Instructions for Authors - Specific Requirements (Version May 2016)

Please consider the advice listed below, as well as the general “Instructions for Authors” provided at the web-page when preparing your manuscript for submission to Marine Biology. We also recommend using a copy of a recent article as an additional guide. For questions please contact the Editors at marinebiology@geomar.de. Manuscripts that do not fit our standard will be returned by the Editorial Office for correction or can even be finally rejected.

For manuscripts on ocean acidification please see also the ‘Guidelines for reporting ocean acidification data’, you will find at the end of this document.

Only articles of interest to Marine Biology readers, presenting novel and useful information for the scientific community, and contributing to scientific progress in a particular field can be considered for publication. The potential impact and importance of the work should be described in the manuscript to ensure that the article will be read and cited.

Submitted manuscripts are first checked for English language, ethical issues, and plagiarism. Manuscripts exhibiting problems cannot be considered for publication and might be irrevocably rejected.

The submission template contains questions about the manuscript’s scientific field and about the specific contribution of the manuscript to the field. The replies to these questions are of utmost importance, because the initial decision, whether a manuscript will be sent out for review or will be rejected without review mainly depends on the title, the abstract, and the replies to those questions. Too vague replies will be taken as an indication that the authors are unable to condense information on these points or that they have not considered the relationship of their work to progress in the field.

Language

Manuscripts should conform to standard rules of English grammar and style. Either British or American spelling and punctuation may be used, but consistently throughout the article. Submitted manuscripts will first be checked for language, presentation and style. Manuscripts, which are substandard in these respects, will be returned without review. Scientists who use English as a foreign language are strongly recommended to have their manuscript read by a native English-speaking colleague or edited by a professional editing service. Information about editing services is available on the journal’s web page (see Manuscript Services). It is the authors’ collective responsibility to submit a linguistically correct manuscript.

Cover letter

When submitting a manuscript, a cover letter, addressed to the Editor in Chief and to the Associate Editor, can be inserted into the “Author Comments” box on the submission template. Please do not submit files containing any confidential information (e.g. a cover letter containing names of unwanted reviewers), because the PDF for the reviewers is made from all submitted files. The cover letter should contain a statement that all authors have agreed to the submitted version of the manuscript and that
the manuscript or parts of it have not been published elsewhere or are not under consideration elsewhere. If the research was done in a country where none of the authors is resident, evidence that official permission to conduct the research has been given must be provided.

**General structure**

The manuscript should be submitted as a word file or in LaTeX. The manuscript should be organized into Abstract, Introduction, Material and Methods, Results, Discussion/Conclusion, Compliance with Ethical Standards, Acknowledgments, References, Figures (with captions) and Tables. Figures and Tables should be submitted as separate files (this structure is not needed for Reviews, Concepts, and Syntheses). Marine Biology does not publish footnotes or supplements, but additional data or videos may be submitted as electronic supplementary material which will be available online.

No right justification for the text should be used. Line numbers should run consecutively throughout the text, from the title page through the figure legends. Lines in tables or figures must not be numbered. Abbreviations and acronyms must be defined at first mention in the Abstract, again in the main body of the text and also in the Figure Legends. A list of abbreviations may be included as a table, but should not appear at the beginning of the manuscript.

The **Title** should be meaningful and signal the importance of the study for the field. It should be rather general, than restrictive to species and geographic areas. If scientific names of species are used, they must be accompanied by a higher taxonomic classification term and/or by a common name.

The **Abstract** summarizes your manuscript. Please keep it short and clear (150-250 words). The abstract should reflect what you have done, why you have done it and what your major results are. It should not be written in the first person. The abstract should include the date(s) of the study and the latitude and longitude where the samples or experimental organisms were collected. It should not contain descriptions of the state of the art; such information should be limited to the introduction. No undefined abbreviations or unspecified references should be used. The abstract may decide whether a manuscript can be sent out for review; papers may be rejected due to poor or confusing abstracts.

The **Introduction** should describe why the study was done and end with some testable hypotheses or clear objectives. Manuscripts which do not present a clear hypothesis are likely to be rejected without review.

