



## PLANT ECOLOGY AND EVOLUTION AUTHOR GUIDELINES

### SCOPE OF THE JOURNAL

*Plant Ecology and Evolution* is an international journal devoted to ecology, phylogenetics and systematics of all 'plant' groups in the traditional sense (including algae, cyanobacteria, fungi, myxomycetes), also covering related fields such as comparative and developmental morphology, conservation biology, evolution, phytogeography, pollen and spores, population biology, and vegetation studies. Submissions concerning tropical and subtropical Africa are particularly welcome.

### PUBLISHERS

The journal is a continuation of *Belgian Journal of Botany*, incorporating *Systematics and Geography of Plants*. It is published by [Meise Botanic Garden](#) and the [Royal Botanical Society of Belgium](#).

### TYPES OF MANUSCRIPTS

The journal publishes original research articles, checklists, short communications, reviews and book reviews. Manuscripts may be of any length, but must be clearly and concisely written. A **regular paper** reports results of a substantial, completed and original work. A **checklist** presents and critically discusses a list of taxa in a given frame (e.g. floristic observations in a defined geographical area, taxa from a selected group...). A **short communication** is a brief report of a small experiment, taxonomic proposal, or unexplained observation. A **review** presents a novel and critical appraisal of a specific topic.

### LANGUAGE

The journal publishes contributions in English (British spelling – Oxford English Dictionary) or French. A native speaker should check manuscripts written by non-native speakers prior to submission.

### SUBMISSION

When submitting to *Plant Ecology and Evolution*, authors agree to the journal's policies on [Copyright and Open Access](#), [peer review process](#), [publication ethics](#) and [publication fees](#). Authors also agree to the [Privacy Statement](#) of the journal.

Authors submit their manuscript electronically by sending an email to the editorial office, [plecevo@meisebotanicgarden.be](mailto:plecevo@meisebotanicgarden.be). The message should include the following attached files: (1) a Cover Letter; (2) a Manuscript Text file with the entire text and figures captions; (3) a pdf wherein all figures and tables are assembled, with their captions, (4) additional separate files for figures and tables; and eventually (5) supplementary files. Please check the instructions below to prepare your files prior to submissions. All file types can be submitted as supplementary files (PDF, nexus, Excel, video files...). They will be reviewed along with the core paper, but the author is responsible for the layout of supplementary files. Authors of phylogenetic papers are encouraged to submit the aligned matrices as supplementary files.

Upon submission, **the corresponding author should put all co-authors in copy of the message.**

Authors should use the guidelines and examples below to prepare the submission files. There are no charges to submit and/or publish in *Plant Ecology and Evolution*, and the co-publishers support all costs. Therefore, to limit these costs, **authors are expected to have their papers well checked for content quality, format**



**conformity and correctness** in presentation of text and illustrations. **A manuscript not conform to the guidelines will be returned to the corresponding author until adequate files are provided.**

In case the files are too large to be sent as attachments, the corresponding author should contact the editorial office for an alternative way to access the files.

The editorial office acknowledges receipt of the submission by email within five working days.

#### EDITORIAL PROCESS

All contributions are subject to normal reviewing processes. The reviewing model is single-blind peer review: reviewers are aware of the authors' identities, while authors are not informed of the reviewers' identities. The peer-review process is detailed [here](#).

The final decision on acceptance or rejection is made by the editor in chief, upon recommendation of the communicating editor. The editorial office will communicate this final decision by email to the corresponding author. Reviewers who participated in the process will be informed separately of the final decision.

#### PUBLICATION PROCESS

Once a manuscript is accepted, all correspondence goes through the editorial office (plecevo@meisebotanicgarden.be). Authors are required to respond to all technical remarks from the editorial office (format, style, file types...), and to fill in a publication agreement.

The copy editor prepares the paper for publication and ensures that style and form are consistent. Depending on the number of manuscripts already 'in press' and on the manuscript's length, the delay to receive proofs can vary.

Proofs must be returned to the editorial office **within five working days**.

#### COVER PHOTOGRAPHS

Authors are invited to submit eye-catching photographs related to the submission for possible inclusion on the cover of the issue in which their paper will appear. The technical requirements are similar to those for manuscript photographs (see checklist). The image should be sent as a TIFF file of 450 dpi, size approx. 15 × 10 cm.

#### CHARGES

Authors pay no fees or page charges. Colour photographs and graphics are accepted without charge when their use enhances scientific content or clarity. The corresponding author receives a free complimentary copy of the issue in which the paper is published and a PDF (portable document format) file of the paper.

The postal address used to send the complimentary copy is the first institutional address of the corresponding author mentioned in the manuscript. If the corresponding author wishes to receive the complimentary copy at another address, he/she must inform the editorial office before proofs' approval.



## TECHNICAL REQUIREMENTS OF MANUSCRIPT

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### PREPARATION OF FILES

The following documents must be provided as **separate** files: Cover letter; Text file; each table; each figure; (if available, each supplementary file). Authors must also provide a pdf assembling: all tables and their captions + all figures and their captions (without the manuscript's core text).

