membership # of Corresponding Author** (Current WDA Member# can be found on the account section of the [WDA website](#), once you have logged in).

### Nomenclature, taxonomy, scientific names of species, and new taxa descriptions

- Measurement of the total length should include the cerci of adults and in anisopteran larvae, the paraprocts. However, in adults the length of the abdomen alone should exclude the appendages. The length of the abdomen and the length of the hind wing are of taxon-specific importance and should always be quoted in descriptions.
- Scientific names of the genus-group and of the species-group should be in italics.
- All Odonata species shall be referred to by scientific name only, unless the author provides the Editor with a satisfactory reason for inclusion of a vernacular name(s). In that case, the vernacular name(s) should appear, in parentheses and only once, either after the first use of the scientific name in the text, or, if all species are listed in one or more tables, after the listing of the scientific name in the first such table. Authors describing a new species or genus may suggest a preferred vernacular name for the new taxa in the manuscript.
- The authority of the names of odonate species should be given on the first occasion of mention in the main text or in a table if all names mentioned are included therein, but not in the Title, nor in the Abstract.
- The date of description should accompany the author's name in taxonomic papers, and author and year must be separated by a comma (e.g. *Libellula quadrimaculata* Linnaeus, 1758).
- Date of description need not be mentioned in papers that are not taxonomic in emphasis (e.g. those that treat behaviour, ecology or physiology); and inclusion of the date is optional in papers that do not obviously fall into either of these categories (e.g. annotated species lists).
- The convention should be respected whereby the authority is placed between parentheses if the species has been transferred to another genus since first being described, e.g. *Enallagma cyathigerum* (Charpentier, 1840).

- If a name of a species is repeated in the text, the generic name should be abbreviated after the first mention in full, e.g. *E. cyathigerum*, unless it is the first word of a sentence or if it could, in the context used, be confused with a taxon in a different genus having the same initial letter.
- Names of suprageneric taxa used in anglicized form (e.g. odonate, libellulid, libelluline) should not have the initial letter capitalized.
- All manuscripts must conform to the latest issue of the International Code of Zoological Nomenclature which contains important new provisions, including, for example, availability and validity of names for new taxa.
- An etymology section is mandatory, where the derivation of the new name is explained.
- Descriptions should describe first the holotype in detail, then one specimen of the opposite sex (male or female paratype), and finally, under separate heading for each sex ('Variation in male/female paratypes'), include the variability observed in the remainder of the paratypic series.
- All descriptions must include a diagnosis section, where the new taxon is unquestionably differentiated from its closest relatives.
- In synonymic lists references should be grouped under each name used and arranged by date within them.
- Primary type specimens (holotype, lectotype, neotype) must be deposited in public institutions.

Contributors may seek guidance from the Editor on such matters if uncertainties exist.

### Order of taxa names

The order of taxa in text, lists, tables, and figures should preferably follow these principles: (1) The sequence of family names corresponds to the systematics of the World Odonata List:

Paulson, D., Schorr, M., Abbott, J., Bota-Sierra, C., Deliry, C., Dijkstra, K.-D. and Lozano, F. (Coordinators). 2022. World Odonata List. OdonataCentral, University of Alabama. Available at: <https://www.odonatacentral.org/app/#/wol/>

