

Instructions for Contributors

The **Boletín of Biologic Investigations Center** is an international journal that publishes original works (basic or applied) en 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.
2. Please send your manuscript to: boletincibluz@gmail.com. Use the following

address for original cover letters sent by regular mail: Teresa Martínez Leones, Editora, Centro de Investigaciones Biológicas, Edificio Ciencia y Salud, planta baja, right side (detrás del Hospital Universitario), Maracaibo, estado Zulia, Venezuela.

3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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. Complete articles do not usually exceed 25 manuscript pages, including tables and figures. 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 one-time 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. No 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:

Olivares, D. M. 1988. Caracterización ecológica del manglar de la Ciénaga Las Palmitas (Estado Zulia, Venezuela). Bol. Centro Invest. Biol. 17: 91-119.

González-Bencomo, E. J. 1999. Ictioplancton del sector San Carlos del Lago de Maracaibo: Composición, distribución y abundancia. Bol. Centro Invest. Biol. 33: 173-195.

Machado-Allison, A. y H. Moreno. 1993. Estudios sobre la comunidad de peces del río Orituco, estado Guárico, Venezuela, Parte 1: Inventario, abundancia relativa y diversidad. Acta Biol. Venezolica 14: 77-94.

Quirós de G., M., Y. Petit, and P. Marsh. 2007. New records and list of genera of Braconidae (Hymenoptera: Ichneumonoidea) at the University of Zulia Museum of Arthropods, Venezuela. Bol. Centro Invest. Biol. 41: 15-26.

IMERY, J. y H. CEQUEA. 2012. Estudio morfológico y citogenético del híbrido experimental *Aloe vera* (L.) Burm. f. x *A. jacksonii* Reyn. Revista Científica UDO Agrícola 12 (2): 267-274.

- Books:

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

Rodríguez, G. 1980. Los crustáceos decápodos de Venezuela. Instituto Venezolano de Investigaciones Científicas (IVIC), Caracas, Venezuela, pp. 20-23.

Cervigón, F. 1994. Los peces marinos de Venezuela, Vol. 3 (2 ed.). Editorial ExLi-bris, 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.

Coty, G. J. 1994. Avifauna de la Ciénaga de La Palmita, Costa Oriental del Lago de Maracaibo, Venezuela. Undergraduate Thesis, Dpto. de Biología, Facultad Experimental de Ciencias, Univ. del Zulia, Maracaibo, 26 pp.

Rangel, M. 2011. Dinámica poblacional del Cucharón *Atrina seminuda* (Bivalvia: Pinnidae) y evaluación de su pesquería en el nororiente de Venezuela. Tesis de Maestría, Instituto Oceanográfico de Venezuela, Universidad de Oriente, Sucre, Venezuela. 116 p.

- Research or Technical Reports:

Casler, C. L., and 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.

Ewald, J. J., W. Brandhorst, F. H. Durant, V. de Espinosa, and W. Díaz-V. 1971. Cruceros de pesca exploratoria del arrastrero “Carmelina” en la zona occidental de Venezuela. Research Report No. 25, Proyecto de Investigación y Desarrollo Pesquero MAC-PNUD-FAO, Caracas, 58 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.

- Government publications: Decrees:

República Bolivariana de Venezuela. 2000. Decree No. 730 of 09 March 2000, about the creation of the Wildlife Refuge Ciénaga de La Palmita e Isla de Pájaros. Official Gazetteer No. 36.911 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.

Keitt, T. H., D. L. Urban, and B. T. Milne. 1997. Detecting critical scales in frag-mented lands-

capes. Conservation Ecology 1, article 4. [Online] www.consecol.org/vol1/iss1/art4.

Larsen, K. 2002. Tanaidacea: Familia Versión 1: 2 October 2000. <http://www.crustacea.net>. Visited on 30 April 2007.

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), m³ (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 χ².

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: González (2001) or (González 2001),

- For two authors: González y García (2002) or (González y García 2002), and
- For three authors or more: González *et al.* (2003) or (González *et al.* 2003). However, give names of all authors in Literature Cited section.

For manuscripts accepted for publication but not yet in print: González (2007 in press) or González (in press). For unpublished information: (González, unpubl. data), (González, pers. obs.), or (González, pers. comm.).

For citations within parentheses: (González 2001, García 2003, Grant 2004), (González 2001; García 2001, 2002; León and García 2004), (González 2002a, b, c).

In general, citations are given in chronological order.

CONDES
**Consejo de desarrollo Científico
y Humanístico**



Vicerrectorado Académico

Universidad del Zulia (LUZ)

República Bolivariana de Venezuela.

ALIADO FIRME DEL INVESTIGADOR

OBJETIVOS DE DESARROLLO

- Consolidar una plataforma de investigación en LUZ que ofrezca al país y a la comunidad Científica avances y resultados de investigación Científica innovadores y comprometidos con el entorno social.
- Generar y desarrollar conocimiento competitivo y alto valor social.
- Formar profesionales capaces de generar soluciones alternativas e innovadoras a los problemas del contexto venezolano y mundial a partir de una investigación científica rigurosa y exigente.
- Difundir los resultados y avances de la investigación Científica que se cumple en LUZ a través de diferentes estrategias (publicaciones, eventos científicos, intercambios, ruedas de negociación, entre otros).
- Lograr que todos los docentes a dedicación exclusiva y a tiempo completo de LUZ participen activamente en actividades de investigación.
- Generar vínculos y alianzas entre las unidades y grupos de investigación de LUZ y sus homólogos en las otras universidades y centros de producción de conocimientos de Venezuela y el mundo.
- Integrar la investigación Científica y el postgrado en LUZ.

