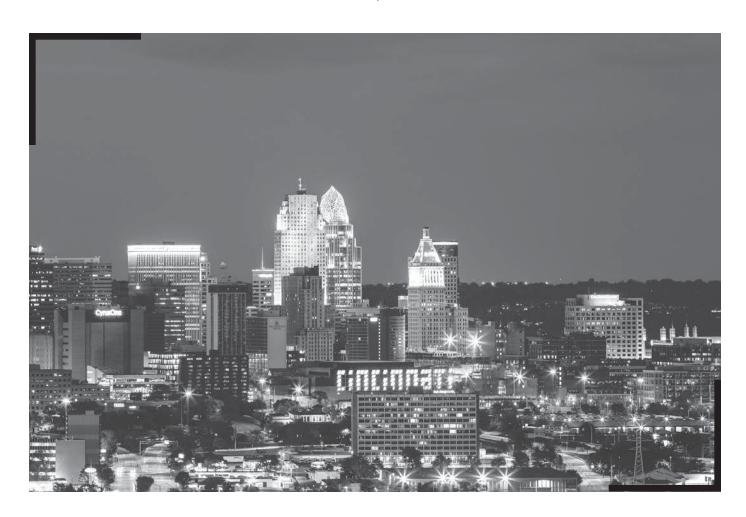


2022 PROGRAM

Vol. 54, No. 4



JOINT NORTH-CENTRAL-SOUTHEASTERN SECTION

7–8 April Cincinnati, Ohio USA

https://www.geosociety.org/nc-mtg

Cincinnati skyline at night Photo by Jake Blucker on Unsplash.



Start | Grid View | Author Index | View Uploaded Presentations | Meeting Information

Joint 56th Annual North-Central/ 71st Annual Southeastern Section Meeting - 2022

Paper No. 47-15

Presentation Time: 1:30 PM-5:30 PM

DIVERSITY AND PALEOECOLOGY OF A NEW ORDOVICIAN (KATIAN) CRINOID FAUNA FROM THE NEUVILLE FORMATION, SOUTHERN QUÉBEC, CANADA

BROWER, James C.¹, COURNOYER, Mario², IELLAMO, John², WRIGHT, David³, COLE, Selina³ and **AUSICH, William**⁴, (1)Heroy Geology Laboratory, Syracuse University, Syracuse, NY 13224, (2)Museum of Paleontology and Evolution, 541 Congregation Street, Montreal, QC H3k 2J1, Canada, (3)Department of Paleobiology, National Museum of Natural History (Smithsonian Intitution), Washington, DC 20560, (4)School of Earth Sciences, Ohio State University, 155 S Oval Mall, Columbus, OH 43210-1398

The Neuville Formation preserves a diverse echinoderm paleocommunity, including a moderate diversity crinoid fauna. Disparids and cladids dominate the fauna comprised of at least two diplobathrid camerates, five disparids, and four cladids. Crinoids were preserved in multiple obrusion deposits that resulted in exquisite preservation. Complete specimens (arms to holdfasts), including juveniles and adults, are known for most species, and numerous biotic interactions among crinoids are also preserved. The Neuville fauna is a unique Katian crinoid assemblage compared to other contemporary faunas, such as those in the Cincinnati Basin and southeast Ontario. It lacks monobathrid camerates, hybocrinids, and flexible crinoids, all of which are typically abundant in Katian crinoid faunas. The Neuville paleocommunity shares several genera and species with the Katian of the Cincinnati region, but it also contains genera not present in the Cincinnati region as well as new species. Among disparids, Neuville specimens exhibit a gradient of morphological features intermediate between *Ectenocrinus* and *Drymocrinus*, possibly representing hybrids or a species complex, and require further evaluation.

Session No. 47--Booth# 22

T3. Under the (Ancient) Sea: Marine Life from the Coastal to Great Plains (Posters)

Friday, 8 April 2022: 1:30 PM-5:30 PM

Junior Ballroom B (Duke Energy Convention Center)

Geological Society of America Abstracts with Programs. Vol. 54, No. 4 doi: 10.1130/abs/2022NC-374841

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Back to: T3. Under the (Ancient) Sea: Marine Life from the Coastal to Great Plains (Posters)

<< Previous Abstract | Next Abstract >>

DIVERSITY AND PALEOECOLOGY OF A NEW ORDOVICIAN (KATIAN) CRINOID FAUNA FROM THE NEUVILLE FORMATION, SOUTHERN QUÉBEC, CANADA

James C. Brower[♣], Syracuse University; Mario E. Cournoyer, Musée de paléontologie et de l'évolution, Montréal, Québec, Canada; John Iellamo, Musée de paléontologie et de l'évolution, Montréal, Québec, Canada; David F. Wright, National Museum of Natural History, Washington, D.C., Selina R. Cole, National Museum of Natural History, Washington, D.C.; William I. Ausich, The Ohio State University, Columbus, OH

COMPARISONS

FAUNAL

Abstract

The Neuville Formation preserves a diverse echinoderm paleocommunity, including a moderate diversity crinoid fauna. Disparids and dadids dominate the fauna comprised of at least two diplobathrid camerates, five disparids, and four cladids. Crinoids were preserved in multiple obrusion deposits that resulted in exquisite preservation. Complete specimens (arms to holdfasts), including juveniles and adults, are known for most species, and numerous biotic interactions among crinoids are also preserved. The Neuville fauna is a unique Katian crinoid assemblage compared to other contemporary faunas, such as those in the Cincinnati Basin and southeast Ontario. It lacks monobathrid camerates, hybocrinids, and flexible crinoids, all of which are typically abundant in Katian crinoid faunas. The Neuville paleocommunity shares several genera and species with the Katian of the Cincinnati region, but it also contains genera not present in the Cincinnati region as well as new species. Among disparids, Neuville specimens exhibit a gradient of morphological features intermediate between Ectenocrinus and Drymocrinus, possibly representing hybrids or a species complex, and require further evaluation.

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KEY ASPECTS OF FAUNA

- Tiering structure revealed by multiple taxa with complete columns
- 2. Unique Katian crinoid fauna
- Evidence for hybrids or species complex between "D." geniculatus and E. simplex
- 4. Many biotic interactions preserved in fauna
- 5. New species present

