

M.A.P.S *Digest*

Official Publication of
Mid-America Paleontology Society
<http://www.midamericapaleo.org>

Volume 46, Number 3
Summer 2023



“A LOVE OF FOSSILS BRINGS US TOGETHER”

Calendar

NOTE: Until further notice, all MAPS monthly meetings will be held virtually via ZOOM, NOT in-person in Trowbridge Hall. Check the website and watch for e-mails for further information.

2023

October 20-22

MAPS EXPO XLIV

Location: Orr Building

Illinois State Fairgrounds
Springfield, Illinois

Theme: The Devonian II

Keynote Speaker: Jed Day

Topic: TBA

Info: www.midamericapaleo.org

New in 2023: Live auction on site

Saturday!

****EXPO 2023 Info & Registration will appear in the May Issue of the MAPS Digest****

October 18-21

MAPS SATELLITE HOTEL ROCK SHOW

Location: Northfield Inn

3280 Northfield Drive
Springfield, Illinois

Contact: Dan Cooper

dancooper@cinci.rr.com
(513) 292-3373

Contributions to Digest Needed

The Digest editors encourage the members to submit articles for publication in the Digest issues. The Digest is for the members and should reflect their interests. If you have specimens that you collected and would like to share with other members or would like to describe a favorite collecting site, please write an article in Word, Times New Roman size 12 font, single spaced with one-inch margins, and send to the editors. Photos and diagrams can be e-mailed separately or incorporated in the article.

John: Fossilnautiloid@aol.com

Chris: CDCozart@aol.com

Call for Papers

The theme for the **2023 EXPO** is **The Devonian II**. Any paper dealing with fossils, stratigraphy, or site-specific paleontology relating to the Devonian Period would be appreciated. The papers should be in Word, Times New Roman, size 12 Font, single spaced with one-inch margins, and e-mailed to one of the Digest Editors by **September 1, 2023**. Diagrams/Photos can be sent separately or imbedded in text. (See article p. 3 this issue for Devonian teaser.)

John: Fossilnautiloid@aol.com

Chris: CDCozart@aol.com

DUES INFO

Please send your \$20 2023 MAPS dues to:

Dale Stout
2237 Meadowbrook Drive S.E.
Cedar Rapids, Iowa 52403

About the Cover

Pictured, as a reminder of the topic of EXPO XLIV, The Devonian Period, is a specimen of *Tornoceras iowaense*, an ammonoid cephalopod, collected from the Devonian Solon Member of the Cedar Valley Group at the Brooks Quarry, Independence, IA. Collected, prepared, and photographed by MAPS member John Catalani.

MAPS EXPO REMINDERS

EXPO DIGEST PAPERS NEEDED: Any paper dealing with fossils, stratigraphy, or site-specific paleontology relating to the Devonian Period would be appreciated. The papers should be in Word, Times New Roman, size 12 Font, single spaced with one-inch margins, and **e-mailed to one of the Digest Editors by September 1, 2023**. Papers received after this date may not be included in the volume. Diagrams/Photos should be sent separately--the editors will assimilate the paper to fit the EXPO Digest format.

MAPS EXPO SHOW TIMES (NOTE the 9:00 am Friday show opening):

Friday October 20: 9:00 am to 5:00 pm
Saturday October 21: 8:00 am to 5:00 pm
Sunday October 22: 8:00 am to 3:00 pm

SET-UP: Normal set-up will take place on Friday, October 20, at 7:30 a.m. However, for those that want to set up their tables on Thursday, October 19, MAPS has arranged for the building to be opened with set-up from 1:00 p.m. to 6:00 p.m. on Thursday. Buying, selling, or trading will NOT be allowed on Thursday and will be enforced. NOTE: There will be no security Thursday night.

NOTE TO DEALERS: All-hands-on-deck for arranging tables in show format Thursday at 1:00 p.m. At this venue, we are responsible to set up tables--YOUR TABLES. No dealer may set up their display until all tables are in place. Additionally: from comments on last year's show, all dealers may want to consider using skirting on their tables to enhance material presentation.

EXPO XLIV ADVERTISEMENT: A successful show depends on customers showing up to view your specimens and wares. To facilitate this, we are asking dealers to advertise EXPO XLIV vigorously to their clients on Facebook. Additionally, page one of the MAPS website (<http://www.midamericapaleo.org>) has the show flyer available in pdf format, by clicking the link, for distribution in your bricks-and-mortar store, your e-mailings, and other shows and venues.