ESTRUCTURA ORGANIZACIONAL

Comisiones CONDES

Para llevar a cabo sus funciones, el CONDES cuenta con la Comisión de Desarrollo Científico y la Comisión de Estudios Humanísticos y social, las cuales están conformadas por un delegado representante de cada Facultad y un delegado representante del Consejo Universitario.

Coordinación Secretaría

La Coordinación Secretaría preside ambas comisiones, las cuales forman un equipo y cumplen con las actividades planteadas para la aprobación y ejecución de cada uno de los programas de apoyo que este organismo financia, además de fijar lineamientos de políticas de investigación para el desarrollo y fomento de dichas actividades.

Departamento de Planificación, Gestión y Control.

Se encarga de:

1. Planificar y gestionar adecuada y oportunamente las solicitudes de financiamiento de programas del CONDES, a fin de verificar el cumplimiento de los aspectos de carácter académico, así como la distribución presupuestaria de los recursos solicitados, previo la evaluación de las Comisiones Técnicas del CONDES.
2. Asesorar de forma acertada a los delegados de las Comisiones y a la comunidad Científica intra y extrauniversitaria respecto a los trámites y políticas del CONDES para el otorgamiento de subvenciones así como de brindar información sobre las decisiones tomadas.

Este departamento cuenta con el apoyo de la Sección Evaluación de Proyectos el cual tiene bajo su responsabilidad la evaluación académico-administrativa de los diferentes programas que financia el CONDES.

Departamento de Administración

Tiene a su cargo planificar y ejecutar los desembolsos financieros, para lograr la entrega oportuna de los requerimientos contemplados en las partidas a ejecutar por el investigador; cuenta con el apoyo de la Sección de Compras.

Sección de Compras:

Verifica, procesa y garantiza la adquisición de equipos y materiales de apoyo a la investigación.

Departamento de Divulgación y Relaciones Públicas.

Es el responsable de:

1. Difundir los resultados de las investigaciones financiadas por el CONDES.
2. Organizar, Coordinar y supervisar los eventos institucionales del CONDES.
3. Diagramar los diseños de divulgación relativos a la actividad científica generada en LUZ a fin de mantener informada a la comunidad universitaria.
4. Difundir información sobre políticas de investigación CONDES y de otros organismos promotores de la actividad científica a nivel nacional e internacional.

Departamento de informática

Responde del Sistema Automatizado de Información sobre la Investigación de LUZ (SAINVELUZ), de la presentación y actualización del sitio web: www.condes-luz.org.ve. Asimismo, se encarga por velar por el funcionamiento de los equipos de computación utilizados en los departamentos del CONDES y de proveer a todos los usuarios de herramientas tecnológicas para el cumplimiento de sus funciones. Además de brindar asesorías necesaria a los usuarios del CONDES como a los investigadores, en términos de manejo y aplicación de software y hardware.

Departamento de Archivo

Clasifica, codifica y almacena toda la documentación que se recibe y se genera en el CONDES, a fin de poder suministrar la información solicitada por las Comisiones, el personal administrativo y la comunidad científica en general.

FINANCIAMIENTOS

Programas y proyectos de Investigación:

Contribuye con el desarrollo de la investigación científica y humanística a través del financiamiento de los programas y proyectos de los miembros del personal Docente y de Investigación en LUZ.

Asistencia a Eventos Nacionales e Internacionales:

Promueve y apoya a la comunidad científica de investigadores a participar en diferentes eventos nacionales e internacionales con el fin de enriquecer la formación académica a través del intercambio entre pares integrados.

Organización de Eventos Científicos:

Este financiamiento es asignado a las diferentes facultades, siempre y cuando los mismos, estén enmarcados en el desarrollo de las actividades de investigación.

Publicaciones de Revistas Arbitradas:

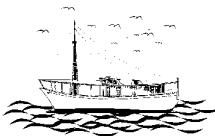
Para cumplir sus funciones de divulgación científica, el CONDES asigna fondos para la edición de revistas arbitradas, siempre y cuando cumplan con la rigurosidad científica exigida a nivel nacional e internacional.

Apoyo a la Investigación Científica estudiantil:

El CONDES estimula y asesora la conformación de sociedades científicas estudiantiles. Financia la participación de estudiantes de pregrado en los programas/proyectos en condición de colaboradores y subvenciona la asistencia de los mismos a eventos científicos nacionales.

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Boletín del Centro de Investigaciones Biológicas

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Suscription

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En Venezuela, el pago debe ser depositado en el Banco Occidental de Descuento, en la cuenta corriente N° 0116-0121-94-2121046701 (LUZ. Fac. de Humanidades y Educación-Ingresos Propios). Favor enviar una copia del depósito bancario por correo electrónico.

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UNIVERSIDAD
DEL ZULIA

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