**Methods:** All details required to repeat the work must be provided. Usage of publicly accessible data from repositories must be indicated. The respective accession information must be provided in the References.

**Results:** Where specific results are being presented or discussed use the past tense. Only use the present tense for generalizations arising from the study results. Data should be archived in a publicly accessible database like Dryad or Pangaea and the accession number must be provided.

The **Discussion** should highlight the study’s importance for the field and the resulting new insights.
Compliance with Ethical Standards must be included as a separate section. The authors should explicitly declare that they have no conflict of interest, that consent was obtained from all participants of the study, that all animals have been sampled and/or treated according to the national legislation and that all required permissions have been obtained.

In the Acknowledgement grants, funds etc. and contributing people should be mentioned. Please do not write ‘we thank the anonymous reviewers’, as Marine Biology now allows reviewers to have their names disclosed on the manuscript. Therefore ‘anonymous’ should be omitted. The References must be formatted in MABI style (see more details under “Citations”). Data taken/used from publicy Databases (e.g. PANGANEA) must be cited by accession numbers.

Figures: Captions should be placed below the figures for ease of reviewing. More details are given under “Illustrations” and “Figure Captions” (see below).

Tables: Tables should be numbered using Arabic numerals and have a table caption (title) on top, explaining the components of the table. All abbreviations in the table should be explained in the caption. Tables should not contain vertical lines.

Specific Advices

Text Formatting

Please use 1.5 or double space formatting and enable line numbering. No right justification for the text should be used. Superscript must be used to denote the denominator in units, e.g. kg y\(^{-1}\), 24 hr time for time of day. E.g. 0700 hr.

We recommend using a copy of a recent article as a guideline. Correct formatting is prerequisite for acceptance of a manuscript. This concerns especially statistics, units and citations/references.

Statistics

Describe statistical methods in sufficient detail to allow a knowledgeable reader with access to the original data to verify the reported results. Use the same font for the same mathematical symbol regardless where it appears in the manuscript (text, equations, tables, figures, figure legends).

Give means and standard errors/standard deviations with their associated sample size in the format: X ± SE = 35.09 ± 0.07 km, n = 15. When standard deviation/error is shown in an illustration, \(n\) should be given as well.

Statistical tests use the following formats:

(ANOVA, \(F_{1,25} = 8.56, P= 0.035\))

(Kruskal-Wallis test, \(H_{25} = 123.7, P= 0.001\))

(Chi-square test, \(X_{22}^2 = 0.23, P = 0.57\))
(Paired t test, \( t_{24} = 2.33, P = 0.09 \))

(Linear regression, \( r^2 = 0.94, F_{1,66} = 306.87, P < 0.001 \))

(Spearman rank correlation, \( rs = 0.60, N = 33, P < 0.01 \))

(Wilcoxon signed-ranks test, \( T = 7, N = 33, P < 0.05 \))

(Mann-Whitney U test, \( U = 44, N_1 = 7, N_2 = 24, P < 0.02 \))

Please either give the exact P-value of a statistical test, or state \( P < 0.xxx \), if this is not possible. \( P = 0 \) is not valid.

**Units**

Use of SI and SI-derived units is preferred. Internationally accepted units can be also be used, e.g. “min” for “minute”. The capital letter “L” must be used for liter.

Please use superscripts instead of “/” or “per ...” for ratios. Exponents should also be written as superscripts.

When using a number and a unit of measure to make a qualifying adjective, put a hyphen between them, e.g. 300-μm sieve.

Please refer to the following examples.

**Length, Area, Volume:** pm, nm, μm, mm, cm, m, km, mm², cm², m², L, mL, μL, mm³, cm³, m³

**Mass:** pg, ng, μg, mg, g, kg, t, Da, kDa

**Time:** s, min, h, d, y

**Temperature:** °C,

**Absolute quantity:** pmol, nmol, μmol, mmol, mol

**Concentration:** pM, nM, μM, mM, M, N, %, μg L⁻¹

**Work, Energy, Heat quantity:** J, erg, cal, kcal

**Force:** dyn, N, gw, kgw

**Pressure:** Pa, mmHg, atm, bar

**Electricity:** V, W, mA, A, Hz

**Photometry:** if possible, avoid cd, lx, lm, cd m⁻², energy or photon flux density would be preferable

**Sound:** Hz, kHz, mHz, Abar, dB

**Speed:** cm s⁻¹, m s⁻¹, kn, rad s⁻¹ (some speeds, e.g. sedimentation rates are better expressed per day or even year)
Archiving of Data

Data storage in a publicly accessible data library is highly recommended, for DNA sequence information it is obligatory.

