

M.A.P.S *Digest*

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

Volume 45, Number 3
June-Sept. 2022



“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.

2022

October 21-23

MAPS EXPO XLIII

Location: Orr Building
Illinois State Fairgrounds
Springfield, Illinois

Theme: Lagerstätten

Keynote Speaker: Don Bissett

Topic: TBD

Info: www.midamericapaleo.org

**NOTE: Thursday Set-up Time:
1:00 pm-6:00 pm**

2023

March 18 & 19

ESCONI Gem, Mineral, & Fossil Show

Location: DuPage County Fairgrounds, Wheaton, IL
Sat. 10:00 am-5:00 pm; Sun. 10:00 am-4:00 pm

Info: www.esconi.org

March 25 & 26

CVRMS Show

Location: Hawkeye Downs, Cedar Rapids

Theme: TBA

www.cedarvalleyrockclub.org

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 **2022 EXPO** is **Lagerstätten**. Any paper dealing with fossils, stratigraphy, or site-specific paleontology relating to any Lagerstätten 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 the **last week of August 2022**. Diagrams/Photos can be sent separately or imbedded in text.

John: Fossilnautiloid@aol.com

Chris: CDCozart@aol.com

DUES INFO

Please send your \$20 2022 MAPS dues to:

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

About the Cover

The cover photograph displays a pair of *Fisherites reticulatus* (more popularly known as *Receptaculites oweni*) collected from the Cummingsville Formation (Lower *Receptaculites* Zone) at an exposure just south of Rochester, MN. There have been many theories proposed for these enigmatic fossils the most recent(?) being green algae. Photographed in the field by MAPS member John Catalani.

Mid-America Paleontology Society Board Meeting; January 13, 2022, via Zoom

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

Marv called the meeting to order at 7.04pm.

1. Minutes of the November 2021 meeting were circulated by email prior to the meeting. John motioned to approve the Minutes. Bob seconded. Minutes were approved.
2. Jim read the Treasurer's Report: Checking, \$13,770.28; Savings, \$2,177.01; total, \$15,947.29. Dale has \$200 to deposit for dues. Jim is updating the membership list. Bob motioned to approve the Treasurer's Report, Tom seconded. Report approved.
3. Expo 2021 feedback:
 - Regarding temperature, having the heat on is better than being too cold. The temperature cannot be controlled by MAPS but the doors can be opened if it's not raining.
 - Tom talked with the Northfield staff, no negative feedback, no comments from Dan Cooper so far. Rooms for the 2022 Keynote Speaker and Live Auction are booked.
 - PA system: MAPS will take the system donated to them by CVRMS to Springfield for storage by LOESS Club who can use it themselves also.
 - Sales Tax: no reported problems. List of vendors was not requested, but anyone who did not pay and causes problems will not be allowed to return for the next Expo.
4. Expo 2022:
 - Opening times: changed to 9am on Friday to give dealers more time to set up. Saturday and Sunday opening times stay the same. Dealers were very efficient setting up on Thursday. Dale motioned to close at 6pm on Thursday (hours: 1.00pm to 6.00pm). Doug seconded. Motion carried. Add this to dealer information.
 - Expo Planning Manual: Marv circulated the draft manual by email. Will add kids' activities. Please suggest other edits.
 - Advertising: Dale will send 2022 Expo information to Rock and Gem. Look out for other venues to post ads. Tom, Marv and John will compile a list of non-member vendors to send flyers and card to. More visitors came from further away, so increase ads locally. Illinois Times is the biggest advertising boost for LOESS show. Marv will talk to Dan about sharing cost (c. \$575) for two ad slots. Dry Dredgers also advertised it.
 - Kids' activities. Add more kid-friendly/affordable items to Silent Auction. Prepare information for Virtual Backpack for schools. Tiffany will contact additional potential outreach participants and direct them to Tom.
 - Marv circulated updated floor plan with more room around the building columns.
 - Admission: too difficult to staff constantly. Doug motioned to discontinue admission fee. John seconded. Motion carried. Advertise as free admission. Add a donation box. Offer door prizes to get people to stay/return. The list of visitors giving contact details voluntarily (c. 100) was smaller than the actual number of visitors.
5. Website: please send EXPO videos/photos to Jim. Tiffany offered to help with website.
6. Donation to LOESS Club: further discussion of motion to donate admission takings to LOESS Club and the complications of doing this led to withdrawal of original motion and proposal of a new motion by Dale to provide a plaque of recognition and a letter of appreciation to LOESS club for their assistance to MAPS. Doug seconded. Motion carried.

