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The Ohio Journal of Science considers for publication solicited Book Reviews and Research Reviews, and unsolicited Brief Notes and Research Reports. Solicited submissions will be requested by the editor or member of the editorial board. Book reviews will be requested of experts in the subject matter of the book to be reviewed. Research Reviews will be requested to serve as reviews surveys of the literature of an area of science in which Academy members have an interest.

Unsolicited submissions, in the form of presentations of quantitative or qualitative data pertinent to any of the sections of the Academy listed inside the front cover, will be considered for peer review. Brief notes are manuscripts that are less than 2 printed pages (approximately 6 typed pages) and contain no more than one table, figure or other type of illustration. The editor will identify papers which meet these criteria as Brief Notes if not already categorized as such by the author. Research Reports are those papers which are longer than 2 pages or contain more than one illustration.

All manuscripts will be organized as follows:

Page 1 — Title, Author(s), Running Head, Abstract
Page 2 and remainder — Introduction, Materials and Methods, Results, Discussion, Acknowledgments, Literature Cited, Tables, Figure Legends, Figures.

STYLE. The CBE Manual for Authors, Editors, and Publishers, 6th ed. is used for editorial decisions with regard to style. Manuscripts should be typewritten using 1 inch margins on 8.5 x 11 inch paper. Text should be left justified using one line (twelve characters per inch). Three copies should be submitted. Manuscript should be double-spaced throughout, including the title and abstract. Arabic numerals should be used in preference to words when the number designates anything that can be counted or measured (7 samples, 43 species). One exception to this use is that numerals are not used to begin a sentence (Thirty-one species were found in . . .). The 2nd exception is when numeric expressions are adjacent in a sentence. The number easiest to express in words should be spelled out and the other left in numeric form (The sections were divided into eight 4-acre plots).

TITLE, AUTHOR(S), AFFILIATION(S). The first page of the manuscript should contain the title, author(s) name(s), the affiliation of the author(s) at the time the research was carried out, a shortened title (running head), and the abstract. The title must be typed in upper and lower case letters as it will appear when typeset. Name(s) of the author(s) should be typed in capital letters below the title. The address (department, institution, city, state, postal code, country if not USA) should appear below the name of the author(s). If more than one institution is to be credited, they should appear in the order of the authors' affiliation. A running head of not more than 38 letters and spaces should be typed in capital letters between the address and the abstract.

ABSTRACT. The abstract should summarize the main conclusions and any new methods or procedures critical to the results of the study. It should be 250 words or less.

INTRODUCTION. The introduction should describe the knowledge that gave rise to the question examined by, or the hypothesis posed for the research.

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DISCUSSION. This section should compare and contrast the data collected in the presented study with that previously reported in the literature. Unless there are specific reasons to combine the two, as explained by the author in the letter of transmittal, Results and Discussion should be two separate sections.

ACKNOWLEDGMENTS. Colleagues and/or sources of financial support to whom thanks are due for assistance rendered in completion of the research or preparation of the manuscript should be recognized in this section rather than in the body of the text.

LITERATURE CITED. References to scientific literature should be arranged alphabetically by first author's last name using the Name/Year (N-Y) method as described in the CBE Manual.

Journals
Author(s). Year. Article title. Journal title volume number (issue number): inclusive pages.


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TABLES. Tables must be typed double-spaced, one table to a page, numbered consecutively, and placed in the manuscript after Literature Cited. Since tables must be individually typeset, consolidation of data into the smallest number of tables is encouraged. A horizontal double underline should be made beneath the title of the table, and single underlines should be made the width of the table below the column headings and at the bottom of the table. Do not use vertical lines, and do not place horizontal lines in the interior of the table. Footnotes should be used to clarify possible questions within the table, and should be noted by asterisks, daggers, or other symbols to avoid confusion with numerical data.

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SCIENCE ON A DEEP OCEAN SHIPWRECK

CHARLES E. HERDENDORF
The Ohio State University

THOMAS G. THOMPSON and ROBERT D. EVANS
Columbus-America Discovery Group

A five-year scientific investigation of a site of a sunken ship on the North Atlantic seafloor, 270 km off Cape Fear, North Carolina at a depth of 2,200 meters, occurred during recovery operations on the nineteenth-century steamship SS Central America which sank in an 1857 hurricane while carrying passengers and cargo—including millions of dollars of gold—on its way to New York from the California gold fields.

Activities in the disciplines of oceanography, marine geology, marine biology, materials science, and undersea archaeology, were undertaken with the tele-directed submersible robot, Nemo. The study included field observations at the site (recorded in over 3,000 hours of videotape and 25,000 still photographs), examination of hundreds of deep ocean specimens and artifacts, and analysis of several experiments deployed on the seafloor.

Resting on a gentle slope of the Blake Ridge, the shipwreck environment was cold, lightless, oxygen-rich, and flushed by moderate currents. The sediments were a foraminiferal-pteropod ooze, deposited at a slow rate (1.7 cm/1,000 years). A diverse community of invertebrates and fishes colonized the shipwreck deriving from it food, cover and a place of attachment. This deep-ocean oasis supported a greater variety and concentration of animal life than did the surrounding ooze habitat. The timbers of the shipwreck were degraded by wood-boring bivalves. The iron machinery was extensively corroded and mobilized into flow structures (rusticles) by iron-oxidizing bacteria.

Passenger luggage recovered from the shipwreck contained artifacts which provided insight about the lifestyles of the voyagers during the Gold Rush. This project demonstrated that a holistic approach to a deep-ocean site of historic importance can provide understandings of the interrelated processes which affect cultural deposits on the abyssal seafloor and the marine life that they foster.

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