



Journal of Applied Phycology

Editor: M.A. Borowitzka

ISSN: 0921-8971 (print version)

ISSN: 1573-5176 (electronic version)

Journal no. 10811

Springer Nature

7th Congress of the International Society for Applied Phycology – Chiba - Japan

Special Issue - Journal of Applied Phycology

The Journal of Applied Phycology is the official journal of the International Society for Applied Phycology and will, once again, publish a Special Issue of papers presented at the 7th ISAP meeting in Japan.

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The submission of manuscripts is online.

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All papers should be written in English:

1. The paper body should have the usual sections:
Introduction
Materials & methods
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Please define any abbreviations and acronyms the first time they are used.

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- The Journal of Applied Phycology uses only metric (SI) units. This includes the use of the metric tonne (the abbreviation is "t")
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Nomenclature

Taxonomical

- Binary nomenclature: names of genera and higher categories may be used alone. For species name please include the authority the first time the name is used in the text. Please use Algaebase (<http://www.algaebase.org/>) to check the currently accepted names for species.

Chemical and biochemical

- Names of chemical compounds follow the *Chemical Abstracts* (Chemical Abstract Service, Ohio State University, Columbus) and its indexes.
- Biochemical terminology, including abbreviations and symbols, follows the recommendations of the *IUPAC-IUB Commission on Biochemical Nomenclature*.
- For summaries of the abbreviations consult *Journal of Biological Chemistry*, *Archives of Biochemistry and Biophysics* and the *Handbook of Biochemistry* (H.A. Sober, Chemical Rubber Company, Cleveland, latest edition).

Statistics & Error Bars

Please ensure that the statistical methods used are fully and clearly described.

When giving the results of a statistical test ensure that it is clear which test was used. For t-tests state whether the test was one-tailed or two-tailed. For ANOVA results provide the F value together with the degrees of freedom and the *p* value. For *p* values greater than 0.001 it is best to give the actual *p* value.

When indicating the variation in data (i.e. mean ± ????) always indicate clearly what the numbers after the ± indicate (i.e. standard error, standard deviation, range, confidence interval etc) and also indicate what is *n*, the number of independent samples used to calculate these. This is particularly important in Tables and Figures. It is essential that *n* (the number of independent results) is carefully distinguished from the number of technical replicates, which refers to repetition of measurement on one individual in a single condition, or multiple measurements of the same or identical samples.

When giving the results of a statistical test ensure that it is clear which test was used. For t-tests state whether the test was one-tailed or two-tailed. For ANOVA results provide the F value together with the degrees of freedom and the *p* value. For *p*-values greater than 0.001 it is best to give the actual *p*-value.

For reporting statistical tests, give full details of a result in the following way: state the test name, followed by a colon, then the test statistic (degrees of freedom), and the *p*-value associated with the test.

For example:

t-test: $t(49) = 2.10, p = 0.041$;
ANOVA: $F(2,12) = 5.6, p = 0.019$ or $F_{2,12} = 5.6, p = 0.019$
Chi-squared: $\chi^2(22) = 19.34, p = 0.62$
Pearsons Correlation Coefficient: $r(425) = -.58, p < 0.001$
Linear regression: $F(1,23) = 25.87, p = 0.049, R^2 = 0.694$

An excellent paper on the correct use of error bars is: Cumming G, Fidler F, Vaux DL (2007) Error bars in experimental biology. *J Cell Biol* 177: 7-11. <http://jcb.rupress.org/content/177/1/7.full>

Figures and Tables

All figures should be supplied electronically. Authors are requested to upload the electronic versions of figures preferably in either Encapsulated PostScript (EPS) or TIFF format. For bitmapped graphics, TIFF is the preferred format but EPS is also acceptable. The following resolutions are optimal: black-and-white line figures - 600 - 1200 dpi; line figures with some grey or coloured lines - 600 dpi; photographs - 300 dpi; screen dumps - leave as is. Higher resolutions will not improve output quality but will only increase file size, which may cause problems with printing; lower resolutions may compromise output quality

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Authors who wish to publish electronic supplementary material to their article (Excel files, images, audio/video files) are requested to submit this with their manuscript via our online submission system.

- Supply all supplementary material in standard file formats. For text and figures please use PDF and not PowerPoint.
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Refer to the supplementary files as “Online Resource”, e.g., “..as shown in the animation (Online Resource 3)”, “... additional data are given in Online Resource 4”.

