North American Commission on Stratigraphic Nomenclature, 77th Annual Meeting

Monday, October 10, 2022 (1:00-5:00 pm, Mountain time)

Hybrid meeting held in conjunction with Geological Society of America Annual Meeting (GSA Connects 2022) in Denver, Colorado, U.S.A.

Quartz B (Hyatt Regency Denver at Colorado Convention Center)

AGENDA

1. Call to Order of the 77th Annual Meeting (Commissioner Janet Slate)

- Refer to attachment file: NACSN-agenda_2022Oct07.pdf
- Meeting called to order at 1:08 pm MDT by Chair Janet Slate
- 12 present in-person in Denver and 15 online at this time; 18 online by 1:12 pm MDT

2. Roll Call (Commissioner Janet Slate)

- Refer to attached file: NACSN Commissioners 2022-10-07.pdf
- 26 NACSN Commissioners and 10 Commissioners at-large

[* indicates new commissioner]

For the **American Association of Petroleum Geologists** (3)

- Katherine A. Giles [2022-2025] present
- Doug Sprinkel [2020-2023] absent
- Richard Denne [2021-2024] **Vice Chair, 2022-2023** present

For the **Association of American State Geologists** (3)

- David LePain [2022-2025]* present
- David Dockery [2021-2024] present
- Nick Tew [2020-2023] present
- R.M. (Matt Joeckel) [2021-2024] **Chair 2022-2023** present

For the **Geological Society of America** (3)

- Frank Ettensohn [2022-2025]* absent
- Jim Lehane [2021-2024] present
- Gordon C. Baird [2020-2023] present

For the **U.S. Geological Survey** (3)

- Lucy Edwards [2022-2025] present

- Julie Herrick [2020-2023] present
- Nancy Stamm [2021-2024] present

For the **Geological Survey of Canada** (3)

- Lynn Dafoe [2022-2025] present
- Robert MacNaughton [2020-2023] absent
- Jim Haggart [2021-2024] absent

For the **Canadian Society of Petroleum Geologists** (2)

- John-Paul Zonneveld [2020-2023] present
- Brian R. Pratt [2021-2024] absent

For the **Geological Association of Canada** (2)

- Frank Brunton [2022-2025] present
- John W. Johnston [2020-2023] **Past Chair, 2020-2021** absent

For the **SEPM Society of Sedimentary Geology** (2) [Need to amend Articles to change to SEPM]

- Howard Harper [2022-2025] present
- Marie-Pierre Aubry [2021-2024] present

For the **Servicio Geológico Mexicano** (1)

- Rosario Isabel López-Palomino [2021-2024] absent
- Juan Carlos Salinas Prieto [2022-2025]* absent

For the **Asociación Mexicana de Geólogos Petroleros** (1)

- Martin Martinez Medrano [2022-2025]* present

For the **Sociedad Geológica Mexicana** (1)

- Ruben Alfonso López Doncel [2022-2025]* absent

For the **Instituto de Geología de la Universidad Nacional Autónoma de Mexico** (1)

- Fernando Núñez Useche [2022-2025] present

Commissioners-in-waiting Need to amend Articles to integrate new Commissioners

For the **Instituto de Geología y Paleontología/Servicio Geológico de Cuba (Cuba)**

- Luis Ramón Bernal Rodríguez [2022-2025]* absent

For the **Colegio de Geólogos (Bolivia)**

- Wilfredo Ramos Collorana [2022-2025]* present

For the **Asociación Colombiana de Geólogos y Geofísicos del Petróleo (Colombia)**

- Luis Ignacio Quiroz [2022-2025]* absent

For the **Colegio de Geólogos de Costa Rica (Costa Rican Association of Geologists)**

- Gerardo Soto Bonilla [2022-2025]* absent

For the **Sociedad Geológica del Perú (Peru)**

- Gerardo Pozo Calle [2022-2025]* absent

For the **La Asociación de Geólogos del Paraguay (Paraguay)**

- Nestor Salinas Franco [2022-2025]* absent

For the **Sociedad Uruguaya de Geología (Uruguay)**

- Valeria Mesa [2022-2025]* absent

Commissioners-at-large (10)

- Carlton E. Brett [2022-2025] present
- Mike Easton [2021-2024] present
- Ismael Ferrusquía-Villafranca [2022-2025] absent
- Stanley C. Finney [2018-2021] absent
- Richard H. Fluegeman [2022-2025] present
- Ed Landing [2021-2024] absent
- Norman P. Lasca [2021-2024] absent
- Randall C. Orndorff [2021-2024] **Webmaster** present
- Robert W. Scott [2019-2022] *(retiring from NACSN)* absent
- Janet L. Slate [2020-2023] **Chair 2021-2022, Past Chair 2022-2023** present

Guests

- Alejandro Angulo (USGS) present
- Stéphanie Larmagnat (National Research Council of Canada [NRC]) present
- Werner Piller (ISSC) absent
- Katrina Sauer (USGS) present
- Jon Smith (Kansas Geological Survey) present
- Quorum established. (Quorum for meetings has been set as one more than half the members of the Commission.)

