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## INSTRUCTIONS FOR CONTRIBUTORS

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The **Boletín of Biologic Investigations Center** is an international journal that publishes original works (basic or applied) in the field of the biological sciences. The journal publishes research done in Venezuela and in other countries that produce solutions applicable to the Neotropical region. Contributions are published in Spanish, Portuguese and English. Among the diverse fields of basic biology, are zoology, botany, taxonomy and ecology, whereas in applied biology are included works in fishery biology, agroecology, ecological economics, genetics, cellular biology, aquaculture, conservation biology, and environmental microbiology, among others. In addition to feature articles, short communications, revisions and commentaries are also accepted.

### REVIEW PROCESS

Manuscripts are first reviewed by the Editorial Committee (EC), and then sent to be evaluated by three experts in the field of the subject. Upon receipt of the observations from anonymous referees, the EC will return the manuscript to the author(s). Based on the observations of the reviewers and EC, the Editor will accept the manuscript, invite the authors to revise the manuscript, or reject the work. When handing in the new, revised the manuscript again to the EC, the authors must include a written statement showing how the observations of each reviewer were taken into account. Once the EC collaborates that the author(s) took into account the observations, the work will be accepted, and only at this time, will a correspondence be sent, showing that the work is accepted for publication.

**Note:** The revised manuscript should be returned within three months. Manuscripts returned after three months may be considered as new works and sent again to the reviewers.

Manuscripts with typographical errors, with poor style, or that are not in accord with the style of the journal, will be returned by the EC without passing for the review process. To improve the presentation of the manuscript, it is highly recommended that the author(s) send it to a "review process" among their colleges, before sending it to the journal. These persons should be cited in the acknowledgments.

## **MANUSCRIPT SUBMISSION**

1. The manuscript should be sent by e-mail in a Word-compatible file containing text, tables, and figures. At time of submission, the first author should include a cover letter (signed by all co-authors) indicating that the article is an original work not published previously, and has not been sent simultaneously to another journal. If an original cover letter is not sent by regular mail, each co-author must e-mail the Editor directly, stating they are co-authors of the article and agree to publication in the Boletín.

Please send your manuscript to: [boletincibluz@gmail.com](mailto:boletincibluz@gmail.com). Use the following address for original cover letters sent by regular mail: Dra. Teresa Martínez Leones, Editora, Centro de Investigaciones Biológicas, Edificio Ciencia y Salud, low level, right side (detrás del Hospital Universitario), Maracaibo, estado Zulia, Venezuela.

2. Include in the cover letter, the names of at least four potential reviewers. These potential reviewers should be specialists (national or international) qualified to review the manuscript, and not have any collaboration with the author(s) or be affiliated with the universities, institutes or research laboratories of the author(s). For each potential reviewer, include the street address of the institute (for regular mail), e-mail address, and phone number, if possible.
3. Manuscripts should be typed in 12-point, Times New Roman font, double-spaced, and on letter-size pages with 2.5 cm margins on all sides (right margin justified). All pages should be numbered consecutively, in the upper right hand corner. Do not include any information in headings or footnotes.
4. Graphics should be done in Excel® or other similar program. Program data should remain available in case style modifications are needed by the Editorial Committee. Tables should be made with a program for that purpose, and take into consideration the journal format (longer than wide). Avoid large, complex tables. Tables may be in 10 or 11-point Times New Roman font, and 1½ spaced.
5. Results of the review process are usually sent by e-mail, but if needed, may be sent by regular mail. The author must give a street address and telephone number for MRW or DOMESA, among others, to be sent COD.
6. In general, there are no page charges to authors. However, if authors have funds for publication in their research projects, we would appreciate receiving a donation.

7. Authors are also encouraged to subscribe to the journal. Although articles are available free on the Internet, funds received via subscriptions help strengthen the journal by reducing our dependency on university subsidies.