Name the files consecutively, e.g. “ESM_3.mpg”, “ESM_4.pdf”.

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In the text, a reference identified by means of an author's name should be followed by the date of the reference in parentheses. When there are more than two authors, only the first author's name should be mentioned, followed by 'et al.' In the event that an author cited has had two or more works published during the same year, the reference, both in the text and in the reference list, should be identified by a lower case letter like 'a' and 'b' after the date to distinguish the works. Multiple citations should be in ascending year order.

Examples: Oswald (1989, p. 204), (Oswald, 1989 a,b), (Oswald, 1989; Richmond et al., 2001), (Hall and Jensen, 1990)

Acknowledgements

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References

References to books, journal articles, articles in collections and conference or workshop proceedings, and technical reports should be listed at the end of the article in alphabetical order. Articles in preparation or articles submitted for publication, unpublished observations, personal communications, etc. should not be included in the reference list but should only be mentioned in the article text (e.g., T. Moore, personal communication). The DOI should only be provided for papers which have not yet been published in printed form (i.e. no journal volume and page numbers are available) or for electronic journals and articles.

Books

Lobban CS, Harrison PJ (1994) *Seaweed Ecology and Physiology*. Cambridge University Press, Cambridge, UK. 366 pp.

Edited Books

Borowitzka MA, Beardall J, Raven JA (eds) (2016) *The physiology of microalgae*. Springer, Cham. 681 pp.

Articles in edited collection

Vonshak A, Torzillo G (2004) Environmental stress physiology. In: Richmond A (ed) *Handbook of microalgal culture: Biotechnology and applied phycology*. Blackwell Science, Oxford, pp 57-62.

Journal Articles

Lüning K, Pang S (2003) Mass cultivation of seaweeds: current aspects and approaches. *J Appl Phycol* 15: 115-119.

Li J, Xue L, Yan H, Liu H, Lian J (2008) Inducible EGFP expression under the control of the nitrate reductase gene promoter in transgenic *Dunaliella salina*. *J Appl Phycol* 20: 137-146.

Wayama M, Ota S, Matsuura H, Nango N, Hirata A, Kawano S (2013) Three-dimensional ultrastructural study of oil and astaxanthin accumulation during encystment in the green alga *Haematococcus pluvialis*. *PLoS One* 8:e53618. doi:10.1371/journal.pone.0053618

The correct abbreviations for journal names can be found at
http://images.webofknowledge.com/WOK46/help/WOS/A_abrvjt.html

Technical reports or dissertations

Lawlor, HJ (1989) Tissue culture of Australian brown seaweeds and an assessment of their tocopherol content. PhD Thesis, Murdoch University, Perth, Australia.

Sheehan J, Dunahay T, Benemann J, Roessler P (1998) A look back at the U.S. Department of Energy's Aquatic Species Program - Biodiesel from algae. National Renewable Energy Laboratory, Golden, Colorado. NREL/TP-580-24190 pp 1-328

Internet publications

These should be avoided, however if essential they should include the author's name; year of publication; Internet address; date of access, in the order given in the example below.

Rotblat J Sir (2000) Fifty Pugwash conferences: a tribute to Eugene Rabinowitch. Retrieved from <http://www.pugwash.org/reports/pac/pac256/rotblat.htm> on 22 June 2014.

Patents or patent applications

Boyd MR, 2000. Method of using cyanovirins. USA Patent 6,015,867 (18 January 2000).

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SAMPLE ARTICLES

Please look at the sample articles below for examples of style, figures, statistical reporting etc:

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[Kuczynska P, Jemiola-Rzeminska M \(2017\) Isolation and purification of all-trans diadinoxanthin and all-trans diatoxanthin from diatom *Phaeodactylum tricornutum*. J Appl Phycol 29 \(1\):79-87](#)

[Benvenuti G, Bosma R, Ji F, Lamers P, Barbosa MJ, Wijffels RH \(2016\) Batch and semi-continuous microalgal TAG production in lab-scale and outdoor photobioreactors. J Appl Phycol 28 \(6\):3167-3177](#)

[Bruhn A, Janicek T, Manns D, Nielsen MM, Balsby TJS, Meyer AS, Rasmussen MB, Hou X, Saake B, Göke C, Bjerre AB \(2017\) Crude fucoidan content in two North Atlantic kelp species, *Saccharina latissima* and *Laminaria digitata*—seasonal variation and impact of environmental factors. J Appl Phycol 29 \(6\):3121-3137](#)