#### Files types and extensions

- Cover letter, Manuscript Text file, Tables files: MS Word format (extension .doc or .docx) or Rich Text Format (extension .rtf).
- Figures files: image files; extensions allowed: .svg, .ai, .pdf (saved in high-quality), .tif, .jpg, .psd, .png. Check the figure requirements below for full technical instructions.
- Assemblage of all tables, figures and their captions: .pdf
- Supplementary files: most extensions allowed (.doc, .tif, .xls, .fas, .mov, .avi...).

#### Naming the files

Each file is named using the first author's initials, followed by underscore (\_) and by the type of file and eventually number, for example: "AP\_cover.doc", "AP\_text.doc", "AP\_table1.doc", "AP\_fig1.tif", "AP\_fig2.jpg", "AP\_supp\_file1.xls", "AP\_tables\_figs.pdf".

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## COVER LETTER

The corresponding author provides a Cover Letter in the following cases:

- submission or resubmission of a manuscript
- during the peer-review process, when sending a revised version of the manuscript.

### First submission

Authors are requested to use the [MS Word Cover Letter template](#) available on the website. **By completing the form, the corresponding author engages his responsibility and the responsibility of all co-authors. If the form is not complete (e.g. some boxes unchecked), the manuscript will be rejected without review.** If you cannot use MS Word, please contact the [editorial office](#) for an alternative Cover Letter form.

### Resubmission

Authors are requested to use the same [Cover Letter template](#) available on the website. In the field “Description of the manuscript”, the corresponding author indicates the manuscript reference number, as well as the name of the communicating editor of the first submission. Authors should also use this field to describe which major changes were applied to the manuscript and how the authors addressed the reviewer’s comments after the previous submission was rejected.

### Revised version

Authors are requested to prepare a Cover Letter for a revised version. This letter is in MS Word format (file extension .doc or .docx) or in Rich Text Format (file extension .rtf), and contains:

- contact details of corresponding author, title and authorship of the paper
- a detailed description of all changes made in the manuscript, as well as answers to all comments and suggestions from the communicating editor and/or from the reviewers. When suggestions have not been followed, the corresponding author must provide detailed explanations about where and why changes were not carried out.

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## MANUSCRIPT TEXT FILE

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### General requirements

The text is formatted in Times New Roman, 12 pt, single-spaced throughout, with 25 mm margins. All pages and lines are numbered consecutively.

The Text File includes tables captions and figures captions (at the end of the manuscript) but excludes tables and figures – these should be submitted as separate files (see appropriate sections below).

### First page

**Running title:** maximum 75 characters, spaces included.

The **full title** is informative and concise. Authorships of taxa names are omitted in the title. A higher rank (family, order...) is indicated if the title includes generic or infrageneric names of plants. Title words are not capitalized (except proper nouns and supra-generic names of taxa). Hence: “Development and multiplexing of microsatellite markers using pyrosequencing in a tetraploid plant, *Vaccinium uliginosum* (Ericaceae)”, and not “Development and Multiplexing of Microsatellite Markers Using Pyrosequencing in a Tetraploid Plant, *Vaccinium uliginosum* (Ericaceae)”

The **full names of all co-authors** are listed in the correct order. The full name consists of: first name, eventually initial(s) of middle name(s), and surname. When all authors are not affiliated with the same institution, each author’s name is followed by an identifying superscript number (<sup>1,2,3...</sup>) associated with the appropriate institutional address. The corresponding author is identified with a superscript asterisk (\*), inserted just after the superscript number(s).

Each **institutional address(es)** of each author is preceded by the appropriate superscript number.

Mention “Corresponding author:” followed by the **e-mail address of the corresponding author**. There can be only one e-mail address, and no phone number.

### Second page

**Structured abstract** not exceeding 300 words. Each paragraph is introduced with an appropriate heading (e.g. “Background and aims”, “Material and methods”, “Key results”, “Conclusion”). The abstract should read independently from the manuscript, i.e. include no bibliographic references and no unexplained abbreviations.

List of maximum ten **keywords**. Keywords ensure accurate indexing by search engines and databases, thus are important for discoverability of your paper.

For papers in French: an English translation of the full title and the abstract.

### Text structure

**IMRAD structure** preferred (INTRODUCTION, MATERIAL AND METHODS, RESULTS, and DISCUSSION). This structure is completed by the following sections:

- if available: **SUPPLEMENTARY FILES** section: paragraph with short descriptive caption for each supplementary file



- **ACKNOWLEDGEMENTS:** use this section to acknowledge persons (or organisations) who provided: facilities, funding (include grant numbers), permits (include permit numbers), logistic support, data sharing, scientific guidance...
- **REFERENCES** section: list of all bibliographic references cited in the manuscript files.

**Results** are presented in a concise way and data are not repeated in both graphical and tabular form.

The **Discussion** section avoids extensive repetition of the Results.

For most manuscripts, no more than three levels of headings are used. For specific headings in taxonomic manuscripts, please check the [appropriate section](#) below.

- **Main headings** are in uppercase and centred (e.g. MATERIAL AND METHODS).
- **Second level headings** are in bold, aligned to the left. Only the first word is capitalized (e.g. **Molecular analyses** and not **Molecular Analyses**).
- **Third level headings** are in bold (only first word capitalized), directly followed by a n-dash (–) and by the text (e.g. **Morphological characters** – Corolla...).

