

***Florida Scientist* - Instructions for Authors**

Purpose and Scope

The *Florida Scientist* (ISSN #0098-4590) is a multidisciplinary scientific journal published quarterly by the Florida Academy of Sciences, Inc., a non-profit scientific and educational association. Membership is open to individuals or institutions interested in supporting science broadly.

The *Florida Scientist* publishes original Research papers, short communications, colloquium papers, natural history notes, book reviews, and research reviews on topics within the scope of the Florida Academy of Sciences (viz., Agricultural and Natural Resources, Anthropology, Atmospheric and Oceanographic Sciences, Biological Sciences, Computer and Mathematical Sciences, Conservation, Environmental and Chemical Sciences, Geosciences, Medicine, Physics and Space Sciences, Social Sciences, and Science Teaching). Contributions from these fields will be considered that present new applications of scientific knowledge to practical problems within the areas of interest to the Academy, and papers are not required to be of regional origin.

Research Articles present the results of original research. These submissions should have a clear research question, hypothesis, or objective(s) articulated within the introduction. Research articles should contain (in the following order) an Abstract (200 words), Introduction, Materials and Methods, Results, Discussion, Acknowledgements, References, Tables, Figure Legends, and Figure files. Research articles have no length limits (see Guide for Authors below regarding page charges). Research articles are peer-reviewed (single-blind) by at least two referees with knowledge in the field of study.

Short Communications are brief, concise reports on current research, preliminary findings, or new techniques. The length of short communications is limited to 2500 words (including references) and a maximum of 3 tables or figures (combinations thereof). Short communications exclude an abstract, and results and discussion are typically combined. Short communications are peer-reviewed by at least two referees with knowledge in the field of study.

Colloquium papers report new information presented as part of scientific colloquia held under the Florida Academy of Sciences. These should follow the general format for research articles. Short communications are peer-reviewed by at least two referees with knowledge in the field of study. Coordinators of the colloquia are often invited to be guest editor(s) for the issue.

Natural History notes are brief (<1000 words), descriptive accounts of novel information that have value in expanding our natural history knowledge that is not broad nor detailed enough for short communication. Natural history notes should include the details such as any relevant environmental data; date, time, and location of the observation(s); the context and description of the observation; a picture and or a permanent link to additional information (e.g., a curated online database; e.g., [figshare](#)). Natural history notes do not include an abstract nor section headings (other than References) but should have a list of Keywords for indexing.

Book reviews are brief (2500 words), scholarly evaluations of recently published books, and monographs of interest to members of the Academy. The Editor generally solicits book reviews, though proposals to review a specific book will be considered.

Editorial Policies

Read this before submitting your paper! Manuscripts demonstrating that these instructions were not followed will be returned without review.

Publication costs: The Florida Academy of Sciences (FAS) subsidizes the publication of the *Florida Scientist* for current individual members. Please read the journal business policies for additional details on publication charges; the link is below 'Journal' on the FAS website (<https://www.flacademyofsciences.org/>). A link to the pdf of the policies is [here](#).

The corresponding author of a manuscript to the *Florida Scientist* must be a member-in-good-standing of the Academy from submission to its acceptance for publication, except manuscripts for special publications. Other authors on a manuscript may also hold membership, but pages of the published article are equally attributed to them and the corresponding author. Failure to maintain membership throughout the process will lose the privilege of ten free pages per volume. Please see the FAS journal business policies for more details on publication fees.

Submission of a manuscript implies that the content is not previously published. It is not considered for publication elsewhere and will not be submitted elsewhere until a decision is made. If accepted, the results will not be published elsewhere in English or any other language without the written permission of the Academy's representative.

Once submitted, all research papers and short communications undergo pre-review by the editorial staff prior to soliciting peer referees.

Pre-review: The Editor examines each manuscript for its appropriateness for the *Florida Scientist*. Articles submitted as **research articles** or **short communications** (see scope) are expected to contribute new information and include a formal objective, hypothesis, or a clear statement of purpose. The pre-review is based on the following:

- 1) The paper falls within the scope of the Florida Academy of Sciences
- 2) The paper is appropriately formatted for the *Florida Scientist*
- 3) That the research article is not entirely descriptive, observational, or preliminary (short communications that are primarily will be considered for peer-review)
- 4) Natural history notes are reviewed by the editorial group or other FAS officers but not peer refereed.

The *Florida Scientist* utilizes iThenticate to identify possible missing citations or other mistakes that would be interpreted as plagiarism. Severe cases will be returned without review.

Research projects involving human or animal subjects are expected to obtain proper permissions from the Human Subjects Research Committee or the Institutional Animal Care and Use Committee. See Michigan State University's Law School for a listing of relevant federal and state statutes that govern the care of captive animals, collection of specimens, and protection of endangered species: <http://www.animallaw.info/>.