## MANUSCRIPT PREPARATION

Manuscripts should be written in the following general format: Title, name and address of author(s), Abstract. Abstract in Spanish (with title in Spanish), Introduction, Materials and Methods, Results, Discussion, Acknowledgments, and Literature Cited. Authors are strongly advised to consult recent issues of the Boletín to help guide manuscript preparation.

Short communications are for short-term studies, descriptions of onetime events, and brief field or laboratory observations with preliminary data. The format is the same as that for complete articles, except manuscript length is usually eight pages or less, including tables and figures.

Revisions are works usually written by experienced investigators, and involve synthesis of information on a specific subject, based on a bibliographic revision that may include 100 or more citations.

There are two types of commentaries. Commentaries that include constructive criticism on articles previously published in the journal, or works that reflect individual points of view on topics of biological interest. In general, the commentary format includes only acknowledgements and literature cited.

**Title.** The title should be short and specific, usually not more than twenty words, and include the most important key words that may be used by Internet search engines.

**Authors.** Give complete names (at least first name, initial of second name, and first last name (first and second last names, if common), and mailing addresses (include e-mail). Indicate author to receive correspondence, if not the first author. Do not use titles or university positions such as Prof., Lic., M.Sc., and Dr., among others.

**Abstract.** Prepare two abstracts (one in English and one in Spanish) that do not exceed 250 words each (150 for short communications). The abstract describes the objective of the investigation and summarizes the most important results and conclusions. Methods are mentioned briefly. The *Spanish abstract* is a translation of the English abstract, without additional or different information. Include about six or seven key words in order of importance, in the corresponding languages. The abstract must be understandable, without referring to the text.

**Introduction.** The introduction defines the problem to be solved, and should contain a brief review of the literature (usually with references published within the last five years) relevant to the aims of the research. In the Boletín, the objective is written in the present tense, and must agree with the content of the title. The objective is usually presented at the end of the introduction, but may also be at the beginning. Keep the introduction brief. Details may be presented in the materials and methods or discussion sections.

**Materials and Methods.** Methods should be written in sufficient detail to enable other scientists to duplicate your experiments or field sampling procedures, if necessary. Put emphasis on those methods that are original or important modifications of known techniques. For well-known methods, cite the references in which they are described. To help with organization of this section, in more extensive papers, the author may use sub-sections.

- Description of study area. Give coordinates, state, and country, and briefly describe the principal characteristics, such as geography, vegetation, precipitation, and temperature, etc. A map may be included.
- Sampling stations. Describe the most important characteristics of each station, and show their location on a map. If collecting methods and other procedures are well known in the literature, just cite the references; in cases of modifications of previous methods, explain briefly.
- Statistical analysis and experimental design. Information about the experimental design should include number of samples, number of replications, level of significance, and types of statistical analyses and software programs employed. Statistical analyses must be in accord with the objectives and experimental design of the study.
- Biological indices. Briefly describe or cite references about the types of indices used, such as species diversity, similarity, evenness, density, and frequency.
- Identification of specimens. Cite references (keys and other taxonomic works) used to identify specimens, and give names of any specialists consulted or museum collections examined. For taxonomic papers, give names of museums or other collections where specimens are deposited.

**Results.** Results are described objectively, concisely, in logical order, and in a way as to easily understand and interpret the most relevant trends of the study. Most results are given in tables and figures. Give the most important findings, in accord with the objectives, variables and experimental design of the study. *Do not repeat* in the text the same information given in tables and figures. *We recommend* keeping the results section separate from the Discussion.

**Discussion.** In this section, the author analyzes or interprets the results. This implies that important findings must be compared with those reported in the literature by other investigators. *Please do not repeat* results, and materials and methods in this section. We recommend ending this section with a paragraph reflecting the theoretical or practical implications of the investigation. In general, conclusions and recommendations (if any) are given in this section.

**Conclusions.** Conclusions may be placed in a separate sub-section in more extensive articles, and should be concise statements based on the objectives and new findings of the study. Please avoid repeating results and discussion in this section. Include only the most important conclusions, usually not more than three.