All **tables and figures** are cited in the text, and numbered consecutively. First figure is "fig. 1", second figure is "fig. 2", etc.

When starting a sentence, use 'Figure', 'Figures', 'Table' or 'Tables'; otherwise, use 'fig.', 'figs', 'table' or 'tables'. Some examples:

- "Figure 1 shows..."
- "The localities are shown on fig. 2..."
- "The populations (tables 1 & 2)..."
- "The petals (figs 4A, 5E) and the stipules (figs 4B–C, 5A, 6B)..."

A figure composed of several elements (A, B, C...) remains in singular form, for example

- "Bayesian analysis (fig. 2A, B)..." [...] "The localities (see fig. 3A, D, E–G)..."

## Style consistency

Font styles (bold, italic, underline) are not used for emphasis, but reserved to specific usages.

**Boldface** is only used in second and third level headings, for introductory terms of figures and tables captions, and to stress some taxonomic acts such as new synonymy, lectotypification (see [Taxonomic Treatment section](#)).

*Italic* is only used for generic/infrageneric names and in specimen citations (see [Taxonomic Treatment section](#)); for Latin expressions in full (*in situ*), for gene abbreviations, for standard expressions and certain statistical symbols, and for journal titles (References section).

Underline is only used to indicate the major organs in a plant description (see [Taxonomic Treatment section](#)).

**Numerals:** numbers up to and including ten are spelled out, except when they are measurements (6 mm); all other numbers are written in figures (24, 53...), except at the beginning of a sentence ("Thirty-two plots..."). Numerals are followed by a single space, then by the unit (24 cm).

**Dates format:** day, month abbreviation, year: "10 Jan. 2016"; "from 14 Jun. to 28 Jul. 2013"; "14 Jun.–28 Jul. 2013"; month, year: "data collected in September 2014".

**Use of n-dash:**

- for all ranges (measurements, elevation range, page number range...), without spaces around, e.g. "2.5–5 mm", "150–200 m a.s.l.", "10–14 stamens"
- for an enclosed phrase – such as this one – within a sentence (note the spaces around n-dashes)



- **n-dash should not be used if you introduce the range with a preposition**: do not write “from 10–15 cm”, “between 10–15 cm” but write “from 10 to 15 cm”, “between 10 and 15 cm”.

**Geographical coordinates**: preferred format 49°00′51.9″N, 13°34′38.4″E (degrees minutes seconds). Use “prime” character for minutes, and “double prime” character for second, no space between each element, and a comma (followed by a space) to separate latitude and longitude. Alternative format: decimal degrees.

**Footnotes** should be avoided.

**Standard symbols** are used for:

- units of measurements: SI units and SI-derived units symbols are used throughout the manuscript, as well as some non-SI units (s, min, h, d, ha...)
- chemical elements (e.g. in molecular formulas such as NaCl, O<sub>2</sub>).

**Abbreviations or acronyms** are used for

- molecular terminology (e.g. bp, SDS)
- common statistical terms (e.g. ANOVA, PCA, *t*-test, *R*<sup>2</sup>)
- names of chemicals (ATP, MES, MOPS, HEPES)
- procedures (e.g. PCR, PAGE, RFLP)
- herbaria (e.g. P, MO, LBV: see [Index Herbariorum](#)).

## Material and methods section, phylogeny

When **specialized equipment** is mentioned in Material and methods, details of the model and manufacturer are given.

**Software** should be cited as true bibliographic reference, e.g. as a website reference. If the software was downloaded at an earlier time, authors should specify it in the text. For example, in the text “FigTree, version 1.4.4 (Rambaut 2018, downloaded on 1 Dec. 2018)” and in the References section “[accessed 21 Feb. 2019]” when the website url was verified later. See the example in the References section.

**Databases and data sets** used as sources should be cited as true bibliographic reference. For example, cite databases such as [Index Herbariorum](#) for herbarium acronyms, [The Plant List](#), [IPNI](#), [Tropicos](#), [AlgaeBase](#) as sources to verify name information, [GBIF](#) as source of specimen data sets, etc.

**Novel sequences** for proteins or nucleotides are deposited within one of the main databases (e.g. [European Nucleotide Archive](#), [GenBank](#)), and accession numbers are included in the paper.

**Sequence matrices** are preferably provided as supplementary file(s); this is mandatory when alignment information is critical to the message of the paper.

**Phylogenetic trees** and alignments: independently from the submission files, authors are strongly encouraged to submit their data to [TreeBASE](#) (no charges to submit data) or [Dryad](#) (data publishing charge of \$120).

## Scientific names of taxa

Taxonomic nomenclature follows the rules of the most recent edition of the [International Code of Nomenclature for algae, fungi and plants](#) (Shenzhen Code).

**Scientific names** are written out in full (*Genus species*) in the abstract and again in the core text at first mention of every taxon. The genus name in full is only needed for the first species in a list within the same genus (e.g. *Lolium annuum*, *L. arenarium*). Only generic and infrageneric names are italicized. **Authorship**



(e.g. L., Benth., H.P.Linder) is added at first mention of the taxon in the core text and in the taxonomic treatment.