- Commissioners representing organizations: 17 of 26 present
- Commissioners at-large: 5 of 10 present
- Total commissioners: 22 of 36 present (61%)

3. Approval of the Agenda (Commissioner Janet Slate)

- No corrections were suggested
- Motion to approve was made and seconded
- Agenda was approved unanimously.

4. Introduction of New Commissioners and Guests (Commissioner Janet Slate)

[* indicates new commissioner]

For the **Association of American State Geologists**

- David LePain [2022-2025]*

For the **Geological Society of America**

- Frank Ettensohn [2022-2025]*

For the **Servicio Geológico Mexicano**

- Juan Carlos Salinas Prieto [2022-2025]*

For the **Asociación Mexicana de Geólogos Petroleros**

- Martin Martinez Medrano [2022-2025]*

For the **Sociedad Geológica Mexicana**

- Ruben Alfonso López Doncel [2022-2025]*

Commissioners-in-waiting Need to amend Articles to integrate new Commissioners

For the **Instituto de Geología y Paleontología/Servicio Geológico de Cuba (Cuba)**

- Luis Ramón Bernal Rodríguez [2022-2025]*

For the **Colegio de Geólogos (Bolivia)**

- Wilfredo Ramos Collorana [2022-2025]*

For the **Asociación Colombiana de Geólogos y Geofísicos del Petróleo (Colombia)**

- Luis Ignacio Quiroz [2022-2025]*

For the **Colegio de Geólogos de Costa Rica (Costa Rican Association of Geologists)**

- Gerardo Soto Bonilla [2022-2025]*

For the **Sociedad Geológica del Perú (Peru)**

- Gerardo Pozo Calle [2022-2025]*

For the **La Asociación de Geólogos del Paraguay (Paraguay)**

- Nestor Salinas Franco [2022-2025]*

For the **Sociedad Uruguaya de Geología (Uruguay)**

- Valeria Mesa [2022-2025]* absent

5. Approval of Minutes of the 76th Annual Meeting (Tuesday, October 5, 2021) (Commissioner Janet Slate)

- Refer to attachment file: 2021_NACSN 76th Mtg Minutes.pdf
- Correction made to indicate that Marie-Pierre Aubry was present at last year's meeting.
- A motion was made to approve the minutes with the correction (above) and seconded; approval of the minutes of the 2021 meeting was unanimous.

6. In Memoriam of Past Commissioners (Commissioner Janet Slate)

- None

7. Recognition of Awards Received by Commissioners (Commissioner Janet Slate)

- Commissioner Janet Slate received the Department of the Interior's Meritorious Service Award this year (2022).

8. Chair's Report (Commissioner Janet Slate)

I have been honored to serve as chair of this august commission. I thank my USGS colleagues, Randy Orndorff, Lucy Edwards, and Nancy Stamm, for getting me involved. As someone who spent the last 9 years of my career making sure that USGS-coauthored manuscripts and maps were of high scientific quality, I value the commission's goal to promote uniformity in stratigraphic nomenclature. Further, I welcome the expansion of the commission to include representatives from Central and South America, which we will bring to a vote when we get to item 25 in the agenda.

9. Vice Chair's Report (Commissioner Matt Joeckel)

The Vice Chair declines to report and will provide comments at the end of this meeting.

10. Report on AGI Business (Commissioner Howard Harper on behalf of Commissioner Norm Lasca)

- By email from Norm Lasca on 10/7/22:

We are no longer a member society as we do not pay dues. We are looking into another type of affiliation.

11. Report on IUGS and ICS (Commissioner Stan Finney)

- No report

12. Report on ISSC (Guest Werner Piller) Piller joined meeting late, but his comments are summarized here out of chronological sequence.

- Piller spoke to NACSN Commissioners beginning at 2:45 pm MDT and concluded at approximately 3:00 pm MDT.

13. Report on the NACSN Archives (Commissioner Janet Slate on behalf of Commissioner Norm Lasca)

- By email from Norm Lasca on 10/7/22:

The archives are up to date. (1) All materials for 2021 have been deposited in the NACSN Archive housed in the University of Wisconsin-Milwaukee Library. (2) Request that all commissioners copy Norm on all Commission correspondence so that we have a complete record of the Commission's work.

