

Author Guidelines | The Journal of Zoo and Aquarium Research is an initiative of EAZA, the European Association of Zoos and Aquaria. EAZA represents and links more than 400 zoos, aquariums and other organisations, in 48 countries working together to make a difference for wildlife and our communities.

Aims and scope

The Journal of Zoo and Aquarium Research (JZAR) provides a forum for publication of novel, peer-reviewed research papers, reviews, evidence-based practice articles and short reports. Through their living collections, field conservation activities and engagement with people, zoos and aquaria are uniquely placed to advance our understanding of conservation, and associated activities.

JZAR aims to support the publication of high-quality science which generates evidence to underpin the progression of zoos and aquariums, which through its application can support evidence-based decision making. Sharing this knowledge will improve the global impact of zoos and aquariums, and bring benefits to their living collection, wild nature and people. The core values of JZAR are:

- a questioning approach, leading to scientific experimentation;
- meticulous observation, enumeration and analysis, replacing anecdotal description;
- recording and cataloguing evidence for systematic retrieval.

The Journal of Zoo and Aquarium Research (JZAR) accepts submissions undertaken in, or in collaboration with, zoos and aquariums. Through the dissemination of high-quality research, we aim to foster an evidence-based culture that supports and progresses zoo and aquarium practices—ultimately contributing to improved outcomes for animals, plants, people and the planet. JZAR welcomes submissions from a broad range of disciplines, including:

- **Pure and applied biological sciences** (e.g., behaviour, genetics, medicine, nutrition, population management, and reproduction)
- **In situ conservation research** (e.g., socio-economic and field studies)
- **Research on the evolving roles of zoos and aquariums** (e.g., visitor learning, education, and marketing)

JZAR accepts four types of submission: original research, short reports, evidence-based practice articles and reviews.

Note | Single case studies or case reports in veterinary medicine are not generally considered for publication.

Publication schedule

JZAR is published quarterly at the end of January, April, July and October.

Submission guidelines

- Register and log in at www.jzar.org
 - Submit your manuscript online.
 - Indicate what type of article you're submitting (see below).
 - Submission of a manuscript will be taken to imply that the material is original and that no similar paper is being, or will be, submitted elsewhere, either in whole or substantial part (this excludes oral presentations, in-house reports, thesis or abstract publications).
 - You can suggest up to four referees; however, the Editor reserves the right to choose referees other than those suggested.
 - The Editors reserve the right to accelerate the publication of high-profile papers, commissioned reviews or topical papers.
- x Serialised studies should not be submitted, and titles *should not* contain part numbers.
- x Single-case studies or case reports in veterinary medicine *are not* generally considered for publication.

Types of paper

JZAR currently publishes four article types, all are expected to include a well-defined research question, aim and/or hypothesis, and use a robust methodology which is able to collect appropriate data to answer the research question (summarised in Table 1).

Original research: a comprehensive, hypothesis driven study that addresses a novel question or provides new insights which have the capacity to be generalised and have far-reaching impacts within the zoo and aquarium profession.

Short reports: a concise summary of a study which is preliminary or narrow in scope, where a robust scientific method has been followed and reported alongside appropriately analysed data. These articles will likely represent studies where the scope to generalise the results beyond the study subjects is limited.

Evidence-based practice articles: a structured account of a practical husbandry or management intervention within a zoo and/or aquarium, which has been appropriately monitored to evaluate the consequences in collaboration with a Zoo and/or Aquarium. The article will report empirical outcomes in a way that informs future decisions or practice.

Reviews: a new insight to a subject is provided through analysis of previously published primary empirical studies, including quantitative meta-analysis, synthesis and modelling approaches, and critical evaluations, concluding with specific application to the Zoo and Aquarium sector. Only invited* reviews will be considered.