**Citation of authorships in non-taxonomic papers:**

- the author can omit authorships in the core text if they are available elsewhere, e.g. in a table or in a supplementary file
- authorships may also be omitted if the author mentions in the Material and methods section a taxonomic work (bibliographic reference) followed.

**Authorship** follows the standard abbreviations of author's names available on International Plant Names Index (<http://www.ipni.org/ipni/authorsearchpage.do>), without space after first name/middle name initials (e.g. H.P.Linder, not H.P. Linder).

**Additional format requirements for taxonomic treatments** are available below ([Taxonomic Treatment section](#)).

**References in the text**

All references cited in the text are provided in the References section and vice versa; this rule applies also to the literature cited in the frame of a taxonomic treatment.

Use the following format for citations in the text:

- single author: Fisher (2012), (Fisher 2012); mention of a page number: Fisher (2012: 487), (Fisher 2012: 487)
- two co-authors: Fisher & Perry (2009), (Fisher & Perry 2009)
- three or more co-authors: Fisher et al. (2012), (Fisher et al. 2012).

Multiple references are listed in chronological order and separated by semicolons. Multiple references sharing the same authorship are grouped, years separated with commas, and inserted in the list based on the oldest reference: (Cremer 1997; Fisher 2012, 2014; Blackwell et al. 2013, 2017; Adams et al. 2014, Wright & Baker 2017).

Letters a, b, c... are added to date of papers with identical authorship and year (Fisher 2011a, 2011b; Adams & Wright 2014a, 2014b; Williams et al. 2016a, 2016b, 2016c); see the References section rules for applying letters.

Reference to a work in press is only used when the work has been accepted for publication in a named journal/book/series; otherwise, the terms 'unpubl. res.' (unpublished results), 'pers. obs.' (personal observations) or 'pers. comm.' (personal communication) are used, and the name and affiliation (institution at least) of the person is given (e.g. S. Fisher, University of Oxford, unpubl. res.; T. Baker, Universiteit Leiden, pers. comm.)

References to grey literature (e.g. reports) are, as far as possible, avoided.

**References section**

References are ordered alphabetically, based on the surname of the first or sole author. If two different first authors share the same surname, the order is based on the first name initial (and subsequently middle name initial) of each author: first "Miller J.", then "Miller P.", then "Miller P.W.".

References sharing the same first author surname and initial are arranged according to the following order: 1° single-authored papers are listed first and arranged chronologically (from the oldest to the newest year of publication)

2° two-authored papers are then listed, arranged alphabetically based on surname of second author; when papers share the same authorship in this list, they are arranged chronologically





3°) three-or-more-authored papers are then listed, arranged chronologically.

When three-or-more-authored papers share the same year of publication, they are grouped alphabetically according to surname of second author, surname of third author, etc. In such group, the first reference is identified by letter “a”, the second reference by “b”, etc.

Example of order:

Adams B. (2015)  
Adams B. (2018)  
Adams B., Sellowe C. (2017)  
Adams B., Sellowe C. (2019)  
Adams B., Wright J.H. (2014a)  
Adams B., Wright J.H. (2014b)  
Adams B., Wright J.H. (2016)  
Adams B., Smith R., Harley W. (2016)  
Blackwell P.T., Bailey F. (2015)  
Blackwell P.T., Ashworth I.S., Williams L.S. (2017a)  
Blackwell P.T., Bailey F., Smith R. (2017b)  
Blackwell P.T., Rogers L.M., Bailey F. (2013)  
Cremer (1997)  
Fisher M. (2012)  
Fisher M. (2014)  
Fisher M., Maxwell D. (2012)  
Fisher M., Maxwell D. (2016)  
Fisher M., Perry K.A. (2009)  
Fisher M., Cornel D., Templeton R.W. (2012)  
Williams J., Johnson R.P., Wright J.H. (2016a)  
Williams J., Perry K.A., Bailey F. (2016b)  
Williams J., Perry K.A., Johnson R.P. (2016c)  
Wright J.H., Baker (2017)

**Authors are required to provide, if available, the Digital Object Identifiers (DOIs)** when they list their references. The DOI (beginning with “10.”) is generally available on the main webpage of the paper, of the book or of the book’s chapter. Authors can also use the CrossRef’s free DOI lookup tool (<http://www.crossref.org/guestquery/>). The DOI is introduced with the url starter <https://doi.org/>

**Words in article titles are not capitalized**, except the first word (or word after a colon), proper nouns, institutions, geographical locations, official denominations and suprageneric names of taxa.

**Generic/infrageneric names of taxa and journal titles are italicized.**

**Journal titles** are written in full (no abbreviations). The volume number is given, and if available, the issue number.

For **book and book chapters**, the following information is given at the end of the citation, before the DOI: City, Publisher.

For **websites**, the url is followed by the date when the resource was last accessed by the authors.

References conform to one of the following styles according to the type of publication:

- **paper without Digital Object Identifier (DOI):**



Carlini-Garcia L.A., van den Berg C., Martins O.S. (2002) A morphometric analysis of floral characters in *Miltonia spectabilis* and *Miltonia spectabilis* var. *moreliana* (Maxillarieae: Oncidiinae). *Lindleyana* 17(3): 122–129.