7. Election of Officers for 2022:

President: Marv Houg

1st Vice President: Karl Stuekerjuergen

2nd Vice President: Tom Williams

Secretary: Tiffany Adrain

Treasurer: Jim Preslicka

Directors: Bob Rondinelli (2022), Dale Stout (2023), Doug DeRosear (2024).

John motioned to accept the new slate of Officers. Bob seconded. Motion carried.

8. Old Business: Dale looking for new source of name badges. Tom and Jim will arrange to add Tom as MAPS bank account signatory so he can write cheques to pay Expo-related expenses in Springfield.

Jim motioned to adjourn the meeting. John seconded. Meeting was adjourned at 8.21pm.

Mid-America Paleontology Society Board Meeting; April 18, 2022, via Zoom

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

Marv called the meeting to order at 7.13pm.

1. Minutes of January meeting were circulated by email. John motioned to accept the Minutes, Chris seconded, Minutes were approved.
2. Treasurer's Report was given by Marv. Current balances are: checking \$13299.84; savings \$2177.04; total \$15406.88. All bills have been paid except LOESS club reimbursement of c. \$23 for flyer. Chris motioned to accept the Treasurer's Report, Dale seconded, Report accepted.
3. EXPO business, October 21-23, 2022
 - Thursday set up time is 1:00 PM to 6:00 PM. John has already updated the newsletter.
 - Public opening time on Friday will be 9:00 AM and will be advertised as such in all future publicity. John will put 9:00 AM in newsletter. Due to the cards already having been printed with 8:00 AM, visitors who arrive earlier will be allowed in. Dealers may enter at 7:00 AM.
 - Tiffany will ask Jed Day about kids' activities.
 - Rooms are booked at Northfield for live auction (6 tables, 70 chairs) and speaker (120 chairs).
 - A donation jar is needed.
 - To be able to attract sponsors, a method of recording visitor numbers is needed.
 - Floor plan: front desk (4 tables) has been moved to where previous admissions were; programs have been moved to opposite corner (may need sunscreens).
 - Tom will contact Barb Wagner and register show with State of Illinois.
 - Advertising:
 - Tom and Mary will start designing advertising for local distribution. Will need checks for July submission. Marv said Dan Cooper will rely on social media for motel show, but may be interested in splitting cost of newspaper ad, which Tom will design. Dan will need a draft of the ad.
 - Bob Kurdelmeyer will organize MAPS social media and should be included on future Board meetings.
 - Tom will contact people who could post Expo ad on their own social media and websites.
 - EXPO is on the Rock & Gem calendar – use calendar to identify other shows to advertise at. Look out for addresses to send cards to.

- Tiffany will send advert to paleo societies.
 - PA system at Oakdale will be donated to the LOESS club for safekeeping and use.
 - John needs PO Box number for the next Digest from Tom.
 - Vendors will not need passes.
 - Motel show: Dan will do reservations nearer the time.
4. Website: Tiffany to get website access from Jim.
 5. Bank account: Motion by John Catalani: to add Dale Stout and Tom Williams as signatories of the Mid-America Paleontology Society (MAPS) US Bank checking and savings accounts. Chris Cozart seconded. Motion carried by unanimous vote.
 6. New Business: Dale received a donation for MAPS and will send thank you letter.

Next meeting: May 16th by Zoom at 7:00 PM.

Dale motioned to adjourn the meeting. John seconded. Meeting adjourned at 8:06 PM.

Mid-America Paleontology Society Board Meeting; May 16, 2022, via Zoom

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

Also present: Dan Cooper.

Marv called the meeting to order at 7.05pm.

Tiffany circulated the Minutes of the last meeting by e-mail. Karl motioned to approve; Tom seconded. Minutes were approved.