**Recommendations (if any).** Recommendations usually form the last part of the discussion section, but in more extensive articles, may be placed in a separate subsection. Any recommendations for future strategies or studies must be based on the conclusions of the article. Again, be concise, and give only the most important recommendations.

**Acknowledgments.** Include in this section, persons and institutions that played an important role in achieving the objectives of the investigation. Also, financial sources (persons or institutions) should be thanked, as well as curators of museums, and directors of laboratories, among others. For persons, omit titles or categories such as Dr., Sr., Sra., lab technician, secretary, etc.

**Literature cited.** Put in alphabetical order, according to last name of senior author, followed by first name of co-authors. Abbreviations of journal names should be in accord with international standards. Use only well-known abbreviations such as Biol. (Biology, Biological), Bull. (Bulletin), Invest. (Investigation), Soc. (Society), Univ. (University), and Dept. (Department), among others.

For lesser known journals or when in doubt, spell out completely. Do not abbreviate names of countries. Regular articles usually have no more than 25 references; 15 for short communications. Write author names in Versailles font. All references included in the Literature Cited must be cited in the text, and visa versa. Please *revise your manuscript carefully*.

Use the following examples for references in the Literature Cited:

• Journal articles:

García, M. y E. Jiménez-Ramos. 2021. Dos nuevas especies de *Ochthebius* del

Caribe, costa peninsular de Araya, Venezuela (Coleoptera: Hydraenidae: Ochthebiinae). *Novitates Caribaea*. 17: 45–58.

González, L. W., N. Eslava, F. Guevara., F. Díaz y J. M. Rodríguez. 2017. Evaluación de la pesquería artesanal de El Tirano, isla de Margarita, Venezuela, durante la temporada de pesca enero-diciembre 2012. *Bol. Centro Invest. Biol.* 51(1): 43-58.

Guédez, C., L. Cañizalez, L. Avendaño, J. Scorza, C. Castillo, R. Olivar, Y. Méndez y L. Sánchez. 2014. Actividad antifúngica del aceite esencial de naranja (*Citrus sinensis* L) sobre hongos postcosecha en frutos de lechosa (*Carica papaya* L.). *Rev. Soc. Vzlana. Microbiol.* 34:81-85.

- Books: In general, omit page numbers for books, except when citing a specific part of the book.

González, L. W., N. Eslava y F. Guevara. 2006. Catálogo de la pesca artesanal del estado Nueva Esparta, Venezuela. Editorial Radoca. Cumaná. 218 pp.

Rodríguez, J.P., García-Rawlins y F. Rojas-Suárez. 2015. Libro Rojo de la Fauna Venezolana. Cuarta Edición. Provita y Fundación Empresas Polar, Caracas, Venezuela.

- Chapter in a book:

Medina, E. and F. Barboza. 2000. Los manglares del sistema de Maracaibo. Pp 175-182, *in* G. Rodríguez (ed.), *El Sistema de Maracaibo* (2 ed). Instituto Venezolano de Investigaciones Científicas (IVIC), Caracas, Venezuela.

- Theses: Theses are denoted as Undergraduate Thesis, Masters Thesis, or Doctoral Thesis.

Moreno, J. C. 2019. Biomasa total como indicador de variabilidad ambiental en 6 especies de mariposas (Lepidóptera, Nynplalidae) en Venezuela. Trabajo Especial de Grado, Dpto. de Biología, Facultad Experimental de Ciencias, Univ. del Zulia, Maracaibo.

Van Der Biest, N. 2016. Análisis de los parámetros pesqueros e indicadores económicos de la pesca artesanal con nasa en el puerto pesquero El Tirano durante el periodo enero-diciembre 2015. Tesis de pregrado. Universidad de Oriente, Boca del Río, Venezuela. 41 pp.