**- paper with DOI:**

Baker A.J.M., Dalby D.H. (1980) Morphological variation between some isolated populations of *Silene maritima* With. in the British Isles with particular reference to inland populations on metalliferous soils. *New Phytologist* 84(1): 123–138. <https://doi.org/10.1111/j.1469-8137.1980.tb00755.x>

Felsenstein J. (1985) Confidence limits on phylogenies: an approach using the bootstrap. *Evolution* 39(4): 783–791. <https://doi.org/10.2307/2408678>

Dančák M., Hroneš M., Sochor M., Sochorová Z. (2018) *Thismia kelabitiana* (Thismiaceae), a new unique Fairy Lantern from Borneo potentially threatened by commercial logging. *PLoS ONE* 13(10): e0203443. <https://doi.org/10.1371/journal.pone.0203443>

White F. (1979) The Guineo-Congolian Region and its relationship to other phytochoria. *Bulletin du Jardin Botanique National de Belgique* 49: 11–55. <https://doi.org/10.2307/3667815>

**- thesis:**

Sánchez M. (2012) Conservation genetics and biogeography of the Caribbean pine (*Pinus caribaea* var. *bahamensis*) in the Bahamas archipelago. PhD thesis, Birkbeck University of London, UK.

**- chapter in book:**

Arcand N.N., Ranker T.A. (2008) Conservation biology. In: Ranker T.A., Haufler C.H. (eds) *The biology and evolution of ferns and lycophytes*: 257–283. New York, Cambridge University Press. <https://doi.org/10.1017/CBO9780511541827.011>

Barrett S.C.H., Pannell J.R. (1999) Metapopulation dynamics and mating-system evolution in plants. In: Hollingworth P.M., Bateman R.M., Gornall R.J. (eds) *Molecular systematics and plant evolution*: 74–100. London, Taylor & Francis.

**- book:**

Manly B.F.J. (1994) *Multivariate statistical methods, a primer*. 2nd Edition. London, Chapman and Hall.

Lestrel P.E. (1997) *Fourier descriptors and their applications in biology*. Cambridge, Cambridge University Press. <https://doi.org/10.1017/CBO9780511529870>

**- book belonging to a series, a flora:**

Hallé N. (1961) Sterculiaceae. In: Aubréville A. (ed.) *Flore du Gabon* vol. 2. Paris, Muséum national d'Histoire naturelle.

**- book chapter belonging to a series, a flora:**

Sales F. (2005) *Vitex*. In: Pope E.V., Martins E.S. (eds) *Flora Zambesiaca* vol. 8(7): 73–92. Kew, Royal Botanic Gardens.

**- website or online document:**

Thiers B. (continuously updated) Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden's Virtual Herbarium. Available at <http://sweetgum.nybg.org/ih/> [accessed 26 Aug. 2018].

IUCN (2017) Guidelines for using the IUCN Red List Categories and Criteria. Version 13. Prepared by the Standards and Petitions Sub-Committee. Available at <https://cmsdocs.s3.amazonaws.com/RedListGuidelines.pdf> [accessed 21 Feb. 2019].

**- software:**

Swofford D.L. (2000) PAUP\* Phylogenetic analysis using parsimony (\* and other methods). Version 4. Sunderland, Sinauer Associates.

Rambaut A. (2018) FigTree. Version 1.4.4. Available at <http://tree.bio.ed.ac.uk/software/figtree/> [accessed 21 Feb. 2019].

**- software documentation:**

ter Braak C.J.F., Šmilauer P. (2002) CANOCO reference manual and user's guide to CANOCO for Windows: software for Canonical Community Ordination. Version 4.5. Ithaca, NY, Microcomputer Power.

## Figure captions

A figure composed of several smaller subfigures is treated as a single figure; each subfigure is labelled with a capital letter (A, B, C... and after Z: AA, AB, AC...). Description of each subfigure is introduced with the capital letter (in bold) followed by a full-stop (not bold). Boldface is not used for subsequent information (e.g. repetition of capital letter for scale bar information).

In figure captions, scientific names of plants are not followed by authorship.

Examples of figure captions:

**Figure 1** – *Amaioua longipedicellata*. **A**. Branchlet with male inflorescence. **B**. Branchlet with fasciculate female inflorescence. **C**. Fasciculate infructescence with immature fruits. **D**. trichotomous infructescence with mature fruits. **E**. Male flower in anthesis. **F**. Dissected male flower in anthesis. **G**. Female flower in anthesis. **H**. Dissected female flower in anthesis. **A**, **C** from *Jardim & Delprete 6801* (CEPEC). **B**, **E**, **F** from *Jardim & Delprete 6802* (CEPEC). **D** from photograph by J. Jardim (see fig. 2F). **G**, **H** from *Jardim 5447* (CEPEC). Illustration by Piero Delprete.

**Figure 2** – Morphological and anatomical characters of *Synarthonia inconspicua*. **A–B**. Thallus with ascomata. **C**. Section through ascoma. **D**. ascus. **E**. ascospores. **A–E** from *Van den Broeck 6325* (BR). Scale bars: **A** = 500 µm; **B** = 250 µm; **C** = 50 µm; **D–E** = 10 µm.