Manuscript preparation

Please follow the instructions below, failure to do so can delay processing submissions:

Submissions should:

- o Follow instructions on word, figure and table limits, listed below (also see table 2).
- o Include consecutive line and page numbering throughout.
- o Comprise a title page listing a concise title, a list of authors' names and their institutions. The name, address and e-mail address of the corresponding author should also be given, followed by no more than eight suggested keywords: each word will be counted if hyphenated or compounded i.e. Captive-born or *Macaca nigra* count as 2 words.
- o Be written in British English.
- o Write whole numbers one to nine and use numerals for number 10 onwards.
- o Include full binomial taxon names on the first occasion an organism is mentioned and abbreviated thereafter, except at the beginning of a sentence.
- o Not use initial capitals for the common names of organisms unless derived from a proper noun.
- o Use metric or SI units where appropriate: see Baron, D.N. (1988). Units, Symbols and Abbreviations. 5th edition. London: Royal Society of Medicine Series.
- o Not use footnotes except to add information below a table.

At submission figures may be embedded in the text file. If the submission is accepted for publication separate high-quality files for each figure should be uploaded (JPEG, TIFF, etc.), or as Excel files.

Original research

1. Submissions should not exceed 5000 words, excluding references
2. A maximum of 5 figures and 2 tables can be included; or 4 pages of figures/table whichever is smaller. Embedded figures and tables are acceptable at initial submission, but if the article is accepted, high-resolution figures and editable tables will need to be provided.
3. Supplementary information can be included in appendices, however responsibility for ensuring these fit house style will rest with the corresponding author. The use of online repositories (e.g. Zenodo) to share additional and/or to make data open access is recommended and can be cited within your submission.
4. **Abstract** should not exceed 500 words, and provide a summary of the study including rationale, methods, results and conclusion.
5. **Introduction** should provide a rationale for the study; why is the study important, why have the methods chosen been employed; how will the current study build upon what is known in the field. The introduction should introduce the reader to the aims and context for the work to follow. This should NOT be a description of research currently undertaken in this area or a taxonomic or ecology overview – unless pertinent to the study.
6. **Methods** should provide ALL details required to understand how the study was undertaken and be sufficient to all the work to be replicated. For example, including the conditions under which data were collected i.e. housing and husbandry of subjects, information about participants. Take care not to repeat information described fully elsewhere, instead please cross-reference.
 - a. **Data analysis** can be a separate section or organised within the methods. Describe how data were handled and analysed. It is important to ensure that the reader can follow if raw or manipulated data (i.e. means) were then analysed, and using what software.

b. **Ethics** can be a separate section or organised within the methods. Detail how ethical integrity was ensured.

7. **Results** should be restricted to a factual account of the findings obtained and the text must not duplicate information given in Tables and Figures. Legends for Tables and Figures should be sufficiently complete that the information provided can be understood without reference to text.

8. **Discussion** should outline how the data collected answer the research question/ aim/ hypothesis and what this means for the study context, and specifically for the Zoo and Aquarium sector.

Short reports

1. Submissions should be approximately 1500 words, excluding references
2. A maximum of 2 figures and/or 2 tables can be included; or 2 pages of figures/table whichever is smaller. There is no limit to what is included in appendices, however responsibility for ensuring these fit house style will rest with the corresponding author.
3. **Abstract** should not exceed 250 words, and provide a summary of the study including rationale, methods, results and conclusion.
4. **Introduction** should provide a concise rationale for the study and focus on how it builds upon what is known/evidenced (published). Introduce the reader to the aims and context for the work to follow. This should NOT be a description of research undertaken in this area or a taxonomic or ecological overview – unless pertinent to the study (should not exceed 500 words).
5. **Methods** should provide ALL details required to understand how the data were collected and be sufficient to all the work to be replicated. For example, including the conditions under which data were collected i.e. housing and husbandry of subjects, information about participants. Take care not to repeat information described fully elsewhere, instead please cross-reference.
 - a. **Data analysis** can be a separate section or organised within the methods. Describe how data were handled and analysed. It is important to ensure that the reader can follow if raw or manipulated data (i.e. means) were then analysed, and using what software.
 - b. **Ethics** can be a separate section or organised within the methods. Detail how ethical integrity was ensured.
6. **Results** should be restricted to a factual account of the findings obtained and the text must not duplicate information given in Tables and Figures. Legends for Tables and Figures should be sufficiently complete that the information provided can be understood without reference to text.
7. **Discussion** should concisely outline how the data collected answer the research question/ aim/ hypothesis and what this means for the study context, and specifically for the Zoo and Aquarium sector (should not exceed 500 words).

