**Journal of Paleontology (JPA) manuscript formatting template**

[title is left justified, 16 pt., bold; capitalize only proper names. Use continuous line numbers from first to last page of manuscript. Margins one inch]

Steven J. Hageman1 and Brian R. Pratt2

1Department of Geology, Appalachian State University, Boone, North Carolina 28608, USA <hagemansj@appstate.edu>

2Department of Geological Sciences, University of Saskatchewan, Saskatoon, Saskatchewan S7N 5E2, Canada <brian.pratt@usask.ca>­

**Running Header:** Descriptive summary of topic, maximum 60 characters + spaces

**Abstract.**—Note that “**Abstract**” is in bold, followed by bold period, then an em-dash (use three hyphens “---” if a single long dash is not available). The abstract should be a short version of the paper and should include in some form: (1) the background and/or context; (2) the research question(s) or hypothesis/problem or reason for the study; (3) general methods and materials, i.e., the approach to the question, the general time and place of specimens; (4) results, kept separated from background and implications; and (5) implications or the broader relevance of the study. The names of all new taxa and combinations must be included in the abstract.

UUID: http://zoobank.org/f99f69cd-6b6b-4797-9ff2-68ea16a5b58e

[If a new zoological taxonomic name is described, the manuscript and all new taxa need to be registered with ZooBank at <http://zoobank.org/>, and the manuscript Universal Unique Identifier (UUID) must be provided after the abstract in the format provided above. All letters in the UUID should be lowercase. See the ZooBank Guide for further information.]

**Formatting for headings: this is a primary heading example**

**[**left justified, bold, 14 pt.; capitalize only first word and proper names; use one blank line before and after the heading]

The first paragraph begins flush left (not indented). Body text should be 12-pt., Times New Roman font, double-spaced, with line numbers.

 Subsequent paragraphs begin with indent (use a single tab, not spaces).

*This is a second-level heading*.—Second-level headings are flush left, italicized, 12-pt. font, with only the first word and proper names capitalized. Words that are normally italicized (such as genus or species names) should not be italicized. The heading is followed immediately by a period and em-dash (or three hyphens "---"). Begin the text immediately after the em-dash (no space). Use one blank line before a second-level heading. There are no blank lines between paragraphs within a subheading's section.

 This is a third-level heading.—Third-level headings are not recommended unless they are absolutely necessary for complex circumstances. Third-level headings are indented, 12-pt. font, and with only the first word and proper names capitalized. The heading is followed immediately by a period and em-dash with no spaces before or after. There is no blank line before a third-level heading. All paragraphs in the text begin with an indent (use a single tab, not spaces).

**Introduction**

This document provides examples of and a template for Journal of Paleontology(JPA) style, with brief organizational notes. The online [Instructions for Contributors](https://www.cambridge.org/core/journals/journal-of-paleontology/information/author-instructions) and File Requirements guides provide general information about what is needed for manuscript submission, and the JPA Journal Conventions and Style Check Sheet provides much additional information about journal style. Please follow the JPA Systematic Paleontology Guide and JPA Figure Requirements for other journal requirements.

 As a default, papers should be organized around these primary headings: **Introduction** (with no subheadings), **Materials and methods**, **Systematic paleontology**, **Results**, **Discussion**. A **Conclusions** section can be included at the end where appropriate. You may use other or additional primary headings, such as **Geologic setting**, **Previous work, Phylogenetic analysis**, **Paleobiogeography**, etc. as needed. Avoid irrelevant content within a heading, or overlap of content between headings.

 A manuscript can be considered for scientific review in the Journal of Paleontology if: (1) it is complete, with no content or files missing; (2) it conforms to JPA style and format; (3) it contains all required sections and subsections; and (4) it is in standard American English with proper grammar and correct spelling. Manuscripts that have major deviations from journal style or formatting, are missing required text or other material, or need English language development will be returned to the author before review.