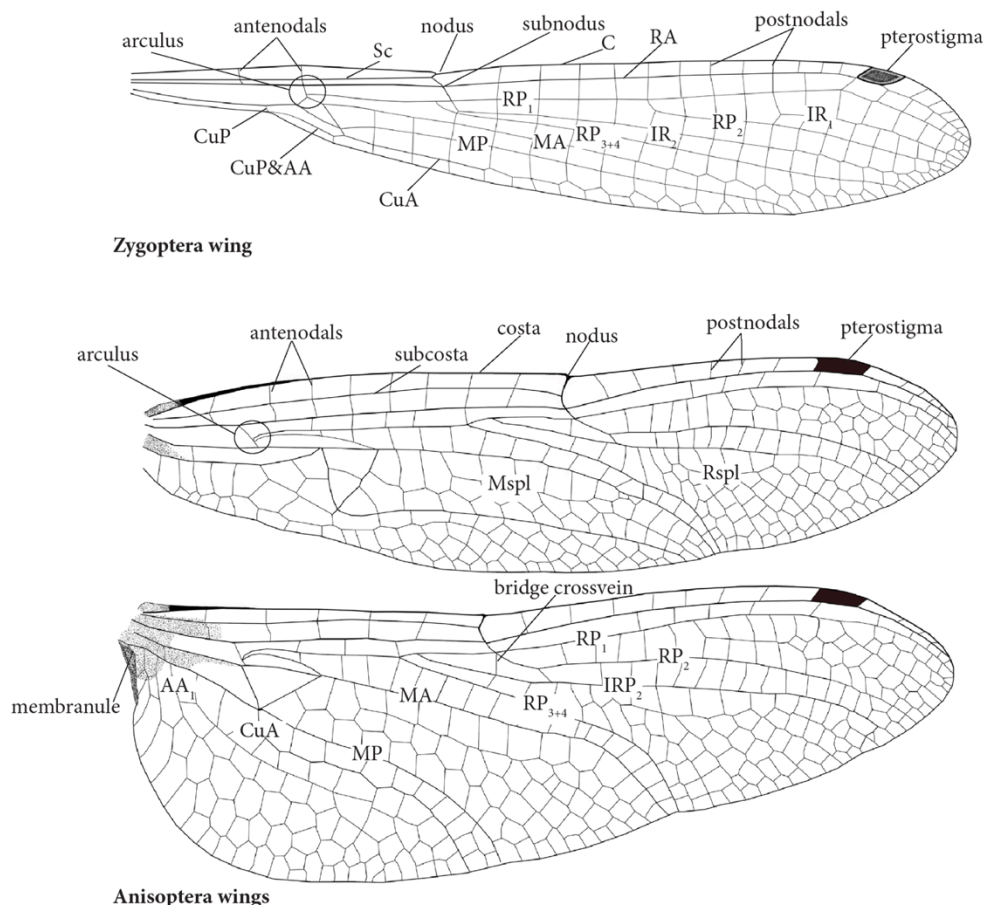
unless there is a basis for using another sequence, e.g., a difference in taxonomic judgement as to validity of a name, is specified by the author, (2) genera within a certain family follow an alphabetical order, and (3) species within a certain genus follow an alphabetical order.

### Terminology

- **exuvia, exuviae** (singular, plural) - this is counter to the use of 'exuviae' as both singular and plural in dictionaries and past literature, but many odonatologists are now using this system to avoid confusion.
- **larva(e) or nymph(s)** when referring to the aquatic stage of Odonata
- **instar** and **stadium** are both widely used; authors may choose to use either term depending on the period they are referring to: **instar** (between two **apolyses**), or **stadium** (between to **ecdyses**)
- Larval stadia are designated **F** (or **F-0**), **F-1**, **F-2**, **F-3**, and so on, from the final stadium in decreasing order of age.
- During the first few hours after ecdysis, while the cuticle remains almost colorless and still unhardened, an insect is **teneral**, a term that should not be used to qualify a larva or adult more than 24 hours after the preceding molt.
- The term **immature** is confined to the pre-reproductive adult.
- An egg typically hatches to reveal the **prolarva**, regarded as the first larval stadium/instar. If the total number of larval stadia/instars is stated, it must be made clear

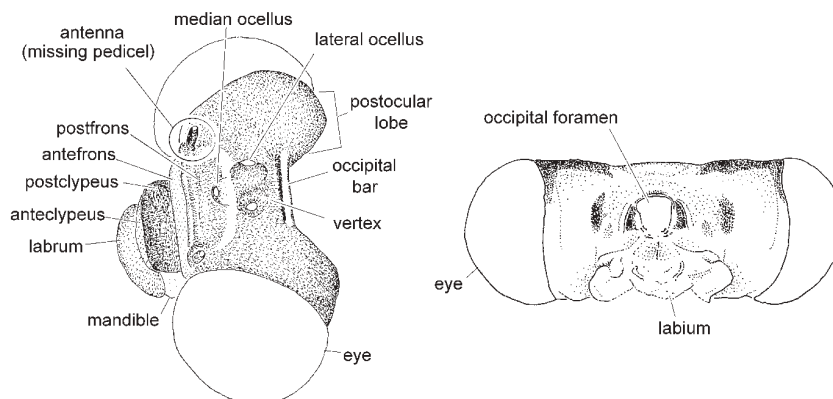
that this includes the prolarva as the first stadium/instar even if the prolarva is widely reduced.

- Caudal appendages of larval Zygoptera are not necessarily caudal gills.
- Preferred terminology larval/nymphal anatomy follows that of the anatomy chapter in Tennessen (2019) [*Dragonfly Nymphs of North America*]. If you do not have access to this, contact the John Abbott (jabbott1@ua.edu).
- The terms reproduction/reproductive are preferred to breeding.
- Suspension of development may be **siccation** occurring during the dry season in the Tropics, **aestivation** during the summer, **hibernation** during the winter or **aestivohibernation** during both summer and winter in temperate latitudes.
- A **periodicity** is the recurrent temporal pattern of an activity or event, whereas a **rhythm** is a regular fluctuation controlled by an innate time-measuring sense.
- The term **genital ligula** is preferred to damselfly 'penis' and **vesica spermalis** or **seminal vesicle** to dragonfly 'penis'.
- **Cerci** is preferred to superior appendages.
- **Epiproct** (dragonfly) and **paraprocts** (damselfly) to inferior 'appendages'.
- **FW** forewing.
- **HW** hindwing.
- **pt** pterostigma.
- **Ax** antenodal crossveins.
- **Px** postnodal crossveins.
- **S1-10** abdominal segments 1 to 10.
- Preferred wing venation terminology is that of Riek & Kukalová-Peck (1984<sup>3</sup>), as it best reflects homologies with other insect orders. For easy reference, a comparative table of frequently used wing nomenclature systems as well as figures of Zygoptera and Anisoptera wings with the main veins and cells identified, is provided.