Evidence-based practice articles

1. Submissions should not exceed 3000 words, excluding references
2. A maximum of 3 figures and/or 2 tables can be included; or 3 pages of figures/table whichever is smaller. There is no limit to what is included in appendices, however responsibility for ensuring these fit house style will rest with the corresponding author.
3. **Abstract** should not exceed 300 words and summarise the main findings presented. Describe and explain the importance of the practice in a way that is accessible to non-specialists.
4. **Background** should provide a description of the 'practice' (intervention) which is the focus of the article, including the extent to which the 'practice' is implemented: is this a novel practice or undertaken only in your institution, several, and/or common amongst many. A rationale should be developed which outlines

Table 1: Comparison of paper types which can be submitted to JZAR. This RUBRIC has been designed to help you decide which paper style best suits your submission. If a submission falls between categories, please email the Managing Editor (editor@jzar.org) for support. If your submission doesn't fit within the outlined paper style, it will either be declined or you will be contacted to reformat and resubmit your submission accordingly.

Metric	Original Research	Short Report	Evidence-Based Practice	Review
Research Scope and Depth	In-depth novel, hypothesis-driven research with comprehensive data analysis and implications critically discussed within a contemporary context.	Concise summary of empirical study with a limited data set e.g. preliminary study.	Empirically evaluates efficacy of current practice; clear problem and intervention identified, supported by rationale and context.	Exploration of previously published empirical studies to provide novel insight; clearly defines and evidences a gap in knowledge; demonstrates how new knowledge will be impactful to practice; research has breadth and insight.
Novelty or Synthesis	Original ideas or conceptual advance; contributes significantly to knowledge.	Extending or adapting methods to a new species, settings or early findings.	Provides new evidence or insight into practical zoo and/or aquarium practice; fills a gap in practice-based knowledge.	Innovative synthesis of existing published data in a novel way; identifies gaps, directions and solutions.
Data Requirements & Analysis	Original methods or application; data collected from sufficient sample to be representative of target population; statistically analysed which might include inferential statistics and/or complex illustration of data.	Previously described phenomenon applied to a novel setting (i.e. species/setting); and/or limited dataset or observation focused on few individuals, one group/setting.	Description of intervention and systematic methods used to evaluate efficacy and outcomes (results) with suitable analysis to extend understanding.	Comprehensive review of previously published data from empirical studies are transformed to provide novel insight; new datasets are created and critically evaluated beyond description; analysis/ illustration of data using complex methods yields new understanding.
Generalizability & Relevance	Results relevant beyond the study context; contributes to a wider theoretical or practical understanding	Provides insights about the study subjects/setting; extends knowledge of phenomenon or methods.	Emphasis on critical appraisal of existing practice, whether at an institution level or broader: Transferable insights can be applied to practice in other institutions or for similar interventions.	Broad relevance; informs theory, practice, or future research.

the necessity of the 'practice' and, if already implemented, how – including specific details about whether this might vary within or between institutions. There should be a critical discussion of the evidence (and type*) currently available which underpins the practice should be critically evaluated and the type of evidence needed to progress practice identified.

5. **Action** should briefly describe situation, including typical management (if appropriate). Give full details of the practice implemented and how evidence was collected to evaluate it; including dates if possible. Provide specific details, about implementation and monitoring of the practice so others could replicate both. Consideration of how practice and monitoring were integrated into institutional operations, including resources (i.e. time taken and costs incurred) would be useful.

6. **Consequences** should summarise the evidence collected and how it progresses understanding of the practice; does this evidence concur, contradict or extend knowledge? Critically discuss the type of evidence collected, and the extent to which practice could or should be changed – and/or highlight what additional evidence is now needed to support the implementation of this practice. Comment on whether the evidence collected has or will change practice in your institution or more widely and how this was achieved.