AUCTIONS AND DONATIONS: As part of your table fees, you are encouraged to donate a correctly labeled, quality fossil(s) or fossil-related item(s) to the Auctions preferably by end of day on Friday so time will be available to sort auction items. Information to include with the specimen is as follows: Brief description and common name, species information, location, and time period. **A minimum guide to the value of your donation would be something equal to your table fee: if you have one table, the donation should have a minimum value of \$30; two tables, \$60; etc.** NOTE that these specimen donations as well as any monetary donations are tax deductible due to the 501(c)(3) status of MAPS.

TABLE REGISTRATION: If you sent your table registration sheet and check to Tom Williams but have not received an e-mail from Tom confirming your registration, e-mail (paleotom234@comcast.net) or call (815-228-5083) Tom immediately. There has been an issue with the mail service and some registrations have not reached Tom.

Additional registrations can be sent to: Thomas Williams MAPS
PO Box 531
Chatham, IL 62629

Mid-America Paleontology Society Board Meeting Minutes November 14, 2022, by Zoom

Board members present: Marv Houg, Dale Stout, Jim Preslicka, Tom Williams, John Catalani, Karl Stuekerjuergen, Tiffany Adrain (scribe).

Also present: Mary Boesdorfer.

Marv called the meeting to order at 7.10pm.

Secretary's Report: None.

Treasurer's Report – None.

Expo 2022, October 21 – 23 Review

- Flyer: keep Roman numerals. Keep “World’s Largest Fossil-only Show.”
- Activities: Reinstate Ask The Expert. Add displays.
- Door prizes: initiated too late for 2022, organize better next year. Buy prizes? Use tickets that people can put their contact info on (not raffle tickets). Determine how many draws and how often. CVRMS displays numbers on a board; ESCONI calls 3 or 4 numbers at a time. Keep calling numbers until a winner comes forward.
- Auction: move Live Auction to Orr Building and hold it from 3pm to 4.00/4.30pm, to get more people involved. Evening auction is taking too long and getting too late. John will update table registration information to request donations by 2.00 pm Saturday. Preview auction items at front desk, where bidding card can be picked up) until 2.30pm. Close at 5.30pm on Saturday.
- Opening times: Friday: 9am to 5.00pm; Saturday 8.00am to 5.30pm; Sunday 8.00am to 3.00pm.
- Authenticity and legality of fossils: John: include wording such as “MAPS assumes that all fossil material is real and authentic and that any alteration or reconstruction is noted.” Let dealers know they are responsible for anything for sale that is not as advertised.
- Discussion of suggestions from Alan Goldstein & Dale Brown.

John motioned to adjourn the meeting. Jim seconded. Meeting was adjourned at 8:51 PM.

Mid-America Paleontology Society Board Meeting Minutes February 16, 2023, by Zoom

Board members present: Marv Houg, Dale Stout, Doug DeRosear, Chris Cozart, Tom Williams, John Catalani, Karl Stuekerjuergen, Bob Rondinelli, Tiffany Adrain (scribe).

Marv called the meeting to order at 7:10 PM.

Secretary's Report: Minutes of the last meeting were circulated by email. John motioned to accept the Minutes; Tom seconded. Minutes accepted.

Treasurer's Report: Jim emailed the Treasurer's Report prior to the meeting. John motioned to accept the report; Chris seconded. Treasurer's Report accepted.

EXPO 2023: Orr Building, Springfield, Illinois. October 20-22, 2023

Theme: Devonian. John proposed reprinting the 2013 Expo Digest “The Devonian” as “The Devonian I”

and making the title of the 2023 Expo Digest “The Devonian II,” or “Devonian Period I” and “Devonian Period II” respectively (Editor’s decision). Chris motioned to accept; Karl seconded. Request accepted.

Orr Building deposit: Marv will confirm with Jim and Tammy that the deposit has been received.

Expo times: Set-up time Thursday 1.00 – 6.00 pm. Assistance is required from dealers to set up tables, starting 1pm on Thursday. Marv will direct volunteer teams in table positioning, assisted by Tom and Karl. Karl suggested using tape to mark where each table group starts (remember to remove at end of show). Three teams of 5 people must be identified by Wednesday or Thursday before show. Marv will ask Dan to recruit dealers. John will add requirement to dealer contract.

Friday 9.00 am opening (correctly stated on cards). Early-birds will be allowed in.

To Do List: not available.