Treasurer's Report: checking: \$12,767.97; savings: \$2,177.05; total: \$14,945.02. Reflects payment for bank fees, Allegra printing, book of checks. Jim will switch to electronic statements to save bank fees and print at home. Jim circulated income and expenses for 2021 (about typical for pre-pandemic years). Jim filed tax form 990-EZ. John motioned to approve the Treasurer's Report; Dale seconded; Report approved.

Expo advertising and sponsorship:

- Dan and Marv reviewed newspaper ad. 1.00 pm to 6.00 pm Thursday set up time was in the newsletter. Opening time on Friday needs to be changed to 9.00 AM - 5:00 PM. Marv will ask Sharon Sonnleitner to update times, remove "dinosaur eggs" and replace with dinosaur material. Also list fossil fish, Mazon Creek fossils and fossil leaves (instead of plant fossils). Change background on hotel show ad to make it more distinct. Remove workshops. Change Dan's telephone number to 513-292-3373. Tom will ask Don Bissett for talk title.
- Tom will get advertising info to Illinois Times. Tom will ask about adding gate #9, Orr Building (Jim said that was one of the comments). Advert is for Springfield area so it may not be necessary.
- Need a way to determine attendance numbers for potential sponsors. Not enough people to cover admissions desk.
- Dan: can promote Facebook ads to various areas, e.g., Chicago. Tom said St. Louis club contact suggested Facebook boosts. Tom will get Expo video and dinosaur display images from prior exhibitors. Dan will ask Paleo Joe about promoting Expo on his social media. The ad will be in Dry Dredgers media.

Jim will bring PA system from Oakdale. Tom may be able to take it to Springfield this summer in time for LOESS Club show.

MAPS Website: Sharon said site is not secure. Glenn Rocca knows what to do. Jim doesn't have full access. David Board is admin. Tiffany, Jim, Marv, Sharon and Glenn to meet on Zoom to address this. Tom has tax info done for Expo. Liability insurance coverage for directors? Karl asked how much \$1,000,000 insurance a year with will cost. Marv will check.

Next meeting: Tuesday July 5th, 2022, at 7:00 PM on Zoom.

Dale motioned to adjourn meeting. Tom seconded. Meeting was adjourned at 8:16 pm.

Mid-America Paleontology Society Board Meeting; July 5, 2022, via Zoom

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

Also present: Ed Wagner, Mary Boesdorfer.

Marv called the meeting to order at 7.09 pm.

Minutes: Tiffany circulated the Minutes of the previous meeting by e-mail. Marv fixed one typo. Karl motioned to approve the Minutes; Jim seconded. Minutes were approved.

Treasurer's Report: at the beginning of June, checking: \$12,767.97; expenses during June included bank fees, check to LOESS Club for flyer printing, and Allegra for Digest newsletter. Savings: \$2,177.06; total at the end of June: \$14,570.66. Karl motioned to accept the Report Doug seconded; Report was accepted.

Expo

- Marv confirmed the Orr building deposit was received. Tammy will send contract.
- John will add Thursday set-up times (1:00 PM to 6:00 PM) to newsletter in big letters as a reminder.
- Friday opens at 9:00 AM to general public but early visitors will be allowed as they may not have seen the update.
- Revised floor plan: moved talks to corner where silent auction was going to be, front desk move to entrance. Tables pulled away from columns by three feet.
- Newspaper ad has been finalized and sent to Tom who will submit ¼ H ad. Rock and Minerals Show website can advertise for free or will charge \$25 for additional content. Tom motioned to submit ad. Karl seconded. Motion carried. Mary will send information to Tom.
- Flyer is on Facebook. Ask Bob Kurdelmeyer to create a Facebook event.
- Tom reminded everyone to identify anyone who can get cards out any events. Cross out admission fee on cards, if time. Tom will work on a poster to display at LOESS Club show. Mary suggested less text for the poster.
- Tom will pick up PA system if he visits Jim.
- John emailed authors to say end of August is the deadline for Expo Digest articles. Would be interested in Burgess Shale, Mazon Creek, or Le Grand crinoids papers.
- The 2022 Theme is Largerstatte. Don Bissett is the keynote speaker.
- Admissions are free, donations will be suggested. Need two containers and signs.