- Research or Technical Reports:

Lentino, M., A. Rodríguez-Ferraro, A. Nagy, M. Rojas, V. Malave, M. A. García y A. López. 2016. Manual de Anillado e Identificación de las aves del Paso Portachuelo, Parque Nacional Henri Pittier, Venezuela (2° Ed). Sociedad Conservacionista Audubon de Venezuela (Caracas, Venezuela). Informe Técnico.

Casler, C. L. y J. R. Lira. 1983. Estudio faunístico de los manglares del sector Los Olivitos, Dtto. Miranda Edo. Zulia. Serie Informes Cient. Zona 5/ IC/50, MARNR, Maracaibo, 46 pp.

- Congress abstracts:

Morales, L. G., J. Pacheco, and J. Pinowski. 1980. Ecología energética de la avifauna ictiófaga del alto Apure, Venezuela. Abstracts, 8 Congr. Latinoamer. Zool., 5 - 11 October 1980, Mérida, Venezuela, p. 188.

Vega, D. y Rodríguez. 2008. Estudio de los posibles del flavonoides del jugo de la parchita amarilla (*Passiflora edulis* var. *flavicara*), AsoVAC LVIII Convención Anual San Felipe, Yaracuy.

- Government publications: Decrees:

República Bolivariana de Venezuela. 2000. Decreto N° 730 of March 2000, about the cration of the Wildlife Refuge Ciénaga de La Palmita e Isla de Pájaros. Official Gazetter N°. 36.9111 of 15 March 2000, 2 pp.

- Electronic journals and data bases:

Electronic journals and data bases must be accessible to the public, and not password protected.

FAO. 2020. La lucha contra tres conceptos que está cambiando el sector de la pesca. Roma. [Documento en línea] Disponible en: <http://www.fao.org/faostories/article/es/c/1279164/>. [Consulta14-01-2020].

Liu, X., X. Yan, J. Bi, J. Liu, M. Zhou, X. Wu y Q. Chen. 2018. Determination of Phenolic Compounds and Antioxidant Activities from Peel, Flesh, Seed of Guava (*Psidium guajava* L.). Electrophoresis. 1-32. doi:10.1002/elps.201700479.

Miranda, J. y J. León. (2017). Lista oficial de las Aves de Venezuela por estados: Zulia. Versión Junio 2017. Disponible en: [http://uvo.ciens.ucv.ve/?page\\_id=3035](http://uvo.ciens.ucv.ve/?page_id=3035), consultado el 21/08/2018.

Unpublished references such as technical reports, manuscripts in preparation, should be cited in the text as personal communications. However, undergraduate, masters and doctoral theses may be placed in the literature cited, as well as reports of public and private institutions, as long as these documents are available in the library of the corresponding institution or other data base, and accessible to the public. Technical reports do not need to be periodic, but should have a fixed nomenclature, with name and number. Works such as “Trabajos de Ascenso” or scientific reports lacking volume or number nomenclature are cited in the text as personal communications.

**Tables and figures.** In the manuscript, tables and figures are placed after the literature cited, and must be cited in the text. Each table and figure should have a legend, and be numbered with Arabic numbers. The legend is placed above the table, but below the figure. Legends should give enough information so as to be understandable, without referring to the text.

The illustrations (photos) should have good definition. Figures (where pertinent) should have a scale. Figures should be large enough to permit reduction to the size that they will appear in print, including the size and thickness of lines and letters. After reduction, letter height should not be less than 1.5-2 mm, or about 9-point.

Maps should be simple, with black lines on a white background, without shades of gray. Legend should not contain many symbols; it is better to put names directly on the map. Use Arial font for maps. *Prevent the use of fine lines* in figures. The Editorial Committee reserves the right to make corrections in style once the article has been accepted for publication. Proofs will be sent to authors (by email) prior to publication and these should be returned within 3 days of receipt. Because this is the last opportunity to detect and correct any errors, authors should examine proofs carefully.