Suggestions received from Judy Cunningham via Stuart Grieve: similar suggestions to previous discussion. More volunteers would be needed to carry out most suggestions.

- Advertising: Karl suggested enquiring about reciprocal/joint advertising, e.g., with weekend Flea Market.
- Food vendor: Marv will ask Tammy for a list of approved vendors. Tom will ask LOESS Club who they are using.
- Admission charge: 2023 cards state free admission. 10-12 people would be needed to cover both entrances for the duration of Expo. John commented that MAPS has never charged admission traditionally. Marv will ask Jim about donations.
- Signage: will be posted in area leading to Fairground. No capacity to put signs around Springfield.
- Flyers: Tom will print copies for Mary and Carol to put up around downtown. Will need them in hand a couple of weeks before. Consider color ad in Illinois Times (Tom will find out cost). TV is difficult to deal with. Springfield News is not worth the cost. We definitely want flyers to display at LOESS show.

Auction: move auction to Saturday afternoon in program area – 3:00 p.m. at Orr Building. John already added it to the May Digest.

Advertising: Paleo Joe will add info to Facebook page. Marv suggested posting to as many Facebook pages as possible, e.g., Fossil Forum, Rockhounds for Beginners. Start posting flyers and include other venues at the fairgrounds site the week of, or prior to, the show.

Vendor presentation: Tom suggested including recommendations to dealers such as using tablecloths so boxes under tables are hidden, creating nice display, displaying retail-grade material.

Program area: – screen size: a new screen would have to be purchased if a bigger/different format is needed.

MAPS Programs: John will add a call for speakers to the next Digest.

Keynote Speaker: Jed Day, no title yet.

Admissions: See previous Minutes for discussion. Need an obvious container for free-will donation, and sign.

News Release: Dale will try to get the news release out earlier.

2024 Keynote: Tom is communicating with possible speaker. Theme will depend on who the speaker is.

Motel Show and Reservations: Dan Cooper is organizing this at the Northfield Inn. Anyone wishing to stay at the motel should book soon and state they are with the hotel show.

Old Business:

- Website: put new flyer up.
- MAPS Checking account: Dale still needs to be added.
- Name badges: Contact Dale if needed.
- Audit Committee: no report.

New Business:

- Biennial Report: Due March 31, 2023. Bob Rondinelli has hired Christine (attorney) to file it and will donate fee. Board members thanked Bob.
- EXPO paper deadline: end of August. Need cover for EXPO Digest.
- Next Digest: May edition.
- Club memberships – Marv received a query about a membership check not being cashed. Marv will contact Jim about it.
- Bob showed a fossil. John suggested adding “Collector’s Corner” to Digest.

Next Meeting: Tuesday April 11, 2023, at 7.00pm on Zoom.

Adjourn: John motioned to adjourn the meeting. Chris seconded. Meeting adjourned.

Mid-America Paleontology Society Board Meeting Minutes April 11, 2023, by Zoom

Board members present: Dale Stout, John Catalani, Jim Preslicka, Marv Houg, Bob Rondinelli, Doug DeRosear, Karl Stuekerjuergen, Tom Williams, Tiffany Adrain (scribe).

Marv called the meeting to order at 7.23pm.

Secretary’s Report: Minutes of the February 16, 2023, meeting was circulated by email. Bob motioned to accept the Minutes; Dale seconded; Minutes accepted.

Treasurer’s Report: Jim read the Treasurer’s Report (also circulated by email). At the end of March there was \$13599.05 in checking; \$2177.16 in savings; \$15,776.21 in total. Form 990 has been filed and accepted (requirement of maintaining 501c3 status). Jim will send copy of filing to Board. Dale received a reminder about the biannual report and will follow up. Jim discussed the email from the Paleontological Society requesting donations for 2023. No donation was made in 2022 as the Auction income decreased from \$3700 in 2021 to \$2300 in 2022. Marv asked about the balance of show expenses vs revenue without auction income. Jim estimated \$4800 to \$6,000 for show expenses with c. \$5,000 income from table fees. Tom said he is not sure when/if the Dig Trip will be offered again and warned against a slow drain of funds (even though there is \$15k, as Karl reasoned). Marv reminded the Board that the auction is advertised as “supporting students” so some donation should be made. Karl motioned that the MAPS donate \$500 to the Paleontological Society and \$250 to the Strimple Award.

Bob seconded. Motion carried.

John proposed to accept the Treasurer's Report. Bob seconded. Report approved.