Reviews

1. Submissions should not exceed 5000 words, excluding references
2. A maximum of 5 figures and/or 2 tables can be included; or 4 pages of figures/table whichever is smaller. There is no limit

to what is included in appendices, however responsibility for ensuring these fit house style will rest with the corresponding author.

3. **Abstract** should not exceed 500 words and provide a summary of the study including rationale, methods, results and conclusion.

4. **Introduction** should provide a rationale for the study; why is the study important, why have the methods chosen been employed; how will the current study build upon what is known in the field. The introduction should introduce the reader to the aims and context for the work to follow. This should NOT be a description of research currently undertaken in this area or a taxonomic or ecology overview – unless pertinent to the study.

5. **Methods** should provide ALL details required to understand how the study was undertaken and be sufficient to all the work to be replicated.

6. **Results/Discussion** can either be presented separately or together depending on the methods and over-arching discipline of the research, ensuring repetition is kept to a minimum.

References

Accuracy and format of references is the responsibility of the author(s). References must be checked against the text to ensure (a) that the spelling of authors' names and the dates given are consistent and (b) that all authors quoted in the text (in date order if more than one) are given in the reference list and vice versa.

In the text, references must be arranged chronologically with the surname(s) of the author(s) followed by the date, with multiple references separated by semicolons (e.g. Pullen 2004;

Table 2: Here we provide a quick overview of the formatting requirements for the different paper styles accepted by JZAR. Please also refer to the additional information provided above within the ‘*Manuscript Preparation*’.

Criterion	Original Research	Short Report	Evidence-Based Article	Review*
Goal	Advances knowledge	Extends knowledge	Evidence’s Practice	Provides insight of 'big ideas'
Submission length (words)	5000	approx. 1500	3000	5000
Abstract (words)	500	250	300	500
Structure	Introduction, Methods, Results, Discussion, References	Condensed: Brief introduction and interpretation/discussion, Full methods, data analysis and results, References	Background, Action, Consequences, References	For quantitative studies: Intro, Methods, Results, Discussion, References - results and discussion can be combined for qualitative studies.
Figures and Tables	Max. 5 figures and/or 2 tables: or 4 pages, whichever is smaller	Max. 2 figures and/or 2 tables: or 2 pages, whichever is smaller	Max. 3 figures and/or 2 tables: or 3 pages, whichever is smaller	Max. 5 figures and/or 2 tables: or 4 pages, whichever is smaller
References (guidance)	25+	~10–20	25+	Max. 80

*Only invited Reviews will be processed. Prospective authors should email the Managing Editor (editor@jzar.org) a 300-word abstract, a list of up to 20 key references, and a cover letter outlining why the review they propose is novel, important and timely.

O’Malley 2025). For more than two authors, give the name of the first author followed by et al. and the date (e.g. Meireles et al. 2025). Use a, b, etc. after the year to distinguish papers published by the same author(s) in the same year (e.g. Miereles et al. 2025a and Miereles et al. 2025b). For two authors, use both names and the year, use and rather than & (e.g. Steinmetz and Zimmermann 2011).

In the reference list, citations must be arranged first alphabetically under author(s) name(s) and then in chronological order if several papers by the same author(s) are cited, and all authors names should be included. Journal titles should be in full, not abbreviated, and italicised. Use En Dash, not hyphen, to separate page numbers. The reference list must be in JZAR format (including the use of punctuation) please see examples below.

Scientific Articles

Meireles J.P., Scherer L., Lackey L.B., Steck B., Pluháček J., Roller M., Müller D., Bertelsen M., Clauss M. (2025a) Historical survivorship and demographic structure of zoo-housed hippopotamuses Hippopotamidae. *Journal of Zoo and Aquarium Research* 13(2): 65–80.

Meireles J.P., Hahn-Klimroth M., Müller D., Dierkes P., Clauss M. (2025b) Body mass of adult zoo hippos Hippopotamidae and how they compare to data from populations in the wild. *Journal of Zoo and Aquarium Research* 13(2): 108–116.