- Gary Olson has offered to do a program for schools in advance of Expo, also maybe a talk at Expo. Tom will investigate ways to organize.
- Door prizes: Mary said LOESS Club visitors fill out a slip with their details. Sign saying won't sell information but will e-mail about next year's show. One drawing per hour, minimum value \$25, draw another name if no one picks it up. Ed will send EXPO info to LOESS list. Tom has slips.
- Keynote for 2023: may need sponsorships to support speaker travel and accommodation. Think of ways to partner with other organizations, e.g., museums.

Website: Tiffany will create a Zoom meeting for the website group on Wednesday 13th July at 7pm. Jim will update Expo page.

Checking account: Tom needs to go to Iowa City to be added as signatory. Jim has to be present.

Digest: John needs papers for June - September Digest to go out at the end of July.

Club membership: Dale received a message asking about MAPS membership for an entire club. John explained that other clubs can do a newsletter exchange for free and made a motion to write a policy to explain that club membership is not part of the MAPS Constitution and that Institutional Membership is for universities, libraries and museums to receive non-Expo publications only. Other membership benefits (e.g., fieldtrips, individual Digest copies) are for Individual Members only. Tom seconded motion. Motion carried. John will send wording* to Tiffany. Marv will respond to enquiry.

Crinoid exhibit: Bob led an interesting discussion about a possible crinoid exhibit in the future, involving the State Historical Museum, UI Paleontology Repository, fossil collectors, etc.

Next Board Meeting: Monday August 29th 7:00 PM, by Zoom.

John motioned to adjourn the meeting; Jim seconded. Meeting adjourned at 8:59 PM.

* M.A.P.S. Membership Categories *

The Mid-America Paleontology Society fossil club has several membership categories. The basic membership category is the "Household" membership that covers individuals and families. The Institutional/Library membership provides non-EXPO Digest issues to be cataloged at their particular institution be they libraries or universities. We also participate in exchange "bulletins" between various clubs. That was then. Now, with most clubs taking advantage of electronic newsletters, the need for physical exchange or cataloging of newsletters is no longer necessary. Members of other fossil/mineral/rock clubs have the option of joining M.A.P.S. as Household members at their choice as many M.A.P.S. members join other clubs individually. Clearly, no membership category in any club allows the club to join another club with one membership that includes all of their members.

The New Ordovician--Still Collecting the Same Rocks

John A. Catalani

I don't know about you, but I am not a big fan of change. Certainly, I will accept change when it betters the human condition such as recyclable plastic bottles AND caps, computer generated dinosaurs in movies, and remastered classic Fleetwood Mac albums. However, I am most comfortable with traditional fossil taxonomic names and established stratigraphic terminology. Taxonomic names, especially at the generic level, are subject to change with varying degrees of acceptance. For example, the name of a well-known Galena Formation (Ordovician) index fossil, *Receptaculites oweni* (see cover photo) was changed some years ago to *Fisherites reticulatus*. Most of us, however, still use *Receptaculites*, the old genus name--we are comfortable with it and know exactly what part of the Ordovician someone is referring to when that name is mentioned. The three concentrations of these fossils are still termed the Lower, Middle, and Upper *Receptaculites* Zones. Fortunately for me, so few paleontologists are involved with nautiloids that taxonomic designations are seldom changed. Even the monumental works by August Foerste published around 100 years ago remain valuable since most of the taxonomic names he established are still valid.

Similarly, in past years, the classification and assignment of Ordovician stratigraphic units has undergone a drastic change culminating in the Global Ordovician Chronostratigraphic Chart (Bergström et al. 2009). In addition to the establishment of global stages (names, boundary definitions, and type sections), many other units were reassigned and/or renamed thus altering how we subdivide the Ordovician. This is part of an effort of the International Commission on Stratigraphy (ICS, the oldest scientific body of the International Union of Geological Sciences) to standardize stratigraphic names on a global scale to facilitate correlation of the various System units. Standardized stratigraphic units will allow comparisons of faunas found in locations world-wide. Clearly, any changes in Ordovician stratigraphic units are of importance to me since my main interest is the nautiloids contained in Ordovician Platteville Formation rocks of the mid-west. Fortunately, names of rock units, such as formations and members, seldom change. What does change is how these rock units fit into the overall picture of regional and global stratigraphy.