MAPS Expo 2023:

- Set-up: Tom is emailing dealers to inform them that they must help with set-up. John added the information in two places in the Digest. Marv suggested putting a sign up at the motel telling dealers to come at 1.00pm on Thursday and that set-up will end at 6.00 pm sharp.
- Stewart Grieve suggestions: Marv responded.
- Floor Plan: accommodated tables for live auction with minimal change.
- Advertising: Tom checking price of color ad, will send Paleo Joe's email to Marv. Marv listed various Facebook groups to post Expo flyer with. Make sure post is shareable. Tammy is sending contact info for the dog and cat shows occurring at the Fairgrounds prior to Expo. The flea market is the following week, unfortunately.
- Programs: Dale will secure speakers after May Digest is sent out.
- Keynote Speaker: no title yet.
- News Release: Dale will send out after speakers are secured.
- Donation box: Need good size boxes. Donations were good last year.
- Motel Show: Block booking is not yet set up. Marv will talk to Dan Cooper. Anyone who has made a booking already might want to rebook when block is set up.
- Kids' activities: Tom suggested having a Kids' Silent Auction with low price fossils. Jim will ask Amy if it is feasible. If so, Marv will create a kids' Expo flyer. Marv also suggested a program for kids, e.g., where to find fossils, though public sites may be hard to find.

Expo 2024: Keynote Speaker: Joe Devera: Carboniferous tetrapods of southern Illinois.

Website: Jim will add the 2023 flyer to the MAPS website.

Bank Account: Jim and Dale still need to set up signatories.

Audit: no update.

Badges: no update.

Membership queries: follow-up by Jim.

Additional Old Business: none

New Business:

Biannual Report: Bob successfully filed the report required for 501c3 status through Bradshaw Law. Christine (Halbrook?) is leaving for another company and will take MAPS business with her, so fee structure may change. Marv thanked Bob, on behalf of MAPS, for donating attorney costs.

Devonian I Digest reprint: John requested a copy of the Iowa Devonian Reef Diorama image and permission to print. Tiffany will contact the UI Museum of Natural History. Discussion over number of reprint copies needed. John will get an estimate from Allegra. John made a motion to print 80 copies of the 2013 Expo Digest as Devonian Period I (depending on approval of price). Tom seconded. Motion carried.

Election of Officers: John motioned to accept the current slate of MAPS officers with Bob Rondinelli as Director through 2025. Dale seconded. Motion carried.

Crinoid Project: Bob reported that he visited the State Historical Museum to see the Beane Crinoid Collection and is in discussion with Museum Curator Leo Landis about an exhibit. Bob would like to establish a fund for donations to support this. John suggested displaying some material at the 2024 Expo. Bob reported on a new exhibit wing devoted to crinoids in development at the Burlington Heritage Museum. Forest Gahn is collaborating on this project. Matt Hill, Iowa State University, is interested in a prehistory of Iowa exhibit. Tiffany motioned to make Bob the point person for a MAPS public outreach project with the State Historical Museum of Iowa to promote crinoids in the state. Dale seconded. Motion carried. Bob will create a sub-committee, including Tiffany.

Next meeting: May 22, 2023, 7pm.

Doug moved to adjourn the meeting; John seconded. Meeting adjourned at 8.50pm.

Mid-America Paleontology Society Board Meeting Minutes May 19, 2023, by Zoom

Board members present: Dale Stout, John Catalani, Chris Cozart, Jim Preslicka, Marv Houg, Doug DeRosear, Karl Stuekerjuergen, Tom Williams, Tiffany Adrain (scribe).

Marv called the meeting to order at 7.15pm.

Secretary's Report: Minutes of the April 11, 2023 meeting were circulated by email. Jim motioned to accept the Minutes; Karl seconded; Minutes accepted.

Treasurer's Report: Jim read the Treasurer's Report (also circulated by email). At the end of April there was \$12511.68 in checking; \$2177.17 in savings; \$14688.85 in total. Form 990 has been filed and accepted (requirement of maintaining 501c3 status). Payment was made to Allegra for the newsletter mailing and checks written for the donations to the Paleontological Society. The Board discussed a recent email from the Paleo Society regarding named awards and endowments but agreed that this was not possible with MAPS' current budget. John motioned to accept the Treasurer's Report. Dale seconded. Report approved.