### **General instructions**

Manuscripts should be typed in 12-point, Times New Roman font, double-spaced, on letter-size pages, with 2.5 cm margins on all sides (right margin justified). All pages should be numbered consecutively in the upper right hand corner. Do not include any information in headings or footnotes, and do not hyphenate words at ends of lines. Words to be italicized should be written in italic type, and not underlined. Scientific names and Latin terms, such as *et al.*, *in situ*, *ad libitum*, *a priori*, *a posteriori*, *in vivo*, and *in vitro*, should be italicized.

**Scientific names:** Scientific names are italicized. Names of genera always start with a capital letter, but the second word of the species name and third word of



the subspecies name are uncapitalized (*Xus albus*, *Xus albus albus*). In the Boletín, the entire title of each article is capitalized, including scientific names. After the first citation, scientific names may be abbreviated (*Xus albus* = *X. albus*). However, genus names are never abbreviated at the beginning of a sentence.

Abbreviations such as sp., spp., are not part of the scientific name and are not italicized. Author names of species or other information may be included when citing the species for the first time in the text. Do not include author names of species in the title unless they concern the theme of the article.

All figures and tables must be cited in the text, and sequenced in the order cited. Use “Fig.” in parentheses (Fig. 3, Figs. 3 y 4, Figs. 3-5), but “Figure” out-side of parentheses. Capitalize the words Figure and Table.

Measurements are in metric units. Avoid citing numbers with many *decimals*, in text and tables. Usually one decimal is sufficient (8.261 = 8.3). Use continental dating (e.g. 15 October 2016), and the 24 hour clock (0900 h, 2400 h).

Use the following abbreviations or symbols: g (gram), µg (microgram), mg (milligram), h (hour), ha (hectare), kg (kilogram), km (kilometer), L (liter), m (meter), m<sup>3</sup> (cubic meter), mm (millimeter), mL (milliliter), mM (millimole), % (percent), ‰ (salinity in parts per thousand), s (second), and min (minute). Write temperature as 25 °C; do not abbreviate the words day, week and year. In the text, abbreviations are written without a period, except for the word number (No.). In the Literature Cited, use a period after the abbreviations p. (page), pp. (pages), ed. (editor or addition), eds. (editors), and coor. (Coordinator). Write (2 ed.), not (2nd ed.).

Use the following statistical abbreviations: ANOVA, SD, SE, df, CV, ns, *n*, *P*, *r*, *F*, *t*-test, and  $\chi^2$ .

For acronyms such as CP (principal components) CPUE (capture per unit of effort) and COD (chemical oxygen demand), or ones created by the author should be written in full when cited for the first time. Write acronyms without periods.

**Numbers.** Write numbers one to nine in words, unless they are measurements; numbers 10 and higher are written as numerals (three males, 7 m, 20 g, 30 females, 2 g). In a series of numbers, where at least one is 10 or more, write all numbers as numerals. (5 males and 20 females). In Spanish, the decimal is separated with a comma (30,6), and a period is used in numbers of 1.000 or more. In English, the decimal is separated with a period, and numbers of 1,000 or more use a comma. Write 0.02, not 02; write 40% instead of 40 percent. Numbers are always written as words at the beginning of a sentence.

**Citations in text.**

Use the following examples to cite literature in the text:

- For one author: Medina (2018) or (Medina 2018),
  - For two authors: González y García (2002) or (González y García 2002), and
  - For three authors or more: Urdaneta *et al.* (2016) or (Urdaneta *et al.* 2016).
- However, give names of all authors in Literature Cited section.

For manuscripts accepted for publication but not yet in print: López (2017 in press) or López (in press). For unpublished information: (González, unpubl. data), (López, pers. obs.), or (López, pers. comm.).

For citations within parentheses: (Viloria 2019, Chourio 2003, Vera 2016), (Martínez 2018; Yépez 2015, 2016; León y García 2014), (Casler 2002a, b, c).

In general, citations are given in chronological order.