All funding sources must be clearly stated in the acknowledgments section.

GUIDE FOR AUTHORS

Submission of Papers

All submissions should be e-mailed to the Editor, Dr. James Austin (fl.sci.editor@gmail.com).

Each submission should include:

1) A cover letter that includes a statement on why the manuscript interests the Florida Academy of Sciences and two or three suggested professional referees with their affiliation. Here authors may also list non-preferred reviewers. In addition, a statement indicating that the corresponding author is current in their FAS membership (if in doubt, check with the office (flacademyofsciences@gmail.com)).

2) A single Word document containing the main text, tables, list of figures and their captions, appendices, and the figures embedded in the document. Please note that separate file(s) for each figure and a veriFig report (see detailed instructions below) will be required upon acceptance.

If the e-mail submission is not acknowledged within five business days, the submission may not have been received. Please advise the Editor in an attachment-free note.

Manuscript Preparation

General The *Florida Scientist* is read by a broad audience, and authors should strive for clarity and write with a general scientific audience in mind.

- All material must be double-spaced—including the title, authors' names, addresses, abstract, text, references, tables, and figure captions.
- All margins should be 3.0 cm.
- Number all pages through the references section.
- Include consecutive line numbers in the left margin.
- Tables must be on separate pages, not inserted in the main text.
- Figure captions must be listed together on a separate page.
- Figures should follow the list of captions in consecutive order (do not embed the figures within the article's main text).

Length There is no page limit to manuscripts submitted to the *Florida Scientist*. Corresponding authors who are members in good standing with the Florida Academy of Sciences will receive the first ten typeset manuscript pages free and accrue page charges (the current rate is \$75 per page) for over ten typeset pages (not ten manuscript pages). Authors not members of the Florida Academy of Sciences in good standing will be responsible for all page charges. In general, one typeset page = 0.6 x manuscript page where the latter is equivalent to a double-spaced, 12-point font, 2.5 cm margin Microsoft Word document page. This formula does not incorporate the addition of tables and figures.

Manuscript Order

Cover Page The cover page should include the category, title, author(s) and affiliation information, corresponding author information, and running head:

Category You must provide the appropriate category identifier in the top left corner of the first page. These include Agricultural and Natural Resources, Anthropological Sciences, Atmospheric and Oceanographic Sciences, Biological Sciences, Computer Sciences and Mathematics, Engineering, Environmental and Chemical Sciences, Florida Committee on Rare and Endangered Plants and Animals, Geosciences, Medical Sciences, Physics and Space Sciences, Science Teaching, and Social Sciences. Natural History Notes should be submitted.

Title: The title should be short but specific and detailed enough to give the reader an idea about the investigation and the outcome. Kindly keep the length of your article title to less than 20 words. Only the first letter of the first word and proper nouns are capitalized.

Author affiliation Include department, institution, and a complete address for each author. Use superscripts to match authors with institutions. Mailing addresses will appear in print.

Corresponding author The corresponding author should be identified with a superscript and the following information on the cover page: “Corresponding author: name, e-mail address.”

Running head A short title must be provided for the header on alternate pages. Limit the running head to 30 characters.

The second page of the manuscript should include the abstract (if required) and keywords, followed by the main text:

Abstract Most modern databases contain only abstracts; thus, writing complete and concise descriptions of your work in your abstract is essential. *The abstract is limited to 200 words.* Include the salient points of the manuscript (e.g., motivation; question, hypothesis, or problem statement; approach; results; and conclusion). Avoid abbreviations and citing references within the abstract (where necessary, references should be cited in full and must also be present within the body of the text).

Keywords Include up to six keywords in alphabetical order below the abstract. Keywords should be specific to your field and accurately represent the content of your manuscript.

Main Text

- Section titles are used (e.g., **Introduction, Materials and Methods, Results, Discussion, References**). These titles are bold and in separate paragraphs. Include **Acknowledgments** at the end of the Discussion and before the References. The acknowledgments will include the funding source for the research conducted.
- Paragraphs are indented throughout the manuscript, except for paragraphs at the start of sub-sections. Sub-section titles may be used but are not required – they should be bold text, left-justified, brief, and precede the first sentence of the sub-section.

- Figures are referred to as “Figure 1” in the text and captions. Tables as “Table 1”
- Use metric units for all measurements.
- The Latin name must be given for all species. Use trade names only when preceded by the chemical or scientific name; trade names, common names, or abbreviations may be used.
- One space should be inserted between sentences (not two).
- Cities and counties are followed by the state acronym (e.g., FL).

References In the text, refer to the author’s name and year of publication: “since Smith (1923) has demonstrated...” or “This is in agreement with subsequent observations (Jones and Webster 2001).” For three or more authors: “Since Smith et al. (1991) reported...” or “because of more recent observations (Smith et al. 2001)...” Multiple citations should be listed in chronological order, separated by a comma, then alphabetically for the same year.