DNA sequence information must be deposited in GenBank (http://www.ncbi.nlm.nih.gov/genbank/) and accession numbers must be included in the manuscript such that the raw data can be accessed and compared against the presented data. For frequency-based data (microsatellites predominantly) a table of allele frequencies by population should be included (suitable for electronic supplementary material).

Phylogenetic information might be stored in TreeBASE, this repository accepts all kinds of phylogenetic data (e.g., trees of species, trees of populations, trees of genes).

Other data can be deposited in the data library PANGAEA (http://www.pangaea.de/). Data is archived by an editor in standard formats, in machine readable form and is available with Open Access. After processing, the author receives an identifier (DOI) linking to the supplement for proof-reading. Data can be referenced in the publication to facilitate linking between the journal article and the data. Send raw data with a description to info@pangaea.de. PANGAEA can be used free of charge.

For Tracking data (telemetry devices on animals) specific databases exist, such as Movebank or Seaturtle.org. Data can be stored with the option to apply different levels of access to internal and external users.

The Dryad Digital Repository DRYAD (http://datadryad.org/) provides a general-purpose home for a wide diversity of datatypes. Data storage is charged, but researchers from economically developing countries may submit data at no charge.

Other publicly accessible data libraries are welcome as well. A special archive for isotope data (IsoBank) is currently under construction.

If unpublished data sources are cited in the text or if a manuscript contains only highly derived data without basal data (e.g. diversity indices without species abundances) archiving of basal data might be requested by the Editor. In the latter case, electronic supplements might be used as an alternative to data archives.

Citations

When citing references in the text, put them in parentheses in chronological order with the earliest first. Separate them with semicolons. Do not put a comma between the author(s) and date.

Examples:

- (Thompson 1990; Abbott et al. 2005; Elliott and Green 2009)

- Same author, multiple years. E.g. (Brown 1997, 2000, 2005)
- Same author, same year. E.g. (Brown 2005a, b)
- Two authors (Brown and Smith 2007; Abbott and Green 2009)
- Multiple authors (Zar et al. 1998; Brown et al. 2008)
- As part of a sentence. E.g. This result was later contradicted by Becker and Seligman (1996)
- Abbreviate Personal communications to (perscomm)
- Abbreviate Unpublished data to (unpubl data)

References

References should be alphabetized by the last names of the first author of each work.

When there are more than two references with the same first author the references should be arranged so that the single-authored papers come first in chronological order with the earliest first, then the two-authored papers in alphabetical order by second author, then the multi-authored papers in chronological order with the earliest first. Please note that the example given in the general “Instructions for Authors”-alphabetical order - is not valid for Marine Biology.

Journal articles

Journal names have to be abbreviated without punctuation. For abbreviations see http://www.issn.org/2-22661-LTWA-online.php. Ideally authors are to provide DOI information for all journal articles. DOIs should be checked with the doi system website, to make sure that the cite is correct.

Dissertations


Online documents (Websites should only be cited if essential, because they may change with time).


Data from a database must be cited in the references by using a Digital Object Identifier (DOI).

Conference Proceedings should not be cited. Be sparing with citations of grey literature. Every cited printed work should be publicly accessible by ISBN or ISSN number.

When revising your manuscript please examine the validity of your journal references with the 'Automatic Reference Checking' module of the Editorial Manager.
The results of the reference checking are provided by clicking the corresponding link provided in your “Main Menu” in the Editorial Manager, as well as in the PDF file containing your manuscript. If "not validated" is displayed for a reference, it should be checked carefully and corrected where appropriate, as in most cases typos, wrong journals, issues or pages preclude its validation.