MAPS Expo 2023:

- Floor Plan: Marv no longer has access to CAD software to access the floorplan and is looking for alternatives.
- Advertising: Tom is checking price of color ad and will need ad soon for submitting in August. Last year's ad cost \$575, split with the motel show. Marv will talk to Dan Cooper about sharing cost this year. Post on your Facebook fossil groups! Tammy sent contact info for the dog and cat shows occurring at the Fairgrounds prior to Expo. Marv will forward email to Tom. Tom needs color flyers and 13 x 19" posters to display at LOESS show. Send any extra cards to Tom.
- Programs: Tom and Dale are corresponding with speakers. No programs needed on Sunday. Auction will take up some speaker time on Saturday.
- Keynote Speaker: Tom will ask Jed for title.
- Motel Show: Marv will talk to Dan Cooper.
- Kids' activities: Kids' Silent Auction is already a feature and will continue. Jed is bringing the fossil hunt sandbox. Tiffany will provide small fossils for kids' activity with accompanying ID sheet and will give Dale publications to give away.

- Paleontological Research Institute: Tom will contact them soon to arrange participation.

Expo 2024: Theme: Carboniferous. Keynote Speaker: Joe Devera: Carboniferous tetrapods of southern Illinois.

Website: Jim added the latest newsletter and the 2023 flyer to the MAPS website. Members were notified by Club listserv.

Bank Account: Jim and Dale still need to set up signatories.
Audit: no update.

Badges: Dale has a source and will get a sample.

Membership queries: received a request for a copy of the Directory. Jim will make a pdf version available on request but will first ask members to contact him if they do not want to be listed. Information consists of name, email address, state, and interest. Jim will send two notices with 3-4 weeks' notice in total.

Additional Old Business: none

New Business:

Devonian I Digest reprint: John received an estimate of \$750 from Allegra for reprinting 80 copies of Devonian I (2013) Expo Digest. John suggested the money is better spent on the current issue (Devonian II) rather than reprinting Devonian I (2013). Chris suggested adding selected articles from the 2013 Digest to this year's. John will check with authors. Marv suggested selling flash drive copies of the 2013 Digest. John will send a revised version of the 2013 Digest to the Board. Deadline for 2023 Digest is end of August.

Awards: please send nominations to MAPS Board.

Expo Displays: Tom will inquire about displays. John and Jim are providing Devonian cephalopods – need lockable cases. Tom and Marv also providing material. Four cases in total. All will collaborate on label format.

Next meeting: July 13, 2023, 7pm.

Chris moved to adjourn the meeting; Dale seconded. Meeting adjourned at 8.34pm.

Ozarkian and Canadian “Periods”

John A. Catalani

The Geologic Time Scale that we use today has been refined over the years into internally consistent divisions of deep time. Along the way, however, there have been diversions in the placement and naming of Time Scale units. Two of these units involve the Geologic Period that I am most familiar with--the Ordovician.

Recall that the Ordovician Period (System) was a compromise by British stratigraphers to solve the Cambrian-Silurian boundary dispute. Charles Lapworth in 1879 erected the Ordovician System to include rocks claimed by both Adam Sedgwick for his Cambrian System and Roderick Murchison for his Silurian System thus ending a decades old “debate”. It was not until 1903 that the term Ordovician was officially adopted by the United States Geological Survey, not until 1906 that British and Irish geologists accepted the term Ordovician, and not until 1960 that the International Geological Congress officially accepted the Ordovician as part of the Geologic Time Scale.

Geologic Systems are not static entities. They are in a constant state of flux. For example, a major direction recently in Ordovician and other Systems research has been to establish Global Stages for each System. This Global effort resulted from intense field work culminating in the establishment of Global Stages allowing for meaningful comparisons of Ordovician sections and faunas world-wide. In establishing these Global Stages, new techniques were employed to fine-tune resolution of the units and establish increasingly more accurate ages.

One technique that has both simplified and complicated Ordovician stratigraphy is the use of K-bentonite beds. K-bentonites are altered volcanic ash layers, often from a single volcanic eruption, that identify a virtual instant in time (isochronous units). Since K-bentonites can be correlated over large distances using elemental composition, they have the potential of allowing us to place variously named stratigraphic units in a time ordered sequence very accurately. On the other hand, such specific time designations can cause problems for certain previously assigned rock units. For example, in Illinois the Deicke K-bentonite occurs at the top of the Platteville Formation--a useful marker bed. In Minnesota, however, the Deicke is positioned within the Carimona Member, the uppermost member of their Platteville Formation. This presented a bit of a stratigraphic dilemma. The state surveys logically reassigned the Carimona above the Deicke to a Member of the overlying Decorah Formation. These isochronous markers can also be used to determine ages of the ash flows by two main radiometric methods: $^{40}\text{Ar}/^{39}\text{Ar}$ on biotite crystals and $^{238}\text{U}/^{206}\text{Pb}$ on zircon crystals. The application of these isotopes has decreased the uncertainty in the ages and thus improved the resolution of the stratigraphic units.