**Figure 4** – Gradation of differential edaphic variables (mean values) for the four ecotypes (G1, G2, G3 and G4) of *Limonium* spp. **A**. Sulphates (SO<sub>4</sub><sup>2-</sup> meq/l). **B**. Sand (%). **C**. Carbonates (CO<sub>3</sub><sup>2-</sup> %).

Alternatively, the capital letters are in bold between parentheses:

**Figure 1** – Relationship between basal stem diameter (**A**) or flowering time (**B**) and number of seed pods for 2011 (red), 2012 (green), and 2013 (blue). Regression lines represent total linear selection.

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## PDF WITH FIGURES, TABLES AND THEIR CAPTIONS

The pdf should contain all figures and their captions, all tables and their captions.

One figure per page, caption below.

Each table must start on a new page of the pdf.

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## TABLE FILES

Each table is a separate file, and is numbered according to its first citation in the text.

Each table has a complete caption at the top of the first page including the explanations of all abbreviations used in the table. The caption should be divided in two parts: (1) “**Table + table number**” followed by n-dash and a concise descriptive headline (in bold); (2) an explanatory part (in regular font), as in the following example:

**Table 3 – Summarized results of two-factor ANOVA testing the effect of dune climate (Mediterranean-oceanic, M-subtropical and M-subdesert) and dune sector (fixed dunes vs. mobile and semi-mobile dunes) on soil nutrient content.**

For each analysis, F-values are shown. LS, leaf size; SLA, specific leaf area; C, leaf [C]; N, leaf [N]; Ca, leaf [Ca]; K, leaf [K]; Mg, leaf [Mg]; P, leaf [P]; Fe, leaf [Fe]; Mn, leaf [Mn]; n.s. (not significant)  $P > 0.10$ ; ·  $P \leq 0.10$ ; \*  $P \leq 0.05$ ; \*\*  $P \leq 0.01$ ; \*\*\*  $P \leq 0.001$ .

Text in table cells is typed using Times New Roman font, 9 pt. Capitals are avoided within table cells (exceptions: first letter of the heading of a row or a column, taxa names requiring a capital letter, such as family, genus, and some abbreviations, e.g. pH).

Please note that our journal does not use landscape format for the publication of papers. Tables in landscape format will be rotated 90 degrees counter-clockwise to fit a portrait page.

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## FIGURE FILES

Each figure is a separate file, and is numbered according to its first citation in the text.

All visual data (line diagrams, drawings, maps, graphs, photographs, plates...) are treated as figures.

Figure captions are provided separately (see Text File section, Figure captions).

### Technical requirements

Figures are provided as high-quality files.

When possible (some graphs, simple line drawings), supply **vector-based files**. These files maintain high print-quality resolution at any size. Vector files are particularly appropriate for some data, such as phylogenetic trees. We can work with the following extensions: .svg, .ai, .pdf.

For **raster images** (photographs, complex line drawings, some maps...), supply the files at the appropriate dimensions to avoid image distortion. We can work with the following extensions: .tif, .jpg, .psd, .png

**Figure size** fits either single column size (85 mm wide) or double column size (up to 177 mm wide). Figure height is maximum 235 mm (preferably shorter to leave some space for the figure caption).

**Line drawings and graphs** are in black and white colour mode (bitmap) with a resolution of 1200 dpi.

**Greyscale figures** (e.g. photograph, map) are in greyscale colour mode with a resolution of minimum 450 dpi.

**Colour images** (RGB colour mode) are used where they enhance significantly clarity of the scientific information. They are of the same quality as the greyscale figures.

Electron and light micrographs have scale bars.

### Figure formats

Formats accepted: .svg, .ai, .pdf (saved in high-quality), .tif, .jpg, .psd, .png

**We cannot accept files in other formats**; in particular, we cannot accept:

- MS PowerPoint files
- figures embedded in MS Word files
- figures prepared in PowerPoint or Word formats that have been converted to other, acceptable formats.

### Figure composition and lettering

Related graphics are assembled into a single figure (composition) whenever possible. Each part (subfigure) of the composed figure is labelled A, B, C... and not treated as a separate figure. Labels are preferably placed in the upper left or lower left corner of the subfigure. Letters are in Arial or Calibri font, at the appropriate font size (depending on the figure height and width). White parting lines (2 mm wide) can be used to separate subfigures.

Titles or labels not absolutely necessary for understanding the figure should be removed and explained in the caption.

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## SUPPLEMENTARY FILES

Additional data (not necessary to the basic understanding of the paper) or supporting data are supplied as separate supplementary file(s).

The number of supplementary files is limited to six per paper. Currently *Plant Ecology and Evolution* provides only DOI for papers, but not for supplementary files. Authors can decide to publish their supplementary files on a dedicated platform, e.g. [Zenodo](#), and mention in their manuscript the Zenodo DOI links to access these additional files.

For a text file, a pdf with images, an Excel spreadsheet: the caption of a supplementary file must include the title of the manuscript and name(s) of its author(s), e.g. "Supplementary file 1 related to "*title of the manuscript*" (by *names of authors*)".

For an image, a software file (e.g. nexus), a database file (e.g. csv), embed the title of the manuscript (and if possible authors names) in the metadata of the file ("properties" or "file info").