 A cover letter is required for each new submission and revision. For new submissions, outline why the manuscript is an important contribution, certify that the material is not under consideration by another journal, and confirm that all authors have seen and approved the submitted version. For revisions, explain in detail (preferably point-by-point) the changes made (or not made) in response to the comments from reviewers, associate editor and editor, and that all authors have seen and approved the revised version.

 See the online [Instructions for Contributors](https://www.cambridge.org/core/journals/journal-of-paleontology/information/instructions-contributors) for other information needed to submit a paper.

**Geologic(al) setting**

*Geologic time units*.—Use the latest version of the International Chronostratigraphic Chart (ISC) proposed by the International Stratigraphic Commission (<[www.stratigraphy.org](http://www.stratigraphy.org)>). If regional or local series or stage names are used, they must be associated with the ISC equivalent the first time they are used in the text or in figures.

*Stratigraphic information*.—The stratigraphic context and position of all specimens and collections must be clearly defined if available; general stratigraphic information should be provided under a second-level heading, and detailed stratigraphic positions of specimens in the *Occurrence* subheading within the **Systematic paleontology** section. More detailed geographic and stratigraphic locality information is best recorded in either an appendix or as supplemental data. Reference to previously published stratigraphic and paleontological studies may be sufficient in some instances.

*Locality information*.—Locality information must be provided for all specimens and collections that are described, illustrated, or evaluated, and can be presented in a number of formats: maps (figures) with localities indicated, tables, or an appendix or supplemental data set. In all cases, localities must be provided with geospatial coordinates (decimal Latitude and Longitude, UTM or other standard systems), and a geographic datum must be included (e.g., WGS84). In some cases (e.g., papers without a **Geologic setting** section), locality information can be integrated into the **Materials and methods** section.

**Materials and methods**

This section is required for all specimen-based articles.

*Equations*.—Center equations and number sequentially (in parentheses) on the right margin. Cite equations in text as Equation 1 or (Eq. 1).

 A = π r2 (1)

Insert blank lines before and after the equation. Any text following the equation that is part of the same paragraph should begin flush left. Indent (tab) if a new paragraph begins.

*Repositories and institutional abbreviations.*—This is a secondary heading required for all specimen-based papers to be used at the end of the **Materials and methods** section to summarize the general information on repositories and institutional/collection abbreviations. For example, “Types, figured, and other specimens examined in this study are deposited in the following institutions: The Natural History Museum (NHM), London, UK; American Museum of Natural History (AMNH), New York, USA, or the Cincinnati Museum Center (CMC), Cincinnati, USA.” Do not repeat this information at the beginning of the **Systematic paleontology** section. If material is reposited in only one location, the subheading should be “Repository and institutional abbreviation.”

**Systematic paleontology**

For most papers that focus on systematics, we prefer this section to be placed immediately after the Materials and methods section. However, it can also be placed closer to the end of the manuscript after the Conclusions if it makes more sense for the flow of the paper.

The document JPA Systematic Guide contains detailed instructions for organizing and formatting this section. Please download and follow that template for this portion of manuscript preparation. All type and illustrated specimens must be deposited in a publicly accessible, permanently curated museum or institutional repository and assigned unique catalog numbers. The status of additional material used must also be recorded. Repository catalog numbers need to be noted under the *Holotype* and *Materials* headings within the **Systematic paleontology** section and the figure captions. All publications containing new taxonomic names must have a ZooBank registration number (UUID) before publication. For assistance, please see our ZooBank Guide.

**Results**

This section is used to describe the objective observations and results of the study. Subheadings can be used as needed, but the **Results** section should not interpret the meaning or significance of the results. This should be broken out into a separate **Discussion** section.

**Discussion**

The organization and content of the **Discussion** section will vary as needed. This section should include implications of the results from this study and relevance to previous and future studies. Use subheadings to organize if necessary.

**Conclusions**

The **Conclusions** section is optional, depending on the nature of the study, but should provide an informative closure to the paper. Important points may be listed, but do not use bulleted points in telegraphic-style text.