Illustrations

The illustrations are a very important part of the article. They must be prepared very carefully and be of good quality. Manuscripts containing poor quality figures will not be considered for publication. The figures should be as simple as possible and all details must be clearly visible when the figures are reduced in size. Data should be provided in figures OR in tables. They must not appear twice (Fig and Table).

Any information that is not absolutely necessary for understanding the article should be provided as numbered appendices in the electronic supplementary material (ESM).

For ease of reviewing the figures with captions (each caption placed below the respective figure) should be included into the text file. To avoid confusion, no extra list of figure legend should be submitted when figures and captions are pasted together.

Source files (e.g. EPS, TIFF; JPG, each figure in its own file) required for later production (if), should be submitted as separate files without captions.

Figures must be numbered consecutively and referred to in the text. The illustrations should be self-explanatory, i.e. with their captions they should be able to stand on their own without requiring further information from the main body of the text.

If a figure contains multiple panels, all panels should be on one page. They should be of the same size and arranged properly. Axes titles must only be repeated on each panel when they are different. The same style should be used for all similar illustrations so that their appearance is consistent.

The same font must be used for lettering in all figures. A sans serif font like Arial is preferred. All lines must be sufficiently thick to reproduce well and all lines, lettering, symbols and markings must be easily legible when reduced in size and must be in proportion to the rest of the drawing. If various degrees of grey shading are used, ensure that they are varied enough to differentiate among them or use patterns. Grid lines and boxes around symbol definitions should be avoided. Colors could be used if necessary. Marine Biology does not charge for color figures in the online or printed version of the journal. However, the Editors may refuse color prints if the use of color is not justified.

The source must be given for maps, photographs etc. Scale bars should be placed on photographs and maps.

Please see also the chapter “Artwork and Illustration Guidelines” in the “Instructions for Authors” for examples and further details.
Figure Captions

The Figure captions should be brief (“telegraphic style”), but contain all details necessary for understanding the figure without reading the text. They should not contain methodical details or results. All terms, abbreviations and symbols must be explained in the caption and correspond with those in the text.

It is no longer necessary for captions to be provided on a separate page, as indicated in the general “Instructions for Authors” on the MABI web site. The manuscript file can comprise the figures with the captions (each caption placed below the respective figure). This makes it easier for reviewers. All figures (with captions) should be placed at the end of the manuscript.

The source files of the figures (JPG, EPS, TIFF, etc) without caption should be provided separately as single files. They are needed for later production (provided acceptance). Please note that the figure captions must not appear twice, e.g. on a list and under the illustrations, as this is a frequent source of error.

Organisms

Genus and species name must be in italics. We recommend writing the species names in full at the beginning of each section of the manuscript and when they appear at the beginning of a sentence. In other places use the contraction e.g. A. islandica for Arctica islandica. Don’t abbreviate genus names if several genera with the same initials can lead to confusion or when only the genus name is used. Genus sp. And Genus spp. should only be used when speciation to species level was generally sought, but not completely reached and several species should be treated together, respectively.

The species author may follow the first use of the study species name in either the Abstract or the Materials and methods. If it is included, the reference to the original description must appear in the References section.

Common names can be used in addition to the scientific names, especially in the title. Common names like “water fleas” for cladocerans, or common names that might be misleading must be avoided. E.g.: Sandfish is a common name of: Gonorynchus, a genus of fish, Scincusscincus, a skink, Holothuriascabra, a sea cucumber. It should only be used for the fish.

Only use the words ‘animal’ and ‘plant’ in the most general sense. When referring to the individual organisms used in a study, use the most specific term possible such as the species name (in full or contracted), the common name such as ‘mud shrimp’ for Upogebia pugettensis, or ‘individuals’, where appropriate.

When describing the general attributes of a species use a singular verb. When referring to the multiple organisms belonging to the species used in a study, use a plural verb.
**Seasons**

When describing the seasonal timing of events, be aware that fall and winter occur at different times of the year in the northern and southern hemispheres. It is best to specify the months rather than just the seasons.

**Study Locations**

When writing the names of states in the USA do not use the postal abbreviation but write them in full—thus Virginia not VA.