As one might expect, the process of determining these new stratigraphic designations and names was long and argumentative. Essentially two factors needed to be agreed upon by the International Subcommission on Ordovician Stratigraphy (ISOS, a subdivision of the ICS) for each Global Stage--a type locality and stage boundaries. Type localities must show boundaries clearly and be accessible to future researchers. The lower boundary of each Stage is usually determined by the first appearance (termed First Appearance Datum or FAD) of a particular graptolite or conodont since these fossils are abundant and have world-wide distribution. This boundary is referred to as a Global Stratotype Section and Point (GSSP). (Recently, this designation has been renamed the Global Boundary Stratotype Section and Point but still referred to as GSSP.) In addition, dependable absolute ages are helpful in determining boundaries at all stratigraphic levels. Unfortunately, rocks that contain the appropriate isotopes needed to determine absolute ages by radioactive dating techniques usually do not contain fossils and are not always present in or around boundary rocks, but see the next paragraph. Also, absolute ages are often fraught with uncertainty although with new and refined techniques our resolution of these time boundaries has, and is, improving greatly.

One of the most helpful techniques in resolving the problems of determining absolute ages and correlations for the Ordovician was the use of K-bentonites. K-bentonites are volcanic ashes that have been altered into potassium-rich clay beds (bentonites), are found between rock layers that can contain fossils, and represent a specific time horizon in the strata (isochronous in paleo-speak). There are 60+ bentonite beds in the North American Ordovician, as well as beds present in Europe and South America. They can be correlated regionally using chemical fingerprinting in which the percent elemental composition of target bentonites is compared (there has even been attempts to correlate several globally). In this way, a bentonite in, say, Minnesota (Deicke) can be correlated with one in Tennessee (T-3) and one in Kentucky (“Pencil Cave”). Additionally, these volcanic ash beds can be radiometrically dated fairly precisely using uranium-238/lead-206 (on zircon crystals) or argon-40/argon-39 (on biotite crystals) isotopic ratios. Given their versatility as time markers, it is no wonder why K-bentonite beds are often used as boundaries between stratigraphic units. For example, the Millbrig K-bentonite is the boundary between the Turinian and Chatfieldian Stages of the Mohawkian Series in North America.

Some historical background. When I started aggressive collecting (early 1970s), the mid-west Ordovician was divided into three clearly defined Series based, of course, on the best information available at that time including fossils and rock correlations. The lowest (oldest) of these Series was termed the Canadian. The fossils contained in Canadian rocks are more similar to those of the Cambrian than to those found in rocks of later Ordovician age. This is what prompted the late Rousseau Flower, at that time the foremost authority on nautiloids, to begin using “Canadian” unofficially as a System in many of his publications. The upper (youngest) Series was termed the Cincinnati and the rocks contained in this series were, and still are, exposed in possibly the most prolific collecting area in the United States--the tri-state region of Indian, Kentucky, and Ohio. Literally millions (billions?) of fossils have been collected there and virtually every new excavation exposes these highly fossiliferous shales and limestones.

Traditionally, it was the Middle Ordovician Champlainian Series that contained the rocks from which I obtained my nautiloids. In my collecting area, two fairly fossiliferous groups of rocks are exposed--the lower Platteville Group (now a Formation, more on this later, but I will use the new designations throughout this essay) and the upper Galena Group (Formation). At that time, the Platteville was assigned to the upper part of the Blackriveran Stage while the Galena comprised pretty much the entire Trentonian Stage and both were tentatively placed in the lower Caradoc of British usage. Both units are composed primarily of carbonates even though Galena rocks are generally more pure with less clay. Although the Platteville is generally more fossiliferous both in numbers and diversity, both units contain an abundant and diverse molluscan fauna (as well as trilobites, echinoderms, brachiopods, etc.). The taxa present in the rocks of these units are similar but not the same--they may both contain nautiloids but there were very few genera, let alone species, in common.