**Acknowledgments**

Avoid excessive details and superlatives and simply state the nature of the assistance received. Use initials rather than given names, and do not use titles of the people being acknowledged. Do thank the reviewers (by name if not anonymous). Authors are required to acknowledge all institutional funding sources and cite all permits and licenses applicable to project-related fieldwork.

**Declaration of competing interests**

All authors must include a declaration of competing interests in their manuscript. Competing interests are situations that could be perceived to exert an undue influence on the content or publication of an author’s work. These may include, but are not limited to, financial, professional, contractual or personal relationships or situations whose association may have impacted the results of the study. The statement must be relevant to all contributing authors and are not the same thing as a conflict of interest. Statements should be written in the format of "A.B. Smith is employed at company C, and D.E. Johnson received grant funding from company F." If no competing interests exist, write "the author/authors declare none".

**Data availability statement**

Supplemental materials for Journal of Paleontology include Appendices that are over 12 manuscript pages in total (including figures and tables), other large data files that are in a format unsuitable for print publication in the Journal of Paleontology (such as video files), as well as large tables, character lists, long locality lists, etc. If supplemental data accompanies a paper, refer to the file(s) in the text as ‘Supplementary Data Set 1, 2…’ or ‘Supplementary Data 1, 2...’ If there are supplemental data associated with your paper, a primary heading called **Data availability statement** should follow the **Declaration of competing interests** section and precede the **References**. The supplemental material should be uploaded to a permanent online repository, such as Dryad or Zenodo. The repository and doi should be provided in the Data availability statement section.

Data available from the Dryad Digital Repository: http://doi.org/10.5061/dryad.NNNNN

**References**

The Journal of Paleontology shares its referencing style with Geological Society of America publications. Guidelines for formatting references for manuscript preparation [can be found here](https://scanmail.trustwave.com/?c=4062&d=iLmx2WjdSyaNoL-fWdHfX3HTLlsVO4JIR8dng2F16g&s=675&u=https%3a%2f%2fwww%2egoogle%2ecom%2fsearch%3fq%3dgeological%2bsociety%2bof%2bamerica%2breference%2bstyle%26ie%3dutf-8%26oe%3dutf-8) and the JPA Reference Formatting Guide. If using **EndNote**, the output style for the Geological Society of America can be used to assist in formatting references and can be downloaded from the **EndNote** website, <https://endnote.com/downloads/styles/>.

Single examples of some of the most common sources (book, article in book, monograph and article in journal) are provided.

McKinney, F.K., 2007, The Northern Adriatic Ecosystem: Deep Time in a Shallow Sea: New York, Cambridge University Press, 299 p.

Miller, A.I., 1990, The relationship between global diversification and spatio-temporal transitions in Paleozoic Bivalvia, *in* Miller, W. III, ed., Paleocommunity Temporal Dynamics: Processes and Patterns of Long-Term Community Development: Paleontological Society Special Publication 5, p. 85–98.

Pratt, B.R., 1992, Trilobites of the Marjuman and Steptoean stages (upper Cambrian), Rabbitkettle Formation, southern Mackenzie Mountains, northwest Canada: Palaeontographica Canadiana, v. 9, 179 p.

Westrop, S.R., and Eoff, J.D., 2012, Late Cambrian (Furongian; Paibian, Steptoean) agnostoid arthropods from the Cow Head Group, western Newfoundland: Journal of Paleontology, v. 86, p. 201–237.

**Appendix**

Additional information that is relevant to the text (i.e., directly supports its interpretation) but too long for inclusion as a table or text can be included as an Appendix and should be cited in the text. Multiple appendices should be numbered consecutively and cited sequentially in the text, e.g., (Appendix 2). Information that supports but is not essential to the interpretation of the paper and is longer than 3 printed pages (~ 12 manuscript pages), such as large data sets, detailed sampling or curatorial information, or special graphics or multimedia, should be archived as **Supplemental Data**. Appendix file(s) should be saved and uploaded as a separate MS Word (.doc or .docx) or MS Excel (.xls or .xlsx) document. Captions, if used, should accompany appendix files. Appendices will be printed in a smaller font size unless special arrangements are requested at the time of submission.