Back to the Ozarkian and Canadian. My first exposure to the so-called “Canadian System” occurred while visiting Rousseau Flower in New Mexico. He was the foremost authority on nautiloids, particularly those from the Ordovician, in the world. (Rousseau has since passed away and his passing was an enormous loss both for the science of paleontology and for those of us who reveled in such legendary and colorful paleontologists.) During my visits with him our talks often ranged beyond my Platteville specimens and included the evolution of nautiloids in general. In the course of these talks, he discussed those nautiloids that came before mine calling this time the Canadian System rather than the Lower Ordovician. Rousseau, of course, based his Canadian System on a comparison between nautiloid faunas of the “Canadian” and the “Ordovician”. Nautiloids of the orders Ellesmerocerida and Tarphycerida dominate Canadian faunas. These orders are, however, relatively minor in the post-Canadian Ordovician. A subsequent diversification of the nautiloids produced faunas dominated by six or seven (depending on whose classification one uses) additional orders that were either minor or nonexistent in the Canadian.

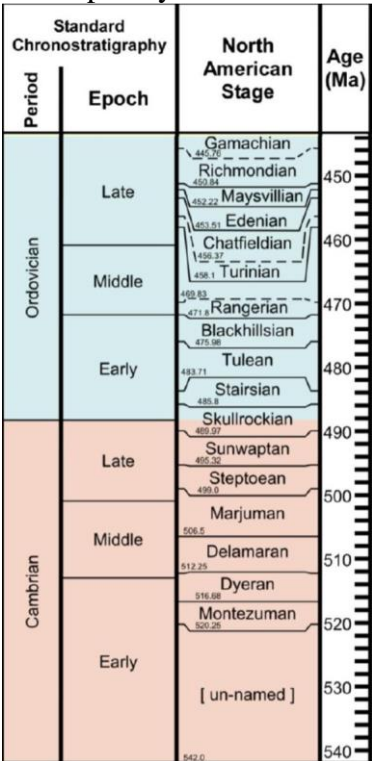
Flower (1964, p. 150) stated that “the Canadian-Ordovician boundary appears as a horizon at which profound changes took place in the cephalopods”.

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E. O. Ulrich’s lower Paleozoic Systems.

Before Rousseau, E. O. Ulrich, an early stratigrapher who believed that fossils were inadequate for defining stratigraphic boundaries employing instead erosional surfaces to define said boundaries, proposed two new Systems that were to be placed between the Cambrian and the Ordovician. He named these Systems Ozarkian and Canadian. In my opinion, Ulrich made two mental errors in his attempt to revise the Geologic Column: 1) proposing not one but two additional Systems so soon after the Ordovician System was adopted and 2) employing a radical new method (akin to today’s sequence stratigraphy) to define these systems, a method that the geologists of the time were unable or unwilling to accept. Additionally, several of his boundary correlations were inaccurate to the point that some of his “distinct” boundaries were eventually proved to be equivalent. Flower (1964, p. 17) commented on these Systems and concluded that “there is a tendency to forget the Ozarkian completely and to treat the Canadian as merely the basal part of the Ordovician, a usage which the writer finds impossible in relation to the cephalopods”. Unfortunately, by the time Rousseau came along with his Canadian System, one based on a careful evaluation of the cephalopod faunas, the established time scale proved impregnable. Both Ulrich’s Ozarkian and Canadian Systems and Flower’s Canadian System are now included in the Early Ordovician Epoch.

(I actually do use one of these terms when presenting programs on cephalopods. When referring to faunas before the Platteville (Smithville, Gasconade, etc.), I often combine these faunas under the umbrella of Ozarkian faunas.)



Modern lower Paleozoic units.

References

Flower, R. H. 1964. The Nautiloid Order Ellesmerocerida (Cephalopoda). Memoir 12, New Mexico Bureau of Mines and Mineral Resources, 234 p.

Ulrich, E. O. 1911. Revision of the Paleozoic Systems. *Bulletin GSA*, 22:281-680.

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