Authors are free to group several items in one single supplementary file (e.g. several maps of a given area), but should provide a clear caption. The first part of the caption should be a general and short description for all items present in the supplementary file. The second part of the caption describes each item, and should be formatted like captions for composed figures (using letters A, B, C...).

The layout of the supplementary files is publication-ready.

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## TAXONOMIC TREATMENT

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### General requirements

**Scientific names and their authorships** follow the requirements specified in the Manuscript Text file instructions above.

**Index Herbariorum acronyms** are used for designation of herbaria.

**Nomenclatural types** are deposited in a public herbarium.

All references cited in the taxonomic treatment (valid publication of a basionym, of a synonym...) are included in the Reference section of the manuscript.

A list of taxonomic novelties present in the manuscript is provided at the end of the Text file.

### Requirements for all taxonomic novelties (isolated/in frame of revision)

The following elements are required for any taxonomic novelty:

- an **illustration** (figure) clearly showing the diagnostic characters
- a **comparison with related** (or sympatric, or similar) **taxa** in a dichotomous key or table
- a **discussion** of the morphological characteristics, ecology, geography, or reproductive biology... that are the basis for its distinctiveness
- for names of new taxa, new combinations, names at new ranks, or replacement names designating **organisms treated as fungi** (including fossil fungi and lichen-forming fungi), **authors are required to cite in the protologue the identifier** issued by a recognized repository for the name (e.g. [Mycobank](#), [Index Fungorum](#), [Fungal names](#)).

### Specific requirements for isolated taxonomic novelties

The journal accepts to publish isolated taxonomic novelties, e.g. a new species described outside the framework of a wider revision or monograph. Papers should be written in a way that they are attractive and interesting for a wider international audience. Such papers are mostly considered as short communications.

Manuscripts of this kind should include:

- a good **introduction** setting out the context of the higher taxon to which the novelty belongs, and making reference to recent taxonomic literature on the group – other taxonomic novelties recently published, etc.
- a sound **discussion** of the arguments for recognition of the new taxon; illustrations of the novelty
- some **discussion about the area** where the new species was found (climate, soil type, levels of endemism, status of collecting efforts in the region, other new species recently described from the area, conservation status of the area...)
- preferably, a **conservation assessment (IUCN)**, or at least general statements on conservation.

For an example, the following paper can be downloaded: Darbyshire I. (2011) *Barleria superata* (Acanthaceae): a new suffruticose herb endemic to Burundi. *Plant Ecology and Evolution* 144: 367–371. <https://doi.org/10.5091/plecevo.2011.445>



## Abbreviations

Following the recommendation 32A of the [International Code of Nomenclature for algae, fungi and plants](#), nomenclatural novelties should be introduced with the appropriate rank abbreviation, followed by the abbreviation 'nov.' (for *novus*, -a, -um).

Authors are required to use the following abbreviations in their treatment:

- family = fam.
- genus = gen.
- species = sp. (plural spp.)
- subspecies = subsp.
- variety = var.
- forma = f.
- synonym = syn.
- illegitimate name = nom. illegit.
- invalid name = nom. invalid.
- new combination = comb. nov.
- name at new rank = stat. nov.
- nomen nudum = nom. nud.

## Boldface

For emphasis, some terms are in bold in the taxonomic treatment:

- Introduction of a novelty: **sp. nov.**, **gen. nov.**, **var. nov.**, **subsp. nov.**, etc.
- Introduction of a new synonym: **syn. nov.**
- Introduction of a new combination, of a name at new rank: **comb. nov.**, **stat. nov.**
- Introduction of illegitimate or invalid name: **nom. illegit.**, **nom. invalid.**
- Designation of a lectotype, neotype, or epitype in the manuscript: **designated here.**

## Treatment structure: novelties

Descriptions of new taxa include the following elements in the following order. Elements in *italic* are optional, depending on the information available. **Third level headings** are used to introduced all elements from 3 to 14 (e.g. "**Type** – ...").

In accordance with article 38.1 of the [International Code of Nomenclature for algae, fungi and plants](#), authors must provide either a diagnosis or a description for valid publication of the name, and are encouraged to provide both.

1° **Name of the novelty** (in bold italic), followed by the authorship, a comma, then the appropriate rank (in bold) and the abbreviation 'nov.' (in bold); e.g.

*Synsepalum ntimii* W.D.Hawthorne, **sp. nov.**

2° **Citation of figures and tables** related to this taxon, e.g.

Figs 1, 2A, 3I–J, 4, tables 1, 2

3° **Diagnosis** in Latin or English. The diagnosis is mandatory only if a full description is not provided. References to the illustrations can be added in the diagnosis.

4° **Type material citation.** See the instructions for specimen citations.

5° **Full description of the new taxon**, with major organs underlined. References to the illustrations can be added in the description. A diagnosis must be present if authors choose not to provide a full description.





6°) *Distribution*

7°) *Chorology*

8°) *Habitat and ecology*

9°) *Phenology*

10°) *Vernacular names*

11°) *Uses*

12°) *Etymology*

13°) *IUCN conservation assessment*. Recommended in the case of isolated novelty.

14°) *Additional material examined*

15°) *Taxonomical notes or remarks*.