**Figures and figure captions**

Required figure resolution and acceptable file formats, labeling, lighting, color use, etc., are explained in the document JPA Figure Requirements. Figure citation style is explained in the JPA Journal Conventions and Style Check Sheet.

 Figure Captions should be provided in a list at the end of the paper. Note that at the time of manuscript submission you will also be prompted to enter a figure caption for each figure file. This caption box will lose special formatting (e.g., italics and bold). You may correct the formatting with the special character box if you wish, but it is not required. However, the text of the two figure captions much match exactly.

 Specimen descriptions in a caption should normally include: species names, specimen catalog numbers, what the photo is showing, locality, stratigraphic position, descriptions of all abbreviations present in the figure, and a numerical description of the scale bar. The order of these descriptions should be consistent. References to figure parts in the caption should be in bold and in parentheses immediately before the relevant text, for example, (**4**) dorsal valve; (**1–3**) dorsal, ventral, and lateral views; or (**1, 3, 5**) dorsal, lateral, and anterior views. Descriptions of figure parts are usually separated by semicolons. Describe scale bars in the caption, preferably at its end, "... scale bar is 20 µm" or "Scale bars are (**2, 5**)200 μm; (**1, 3, 4**)60 μm; (**6**)1.0 mm." See two typical examples of figure captions below.

**Figure 1.** *Perspicaris*? *dilatus* from the Rockslide Formation, middle Cambrian, Ravens Throat River area, Mackenzie Mountains: (**1**) dorsal view of butterflied carapace (TMP 2013.101.0001; surface scratched); (**2**) same as (**1**) (dusted with ammonium chloride); (**3**) lateral views of three complete and one partial valves (TMP 2013.101.0004); (**4**) lateral views of one complete and two partial valves (latex cast dusted with ammonium chloride; TMP 2013.101.0004; flipped horizontally); (**5**) lateral interior view of complete valve, with muscle scar (TMP 2013.101.0008); (**6**) lateral interior view of complete valve, with muscle scar (latex cast dusted with ammonium chloride; TMP 2013.101.0008; flipped horizontally). All scale bars represent 5 mm.

**Figure 2.** *Quechuacrinus ticsa* n. gen. and sp. (**1, 2**) holotype CEGH 23541, partly flattened; (**3**) paratype CEGH 23539, small interbasal gap; (**4**) paratype CEGH 23543, C ray view, irregular supernumerary plates below C radial; (**5**) paratype CEGH 23546, latex, much of stem, pentameric distal portion. Scale bars = 1 mm (**1, 2**), or 2 mm (**3**), or 5 mm (**4, 5**).

**Tables**

Provide all Table captions at the end of the Figure captions with the manuscript text as well as in each table file. Table citation style is explained in the JPA Journal Conventions and Style Check Sheet. Tables are numbered and ordered in the sequence of their first citation in the text. Each table must include a descriptive, concise heading. Each column must include a label, and all abbreviations must be defined in the heading (caption). Tables may only contain text and numbers. Tabulated files that have images, non-ASCII symbols, fill colors, or lines should be designated a figure. **Submit tables as individual, separate files**. **Do not include them in the manuscript document.**

Example:

**Table 1.** Table headings should serve as the title of the table, and be used to define all parameters in the table including abbreviations and units, LA = length of aperture, WA = width of appendage, AZ = Length of hinge, units = cm, Spines = number of spines. Table headings should also be provided as a list at the end of manuscript text.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sample | LA | WA | AZ | Spines |
| One-B | 0.22 | 5.3 | 1.32 | - |
| One-G | 0.32 | 4.3 | 1.38 | - |
| Two-B | 0.44 | 2.2 | 1.37 | 3 |
| Two-G | 0.39 | 2.4 | 1.28 | 3 |