- Personal communications should be used minimally. They should be in the body of the manuscript and have the name, date of communication, and affiliation. Do not include communications in the References section.
 - E.g., “Earlier versions of the software calculated linear regressions incorrectly (pers. comm. P. Brainiac, University of Tasmania, January 5, 2011).”

Tables Tables should be on separate pages. Captions and footnotes should be outside of the table body. Table captions should be limited to a brief description of the contents. Explanatory information should be included in the footnote only. Do not use vertical rulings. Do not include any empty rows or columns. Do not use any shading, bold, or italics. Tables should be created using the Word table tool.

Figure Captions The captions must be listed on a separate page and double-spaced. Ensure figures are numbered in the order referred to in the text.

Figures

Authors must submit publication-quality figures and the Allen Press veriFig™ report (see below) before final acceptance. You can put the figures at the end of the article in the word document for initial submissions. Authors are strongly recommended to follow these guidelines to prevent delays in publication:

- Ensure uniform lettering, font, and font size within the figures.
- Use Times Roman font for figure labeling, and embed fonts if possible.
- Ensure that the font sizes are appropriate, taking into consideration the size of the printed page (see below)
- Size the illustration to fit on a printed page with maximum dimensions of 6 x 9 inches.
- Utilize the Allen Press veriFig™ tool, a web-based application that allows authors to quickly determine if digital images are correctly prepared according to specifications required by Allen Press. This tool is free and accessible at <http://verifig.allenpress.com/login>. To log in, enter your e-mail and the password “figcheck.” Additional help is available on the veriFig™ webpage. Figure files may be in the following formats .pdf, .bmp, .eps, .gif, .tif, .png, .ai, .psd.
- *Color illustrations:* When color printing is desired, the author is encouraged to check with the *Florida Scientist* Business Manager to obtain an estimate of the cost charged to the

- author.
- Permission to use published photos must be provided at the time of submission

Copyright

All authors (except employees of federal government agencies) must sign a “Transfer of Copyright” agreement before an accepted manuscript can be published. This agreement enables the Florida Academy of Sciences to protect the copyrighted material for authors without an individual author relinquishing proprietary rights. The agreement covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microfilm, or other reproductions of a similar nature, and translations.

Proofs

We highly recommend authors carefully proofread their final submission because alterations other than changes to typesetting errors will be charged to the corresponding author at a varying rate of \$3 to \$4 per correction (depending on Allen Press’ charges to the Florida Academy of Sciences). Proofs of accepted manuscripts will be sent to the corresponding author and should be returned to the Editor within 48 hours of receipt.

Reprints

The corresponding author will receive a free PDF of the article after publication. Please refer to the journal business policies ([url link here](#)) for proper use of the PDF. Allen Press no longer offers paper reprints.

Reference Style Guide

- Spell out all journal and press names in the literature cited.
- Page numbers immediately follow colon (no space) and are separated by an en dash
- List volume number, do not include the issue number.
- Documents, software, etc., obtained online must include the date accessed and the website.
- Personal communications should be used minimally. These are not included in the References section but are included in the body of the manuscript and should include the date and affiliation of the expert.
 - E.g., “Earlier versions of the software calculated linear regressions incorrectly (pers. comm. P. Brainiac, University of Tasmania, January 5, 2011).”

Journal articles:

Beaver JR III, Crisman TL, Bays JS. 1981. Thermal regimes of Florida lakes. *Hydrobiologia* 83:267–273.

Cespuglio G, Piccinetti C Jr, Longinelli A. 1999. Oxygen and carbon isotope profiles from *Nassa*

mutabilis shells (Gastropoda): accretion rates and biological behavior. *Marine Biology* 135:627–634.

University or other Press Publications:

Shannon CE, Weaver W. 1949. *The Mathematical Theory*. University of Illinois Press, Urbana.

Edition of book:

Hill JW. 1984. *Chemistry for Changing Times*. 4th ed. Burgess, Minneapolis.

Robertson W Jr. 1988. American swallow-tailed kite. Pp. 109–131 *in* Palmer RS, ed. *Handbook of North American Birds*, Volume 4. Yale University Press, New Haven.

Thesis/dissertation:

Bleik CR. 1973. *The Low-down on the High-ups of the Middle Ionian Period*. Ph.D. dissertation. Florida State University. Tallahassee.

Unpublished/technical reports:

Gopher Tortoise Management Plan Team. 2007. Gopher tortoise management plan, *Gopherus polyphemus*. Florida Fish and Wildlife Conservation Commission, Tallahassee.