### Treatment structure: synonymy

For nomenclatural matters, homotypic synonyms are kept in one paragraph, followed by the type citation, and each heterotypic synonym is mentioned in a separate paragraph, followed by its own type citation. Heterotypic synonyms are listed in chronological order of publication. N-dashes (–) are used as separators within a paragraph.

***Leplaea mayombensis*** (Pellegr.) Staner

*Guarea mayombensis* Pellegr. (Pellegrin 1921: 449, 1924: 54, 1939: 152); Pennington & Styles (1975: 495); Styles & White (1991: 43). – *Leplaea mayombensis* (Pellegr.) Staner (Staner 1941: 204); Staner & Gilbert (1958: 212). Type – Gabon, Tchibanga, 18 Jan. 1915, *Le Testu 1990* (holotype: P; isotypes: BM, BR, E, K, WAG).

*Leplaea coalescens* Vermeesen (Vermeesen 1921: B64); Harms (1940: 137). – *Guarea mayombensis* Pellegr. var. *coalescens* (Vermeesen) Pellegr. (Pellegrin 1939: 152). – *Leplaea mayombensis* (Pellegr.) Staner var. *coalescens* (Vermeesen) Pellegr. (Staner 1941: 204). Type – D.R. Congo, Mayumba, Temvo, 26 Feb. 1919, *Vermeesen 1680* (lectotype: BR, **designated here**).

New synonyms are indicated as **syn. nov.** at the end of the citation for the synonym.

Illegitimate and invalid names are indicated as **nom. illegit.** and **nom. invalid.** at the end of the citation for the name.

### Treatment structure: new combination

New combination includes the basionym with a full and direct reference to its authorship and valid publication:

***Leplaea cedrata*** (A.Chev.) E.J.M.Koenen & J.J.de Wilde, **comb. nov.**

*Trichilia cedrata* A.Chev., *Etudes Scientifiques et Agronomiques, Fascicule V*: 214. 1909 (Chevalier 1909). – *Guarea cedrata* (A.Chev.) Pellegr. (Pellegrin 1928: 480); Pellegrin (1939: 154); Harms (1940: 135); Staner (1941: 187); Keay (Mar., 1958: 706); Staner & Gilbert (1958: 204); Aubréville (1959: 160); Voorhoeve (1965: 264); Pennington & Styles (1975: 495); Styles & White (1991: 43); Poorter et al. (2004: 418); Hawthorne & Jongkind (2006: 738). Type – Ivory Coast, Bouroukrou, s.d., *A. Chevalier 16125* (lectotype: P; isolectotype: G, WAG). See also note 1.

*Khaya canaliculata* De Wild. (De Wildeman 1914: 377); De Wildeman (1920: 168). Type – D.R.Congo, Ganda-Sundi, 1913, *J. de Briey 220* (holotype: BR).

*Guarea alatipetiolata* De Wild. (De Wildeman 1930: 71). Type – D.R.Congo, Eala, Nov. 1923, *V.G. Goossens 4514* (holotype: BR).



*Guarea kennedyi* Burt Davy, manuscript name; J.D. Kennedy (1930: 223), in obs., nom. nud. (see note 4).

## Lectotypification

When the lectotype (or neotype, or epitype) is designated in the manuscript itself:  
(lectotype: BR, **designated here**).

When the lectotype (or neotype, or epitype) was designated before, the reference is needed:  
(lectotype: AD, designated by Prescott 1984: 319).

## Specimen citations

Specimen citations are grouped per country (one paragraph per country). Each citation is separated by a semicolon; each element in the citation is separated by a comma.

Authors are required to check carefully their specimen citations for consistency; for example, use always the same name for the same collector (except if different names designate two different collections with separate numbering system).

For 2 or more specimens sharing part of the data, use the expression “same data as preceding” and complete the citation with the differing data.

The elements are presented (when available) in the following order:

- country (before first citation)
- geopolitical unit(s) within country (e.g. state, region, district...), from largest to smallest
- locality where the specimen was collected, as written on the specimen’s label; if no locality was mentioned on the label, use the abbreviation ‘s. loc.’ (*sine loco*)
- geographical coordinates (see Style consistency in the Manuscript Text File section); authors are free to distinguish coordinates written on label and coordinates calculated by the authors; in this latter case, calculated coordinates should be between square brackets
- elevation as written on specimen’s label, e.g. “500 m”, “680 m a.s.l.”, “1400 ft”; if the elevation is not in metres, authors are free to add a conversion between square brackets
- collection date (see Style consistency in the Manuscript Text File section)
- phenology (fruit, flower...)
- *collector(s) name* (italic)
- *collection number* (italic); if no collection number, use “s.n.” without italic
- herbaria acronyms where specimen and duplicates are deposited; if the specimen was seen, do not add ‘!’; if the specimen was not seen, add ‘n.v.’; if the specimen was only seen as digital image, add ‘web’; authors are free to add the institutional barcode number, and in some cases, the url where the digital image is available.

## Abbreviations in specimen citations

*sine loco* = s. loc.

*sine dato* = s.d.

*sine collector* = s. col.

*sine numero* = s.n.

fruit(s) = fr

open flower(s) = fl



flower bud(s) = fb

sterile = sterile

specimen not seen (*non vidi*) = n.v.

specimen only seen as digital image = web

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