Then in the mid-1980s, I became aware, by way of the academic literature and several fieldtrip guidebooks, of a reassignment of several units of the Galena Formation. The upper Galena, including the very fossiliferous Wise Lake, was now being correlated with the Edenian-Maysvillian units of the lower and middle Cincinnati. The lower Galena was still placed in the Champlainian Series. That meant that the Champlainian-Cincinnati contact occurred in the middle of the Galena Formation. I had collected the fossiliferous Wise Lake many times (one quarry exposing this unit was located less than a mile from my parents' house) searching for nautiloids that occurred in rocks just above (younger) those of the Platteville. Curiously, the trilobites I had collected in the Wise Lake seemed very similar to those I had found in the type Cincinnati and one of them was of a common genus--*Flexicalymene*.

GLOBAL			UNITED KINGDOM		NORTH AMERICA		
SYSTEM	SERIES	STAGE	SERIES	STAGE	SERIES	STAGE	
ORDOVICIAN	UPPER ORDOVICIAN	HIRNANTIAN	ASHGILL	HIRNANTIAN	CINCINNATIAN	GAMACHIAN	
				RAWTHEYAN CAUTLEYAN PUSGILLIAN		RICHMONDIAN MAYSVILLIAN EDENIAN	
		SANDBIAN	CARADOC	STREFFORDIAN CHENEYAN		MOHAWKIAN	CHATFIELDIAN
				BURRELLIAN		TURINIAN	
	MIDDLE ORDOVICIAN	DARRIWILLIAN	LLANVIRN	AURELUCIAN	WHITEROCKIAN	CHAZYAN	
				LLANDEILIAN		Not distinguished	
		DAPINGIAN	ARENIG	ABEREIDDIAN		FENNIAN	RANGERIAN
				WHITLANDIAN		BLACK HILLSIAN	
	LOWER ORDOVICIAN	FLOIAN	TREMADOC	MORIDUNIAN	IBEXIAN	TULEAN	
				MIGNEINTIAN		STAIRSIAN SKULLROCKIAN	
	TREMADOCIAN			CRESSAGIAN			

By the mid-1990s the British Ordovician had been revised from six Series designations to five and the North American Ordovician was modified into four Series--Ibexian (oldest), Whiterockian, Mohawkian (Platteville, etc.), and Cincinnati. The Mohawkian was in turn subdivided into a dizzying array of Stages and Sub-stages. Fortunately, cooler heads prevailed and, with the use of the K-bentonites described above, the Mohawkian Series was re-evaluated and subdivided into only two Stages. The lower (older) Turinian Stage contained Platteville rocks as well as the lower Decorah Shale while the upper Chatfieldian Stage contained the lower Galena (the upper Galena is still assigned to the Cincinnati Series). The Mohawkian was correlated with the lower part of the British Caradoc Series and was still considered "Middle" Ordovician.

The late 1990s and early 2000s saw both the push for Global Stages to correlate the various local and regional Ordovician units world-wide and the final reassignment of the North American Series and Stages. The Mohawkian is now part of an expanded Upper Ordovician and is correlated with the middle (more-or-less) of the British Caradoc Series. Global Stages were gradually approved by the ISOS, once type sections and boundaries were agreed upon. The final result (see chart this page) was an Ordovician

Correlation Chart that consisted of seven Global Stages. The Turinian (Platteville) is placed in the upper Sandbian Global Stage while the Chatfieldian (lower Galena) and the type-Cincinnati are part of the Katian Global Stage.

So, how does the revised Ordovician stratigraphy affect amateur collectors? Hardly at all since no matter what regional or continental or global categories the rock units we collect are placed in, the names of these rock units more often than not remain the same. Rock-stratigraphic names, formations and members, are very seldom changed because this would indeed cause confusion and limit our ability to assimilate historical collections into modern data-bases with the resolution we have come to expect and would also make any attempt at global correlation difficult at best.