Fitzpatrick JW, Woolfenden GE, Kopeny MT. 1991. Ecology and development-related habitat requirements of the Florida scrub jay (*Aphelocoma coerulescens coerulescens*). Florida Game and Fresh Water Fish Commission. Nongame Wildlife Program Technical Report No. 8, Tallahassee.

Internet items:

Smith J. 2009. Father Sanchez's Web Site of Western Indian Natural History. (updated 9/13/2007). <http://www.kingsnake.com/westinmdian/>. Accessed: October 20, 2007.

1 Biological Sciences

2 **Microsatellite variation reveals incomplete diploidization in**
3 **Gulf of Mexico sturgeon**

4 **John Hargrove⁽¹⁾, Emily V Saarinen⁽²⁾, and James D Austin⁽¹⁾**

5

6 ⁽¹⁾Department of Wildlife Ecology and Conservation, University of Florida, 110 Newins-
7 Ziegler Hall, Gainesville, FL 32611

8 ⁽²⁾Department of Natural Sciences, University of Michigan-Dearborn, 4901 Evergreen
9 Road, Dearborn, MI 48128

10

11 Corresponding author: James Austin, austinj@uf.net

12 Running head: Microsatellites and ploidy of sturgeon

13

14

15

16

17

18

19

20

21 **Abstract** Several important questions regarding the evolutionary history of sturgeon remain
22 unanswered, including the relationship between chromosome number and ploidy level. The
23 Gulf of Mexico sturgeon (*Acipenser oxyrinchus desotoi*), currently listed as “threatened” under the
24 U. S. Endangered Species Act, is an anadromous fish found along the United States Gulf
25 Coast and its associated rivers....

26 **Keywords** Acipenseridae, chromosome, conservation genetics, re-diploidization

27 **Introduction**

28 Few freshwater fishes are as enigmatic as the sturgeons (Acipenseridae). Sturgeon
29 stocks have declined worldwide as a result of overfishing and habitat degradation (Billard
30 and Lecointre 2001). Currently, there are 25 species of sturgeon listed on the IUCN “Red
31 list” of threatened species (IUCN 2012)...

32 **Materials and Methods**

33 Methods for microsatellite development, fish source, and pyrosequencing are
34 described in Molecular Ecology Resources Primer Development Consortium et al. (2011).
35 The library was sequenced on a single one-eighth GS-FLX titanium run (454 Life Sciences,
36 Roche, Branford, CT) resulting in approximately 1700 available markers, from which 41
37 loci (13 di-, 13 tri-, and 15 tetra-repeats) were screened for variation.

38 **Genotyping and statistical analysis.** All primer pairs were screened on 26 fin-clip
39 extractions collected from...

40 **Results**

41 Polymorphic markers (described in Molecular Ecology Resources Primer
42 Development Consortium et al. 2011) were classified into two groups, functionally diploid

43 (n = 15) and functionally tetraploid (n = 10), based on the presence of one to two or three to
44 four allele peaks per sample, respectively (Figure 1). The loci having three or four peaks per
45 individual had repeat values that reflect expected stepwise mutations of microsatellites
46 (Table 1)....

47 **Discussion**

48 The presence of apparently tetrasomic loci was unexpected given the general
49 consensus that the Atlantic sturgeon and, hence, Gulf sturgeon are members of the 120-
50 chromosome clade...

51 **Acknowledgments** Funding for the microsatellite development came from NOAA-
52 NMFS Protected Resources Division, St. Petersburg, Florida.

53 **References**

- 54 Birstein VJ, Hanner R, Desalle R. 1997. Phylogeny of the Acipenseriformes: cytogenetic and
55 molecular approaches. *Environmental Biology of Fishes* 48:127–156.
- 56 Clugston JP, Foster AM, Carr SH. 1995. Gulf sturgeon *Acipenser oxyrinchus desotoi* in the Suwannee
57 River, Florida, USA. Pp. 215–224 in Gershanovich AD, Smith TIJ, eds. *Proceedings Second*
58 *International Symposium on the Sturgeon*. VNIRO Publishing, Moscow.
- 59 International Union for Conservation of Nature [IUCN]. 2012. IUCN Red List of Threatened
60 Species, version 2012.2. [www.iucnredlist.org; accessed on December 19, 2012]

EDITOR

James D. Austin, PhD
Professor, Wildlife Ecology and Conservation
University of Florida
P.O. Box 110430
Gainesville, FL 32611

e-mail: fl.sci.editor@gmail.com

Associate Editor
John Hargrove, PhD
Pacific State Marine Fisheries Commission
1800 Trout Rd.
Eagle, ID 83616

BUSINESS MANAGER

Dr. Richard L. Turner
Department of Ocean Engineering and Marine Sciences
Florida Institute of Technology
150 West University Boulevard
Melbourne, FL 32901-6975
Tel: 321-674-8196
Fax: 321-674-7238
e-mail: rturner@fit.edu

12 May 2022