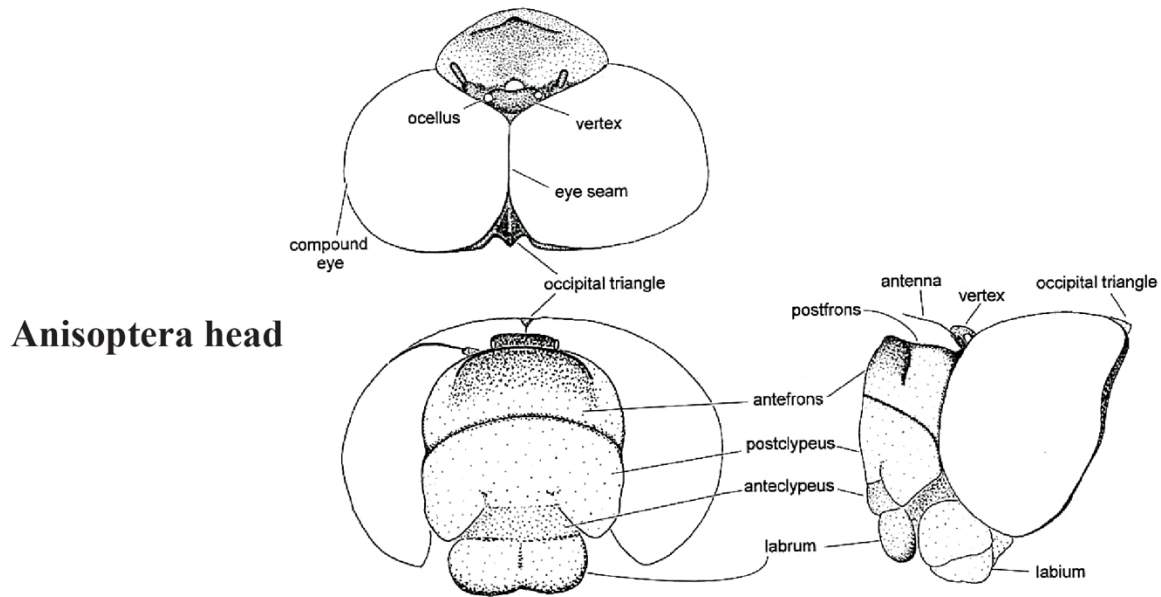
Vein name	Comstock & Needham (1898-1899)	Tillyard & Fraser (1938-1940)	Carle (1982)	Riek & Kukalová-Peck (1984)	
Costa	C	C	CA	C	
Subcostal	Sc	Sc	CP	ScP	
Radius anterior	R <sub>1</sub>	R <sub>1</sub>	RA	RA	
Radius posterior, first branch	M1	R <sub>2</sub>	RP <sub>1</sub>	RP <sub>1</sub>	
Radius posterior, second branch	M2	R <sub>3</sub>	RP <sub>2</sub>	RP <sub>2</sub>	RP <sub>2</sub>
Radius posterior, third branch	M3	R <sub>4</sub>	MP	MP	RP <sub>3+4</sub>
Intercalary vein 1	M1a	IR <sub>2</sub>	--	--	IR <sub>1</sub>
Intercalary vein 2	RS	IR <sub>3</sub>	MA	MA	IR <sub>2</sub>
Media anterior	M4	MA	CuA	CuA	MA
Media posterior	Cu1	CuP	CuP	CuP	MP
Cubitus anterior	Cu2	1A	A1	A1	CuA
Anal anterior and posterior	A1-A3	A	A2/A3	A2/A3	AA/AP

- Preferred terminology of body parts should follow the Garrison et al. volumes referenced below. Some useful illustrations of common structures from those references are included here.
  - Zygoptera: Garrison, R., von Ellenrieder, N. & Louton, J. (2010) Damselfly Genera of the New World: An Illustrated and Annotated Key to the Zygoptera. The Johns Hopkins University Press.
  - Anisoptera: Garrison, R., von Ellenrieder, N. & Louton, J. (2006) Dragonfly Genera of the New World: An Illustrated and Annotated Key to the Zygoptera. The Johns Hopkins University Press.