If a map is used to show study locations, it should have a scale, an arrow indicating due north or a compass rose and a border with the latitude/longitude marked on it. It should show all geographical locations mentioned in the study. The source of the map must be given in the caption of the figure.

..........................

**Guidelines for reporting ocean acidification data in scientific journals**

**AUTHORS:**

Jean-Pierre Gattuso ([gattuso@obs-vlfr.fr](mailto:gattuso@obs-vlfr.fr))

Hernan Garcia ([hernan.garcia@noaa.gov](mailto:hernan.garcia@noaa.gov))

Clara J. M. Hoppe ([Clara.Hoppe@awi.de](mailto:Clara.Hoppe@awi.de))

James Orr ([James.Orr@lsce.ipsl.fr](mailto:James.Orr@lsce.ipsl.fr))

Hans-Otto Pörtner ([Hans.Poertner@awi.de](mailto:Hans.Poertner@awi.de))

Yan Yang ([yangyan@xmu.edu.cn](mailto:yangyan@xmu.edu.cn))

This document was prepared in the framework of the data management activity of the Ocean Acidification International Coordination Centre of the International Atomic Energy Agency (OA-ICC: [www.iaea.org/ocean-acidification](http://www.iaea.org/ocean-acidification)). Please contact the first author ([gattuso@obs-vlfr.fr](mailto:gattuso@obs-vlfr.fr)) in case of any error or omission. It is primarily based on Dickson *et al.* (2007), Dickson (2010), Nisumaa *et al.* (2010), Pesant *et al.* (2010), Pörtner *et al.* (2010) and Orr *et al.* (2015).

To ensure reproducibility, it is critical to report at least two variables of the carbonate system of seawater as well as salinity, temperature, and the hydrostatic pressure (if the measurements were not performed at atmospheric pressure). In addition, authors should report concentrations of total dissolved inorganic phosphorus as well as total dissolved inorganic silicon (in μmol kg⁻¹) whenever possible. Furthermore,
Authors should carefully report how the parameters were measured and, if applicable, which protocol they followed.

- The use of Certified Reference Materials, source, and batch numbers must be mentioned.

- At least two of the following carbonate system parameters should be measured and reported (note the preferred acronyms and units):
  - Dissolved inorganic carbon ($C_T$; µmol kg$^{-1}$)
  - Total alkalinity ($A_T$; µmol kg$^{-1}$)
  - pH (it is critical to mention its scale; see below)
  - Partial pressure of carbon dioxide (pCO$_2$; µatm)
  - Fugacity of carbon dioxide (fCO$_2$; µatm)
  - Carbonate ion concentration (CO$_3^{2-}$; µmol kg$^{-1}$)

- The pH scale (NBS, free, total, or seawater) must be mentioned prominently in the manuscript.

- If more than one pH scale is used in a given manuscript, the pH should always be given with the associated scale as a subscript:
  - on the National Bureau of Standards scale (pH$_{NBS}$)
  - on the seawater scale (pH$_{SW}$)
  - on the free scale (pH$_{F}$)
  - on the total scale (pH$_{T}$)

- The temperature at the time of sampling and at the time of measurement should both be mentioned, if they differ.

- Salinity is needed (note that it is unitless)

- The formulations used to calculate the following variables should be mentioned:
  - Concentrations of total boron
  - CO$_2$ solubility ($K_0$)
  - Dissociation constants of carbonic acid ($K_1$ and $K_2$), boric acid ($K_b$), water ($K_w$), phosphoric acid ($K_{p1}$, $K_{p2}$, $K_{p3}$), silicic acid ($K_{si}$), hydrogen fluoride ($K_f$), and bisulfate ($K_s$)
  - Solubility products of calcite ($K_{spc}$) and aragonite ($K_{spa}$)

- The software package used to calculate the carbonate chemistry, along with its version number, and any associated options must all be mentioned.

- Average reproducibility of the performed measurements (with number of measurements) should be mentioned.

- Finally, it is strongly recommended that the chemistry and biological data are either archived in an on-line database (preferred) or provided along with the paper as supplementary information.

References cited


END