Make no mistake, these improved stratigraphic designations will make future paleontological studies easier and will stand the test of time by standardizing correlations. This will alleviate the problems I encountered when I was researching published Ordovician nautiloid species for a nautiloid range chart I was compiling for the 1987 North-Central GSA meeting in Saint Paul, MN. The stratigraphic units used in some very old publications were given vague names such as "Lower Buff Limestone" or "Upper Blue Limestone" making correlation with the formations and members I was using practically, but not totally, impossible. Fortunately, higher level stratigraphic units have virtually no effect on our collections. Whether my nautiloids are Middle or Late Ordovician in age, whether the rocks belong to the Champlainian or Mohawkian Series or the Blackriveran or Turinian Stage, they still come from Platteville rocks.

Finally, one of the most knowledgeable Ordovician workers, Dennis Kolata, has brought the rock stratigraphic ranks of the mid-west Ordovician into agreement between Illinois and Wisconsin and Minnesota. In the accompanying notes to the Bedrock Geologic Maps of the Dixon West and Dixon East Quadrangles, Kolata placed the former Group-rank units St. Peter (oldest), Platteville, Decorah, Galena, and Maquoketa all at the rank of Formation, formations at Member rank, and members relegated to Bed rank. Even with this merging of stratigraphic ranks, some of the terminology is still slightly different in the various states.

The new Ordovician stratigraphic chart allows systematic collections of fossils that many of us amateurs amass to be placed in a global context adding a new dimension to our collecting activities. Remember, any fossil assemblage contained in a particular set of rocks represents just a small part of the entire fauna that was present during a particular time period such as the Ordovician. Each site is a small peep-hole allowing us to view a tiny segment of the total fauna; each suite of sites is a window showing us a more complete view; and combining a global set of sites allows us to view the fauna through a picture window. Dedicated field work is a laborious but an incredibly rewarding endeavor that can result in significant contributions to the picture we have of a local or regional fauna. Now, with the finalization of the Ordovician Global Correlation Chart, these contributions can be placed in a global context that has the potential of allowing us to view the Ordovician Radiation in unprecedented detail.

Further Reading

- Bergström, S.M. et al. 2009: The new chronostratigraphic classification of the Ordovician System and its relations to major regional series and stages and to $\delta^{13}\text{C}$ chemostratigraphy. *Lethaia*, 42: 97–107.
- Cooper, J. D. et al. 1995. Ordovician Odyssey. The Pacific Section Society for Sedimentary Geology, Fullerton, CA, 498 p.
- Kolata, D. R. 2013a. Bedrock Geology of Dixon East Quadrangle Lee County, Illinois. ISGS, Geologic Quadrangle Map Dixon East.
- _____. 2013b. Bedrock Geology of Dixon West Quadrangle Lee County, Illinois. ISGS, Geologic Quadrangle Map Dixon West.
- Sloan, R. E. (ed.) 1987. Middle and Late Ordovician lithostratigraphy and biostratigraphy of the Upper Mississippi Valley. Minnesota Geological Survey, Report of Investigations 35, 232 p.
- Webby, B. D. et al. 2004. The Great Ordovician Biodiversification Event. Columbia University Press, New York, 484 p.

The Mid-America Paleontology Society (MAPS) was formed to promote popular interest in the subject of paleontology; to encourage the proper collecting, study, preparation, and display of fossil material; and to assist other individuals, groups, and institutions interested in the various aspects of paleontology. It is a non-profit society incorporated under the laws of the State of Iowa.

Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Membership fee: \$20.00 per household covers one year's issues of DIGESTS. All Canadian and Overseas members receive the DIGEST by air letter post. For new members and those who renew more than 3 issues past their due date, the year begins with the first available issue. Institution or Library fee is \$25.00.

MAPS meetings are held on the 2nd Saturday of October, November, January, and February and at EXPO in March or April. A picnic is held during the summer. October through February meetings are scheduled for 1 p.m. in Trowbridge Hall, University of Iowa, Iowa City, Iowa. One annual International Fossil Exposition is held in late March/early April.

The MAPS official publication, MAPS DIGEST, is published 5 times per year – Jan-Mar, EXPO EDITION, May-August, Sept-Nov, Dec. (EXPO Materials). View MAPS web page at: <http://www.midamericapaleo.org>

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