Chapters in Books

Steinmetz H.W., Zimmermann N. (2011) Computed Tomography for the diagnosis of sinusitis and air sacculitis in orangutans. In: Fowler, M.E. and Miller, E. (eds.). *Zoo and Wild Animal Medicine: Current Therapy Vol. VII*. St. Louis, Missouri: Elsevier Saunders, 422–430.

Books

Zimmermann A., Hatchwell M., Dickie L., West C.D. (eds.) (2007) *Zoos in the 21st Century: Catalysts for Conservation?* Cambridge, UK: Cambridge University Press.

Online Resources

Humble T., Maisels F., Oates J.F., Plumptre A. Williamson E.A. (2016) *Pan troglodytes* (errata version published in 2018). The IUCN Red List of Threatened Species 2016: e.T15933A129038584.

<https://dx.doi.org/10.2305/IUCN.UK.2016-2.RLTS.T15933A17964454.en>. Accessed on 01 July 2025.

Publication ethics

Authors must be aware of, and adhere to, all laws, treaties and regulations currently applying to their work, experimental work must comply with the standards and procedures laid down by relevant national and international legislation.

Research on animals should conform to relevant guidelines e.g. the Guidelines for the Treatment of Animals in Behavioural Research and Teaching published by the Association for the Study of Animal Behaviour. Any experimentation in which animals are subjected to painful or harmful conditions must be justified, and a statement as to an Animal Ethics Committee’s approval should be included in the cover letter that accompanies the submission. Authors must demonstrate in their papers that the knowledge gained was of sufficient value to warrant such treatment. Questionable manuscripts where the Editors believe the animals were subjected to significant pain, distress or harm will not be published in the journal. Research on human subjects should conform to the Code of Ethics and Conduct of the British Psychological Society.

JZAR subscribes to the principles of the Committee on Publication Ethics. All co-authors of a paper should have made

significant scientific contributions to the work reported and should share responsibility and accountability for the results. The submitting author should have sent each living co-author a final draft copy of the manuscript and should have obtained the co-author's assent to co-authorship.

Conflict of interest

Authors must declare details IF there are any potential conflict of interest. A conflict of interest exists when professional judgement concerning a primary interest (such as animal welfare or the validity of research) may be influenced by secondary interests (personal matters such as financial gain, personal relationships or professional rivalry).

Decisions and invitations to revise

All submissions are subject to peer review. If minor revisions are requested, the corresponding author should submit the revised manuscript within 6 weeks; if major revisions are requested, a revised manuscript should be submitted within three months. If these timelines cannot be achieved and there are special reasons for a delay, please email the Editor.

Proofs

A copyedited typeset proof will be sent to the corresponding author, when the submission is accepted for publication.

- o During copyediting, accepted manuscripts might be changed to conform to scientific, technical, stylistic or grammatical JZAR standards.
- o The manuscript will be typeset (formatted according to the submission style).
- o Sometimes queries will accompany the proofs, requesting additional information or clarification.
- o At this stage, authors can make minor changes to the proof e.g. changes to a couple of word or number, removal of redundant citations. Updating the submission or adding figures, tables or supplementary information is not possible at this stage.

- o Please return answers to queries and comments within 3 working days.

Issues with automated email communication

- To facilitate communication please ensure JZAR is listed in your 'trusted contacts'.
- Sometimes communications generated by the JZAR online journal system may end up in JUNK or SPAM folders. We are working to improve our communications, but please check these folders.

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- are able to enter into separate, additional contractual arrangements for the non-exclusive distribution of the journal's published version of their work (e.g., post it to an institutional repository or publish it in a book), with an acknowledgement of its initial publication in this journal.
- are permitted and encouraged to disseminate their work widely including online (e.g., in institutional repositories or on their website) prior to and during the submission process, as it can lead to productive exchanges, as well as earlier and greater citation of published work (See The Effect of Open Access).

Privacy Statement

The names and email addresses entered when working with JZAR will be used exclusively for the stated purposes and not be made available for any other purpose or to any other party.