**Zygoptera head**





**Anisoptera head**

**Zygoptera thorax**

**Anisoptera thorax**

<sup>3</sup> Riek, E.F. & J. Kukalová-Peck, 1984. A new interpretation of dragonfly wing venation based upon Early UpperCarboniferous fossils from Argentina (Insecta: Odonatoidea) and basic character states in pterygote wings. Canadian Journal of Zoology 62: 1150-1166.

### 3. Figures

- Please provide the highest quality figure format possible. **Please be sure that all imported scanned material is scanned at the appropriate resolution: 1200 dpi for line art, 600 dpi for grayscale and 300 dpi for color at a width of at least 18 cm.**
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- All figures must be numbered in the order in which they appear in the manuscript (e.g. Figure 1, Figure 2). In multi-part figures, each part should be labeled (e.g. figure 1(a), figure 1(b)).
- Figure captions must be saved separately, as part of the file containing the complete text of the manuscript and numbered correspondingly.
- The filename for a graphic should be descriptive of the graphic, e.g. Figure1, Figure2a.

#### 4. References

This reference guide largely follows an APA style, visit <https://apastyle.apa.org/>.

If you have access to the software, a corresponding EndNote output style (IJO.ens) can be downloaded from the WDA website (<http://worldddragonfly.org>) under the Journal→Instructions to Authors tab.

Consult recent past issues for examples beyond those provided here.

All literature cited in the text must be listed in the references. References should be cited in the text as follows:

**Simple in text:** (Abbott & Stewart, 1998) (Boehms, 1971) (Corbet, 1999) (Córdoba-Aguilar, 2008) (Norling, 2021) (R Core Team, 2020) (Samways et al., 2020) (Suhling et al., 2015)

**Several papers of one author:** (Corbet, 1954, 1955, 1956)

**Several authors:** (Boehms, 1971; Corbet, 1955, 1956; Norling, 2021)

References should be listed as follows:

##### Journal articles

Abbott, J. C. & Stewart, K. W. (1998). Odonata of the South Central Nearctic region, including Northeastern Mexico. *Entomological News*, 109(3), 201–212.

Corbet, P. S. (1954). Seasonal regulation in British dragonflies. *Nature*, 174, 655, erratum 777.

Corbet, P. S. (1955). A critical response to changing length of day in an insect. *Nature*, 175, 338–339.

Corbet, P. S. (1956). The influence of temperature on diapause development in the dragonfly *Lestes sponsa* (Hansemann) (Odonata: Lestidae). *Proceedings of the Royal entomological Society of London (A)*, 31, 45–48.

Norling, U. (2021). Growth, winter preparations and timing of emergence in temperate zone Odonata: control by a succession of larval response patterns. *International Journal of Odonatology*, 24, 1–36.  
doi:10.23797/2159-6719\_24\_1

Eight or more authors: Samways, M. J., Barton, P. S., Birkhofer, K., Chichorro, F., Deacon, C., Fartmann, T., . . . Cardoso, P. (2020). Solutions for humanity on how to conserve insects. *Biological Conservation*, 242, 108427.  
doi:10.1016/j.biocon.2020.108427

##### Software with URL

R Core Team. (2020). *R: A language and environment for statistical computing (Version 3.6.1.)*. R Foundation for Statistical Computing, Vienna, Austria. <https://cran.r-project.org/>

##### Book

Corbet, P. S. (1999). *Dragonflies: behaviour and ecology of Odonata*. Colchester: Harley Books.

##### Edited book

Córdoba-Aguilar, A. (Ed.) (2008). *Dragonflies and damselflies: model organisms for ecological and evolutionary research*. Oxford: Oxford University Press.

##### Book section

Suhling, F., Sahlén, G., Gorb, S., Kalkman, V., Dijkstra, K.-D. B. & Tol, J. v. (2015). Chapter 35 Order Odonata. In J. H. Thorp & D. C. Rogers (Eds.), *Ecology and general biology: Thorp and Covich's freshwater invertebrates*. pp. 893–932. Cambridge, USA: Academic Press.



## Thesis

Boehms, C. N. (1971). *The influence of temperature upon embryonic diapause and seasonal regulation in Sympetrum vicinum (Hagen) (Odonata: Libellulidae)*. (Dissertation). University of North Carolina, Chapel Hill.

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Authors are encouraged to submit animations, movie files, sound files or any additional information for online publication.

**7. Data Availability Statement:** If there is a data set associated with the paper, please provide information about where the data supporting the results or analyses presented in the paper can be found. Where applicable, this should include the hyperlink, DOI or other persistent identifier associated with the data set(s).

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## 9. Manuscript submission

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Parts of the above were developed by the current and past Odonata editors of Zootaxa, Rosser Garrison, Dennis Paulson and Milen Marinov.