- By email from Jim Haggart on 10/7/22:

I have initiated a summary manuscript of the "Records of the Stratigraphic Commission 2018-2022." This is a multi-authored contribution summarizing the activities and decisions of the Commission during those years, including the time when I was involved in the Executive of the Commission as Chair. I hope to have this manuscript completed and distributed to the Commission for review this coming winter.

14. Report on the NACSN Website (Commissioners Julie Herrick, Randy Orndorff, and Brian Pratt)

- Julie is Chair. The report is simple—we did not get support from GSA to host the website; director of communications indicated recommendations but declined to host it.
- Randy suggested contacting Stratigraphy, even though there was a previous negative response.
- Rick Flugelman suggested contacting SEPM to host the website.
- Vice Chair Joeckel offered potential financial support (up to $3000) to improve website.

15. Report on Latin American Geoscience Societies (Commissioner Fernando Núñez)

- Last year we had participation from Uruguay and Colombia, this from Bolivia, Uruguay, Paraguay, and Peru. First steps toward a Pan-American commission? Chile, Venezuela, and Guatemala geological societies have been contacted and are interested in representation, but they could not make choices on representatives. There is clear interest overall, though.

16. Update on Formalizing Biochron in the Code (Commissioner Marie-Pierre Aubry)

- "Something to think more about." –Aubry
- Lucy Edwards: use of "-chron" is encouraged in the Code, as is "chronozone."
- Randy Orndorff: see article 75 in the Code
- Commissioner Marie-Pierre Aubry: freedom of expression should be maintained.
- Definition still needs to be formalized; Lucy Edwards indicated that present use of the term needs to be summarized first (she thinks it is used in different ways), then discuss any discrepancies before making a formal definition.

- C. Brett indicates that a draft document has been prepared and that there has been some review of the use of the term; more work will be needed.
- Janet Slate recommended that this matter be completed.
- RMJ asked how long it would take. Aubry indicated that the code needs to be translated and that the proposal to formalize "biochron" should be tabled for a year or more (2024).

17. Update on Inclusion of Chemostratigraphy in the Code (Commissioner Bob Scott)

- Robert W. Scott, Carlton E. Brett, Richard H. Fluegeman, and Brian R. Pratt (2020) North American Commission on Stratigraphic Nomenclature, Note 71 – Application for addition of chemostratigraphic units to the North American Stratigraphic Code: A case for formalizing chemostratigraphic units; Stratigraphy, Volume 17, No. 2, pp. 135–139 - online 09 Jun 2020. https://doi.org/10.29041/strat.17.2.135-139
- Refer to attachment files: Chemostrat prop revised_Clean_03-24-2022 (2).docx and History of Chemostrat in NACSN (2).docx
- By email from Robert Scott on behalf of himself, Carl Brett, Rick Fluegeman, Ed Landing, and Brian Pratt on 9/7/22:

The group of 5 co-authors are following up on the discussions at and following the 2021 NACSN meeting about the proposal to add guidelines on chemostratigraphy to the NACSN Code.

Following the 2021 meeting 3 commissioners submitted comments, and we responded to each as reported in the attached document on "History of …."

The attached proposal was updated in March after considering all comments and suggestions offered first at the 2021 meeting and then in subsequent notes by the 3 colleagues.

This proposal has followed the guidelines established for amendments in the Code, "Article 21 Code Amendments" (p. 5166).

The proposal was published June 2020 in *Stratigraphy*: 19A Scott et al. 2020 Strat_17_2_135-139.pdf, online 09 Jun 2020. Thus, it meets the timeline in Art. 21.

We coauthors request that the 2022 NACSN agenda include the item to present the final version of the proposal to add Chemostratigraphy to the Code and that all present commissioners vote to include or not. Please circulate the two attachments to all commissioners.

- Bob Scott's comments at the meeting: the larger document results from last year's discussion (Landing, Pratt, Brett, Scott), Lucy Edwards responded the morning after the document was circulated. Distinguish between observations (chemistry) and actual events is important. Defining "event" is beyond the scope of the present effort.
- Randy Orndorff: Note 71 was published a few years ago—does what exists now need to be published as a separate note?
- There was extensive discussion on the matter by multiple Commissioners, but primarly by Commissioner Lucky Edwards, and also by guest and coauthor Robert Scott

- Robert Scott: redundant to publish another note, as opposed to voting on the proposed addition.
- Commissioner Orndorff: changes still need to be made.
- Vice Chair Joeckel: asked for appropriateness of a vote at this juncture.
- By email from Lucy Edwards on 9/22/22:

The chemostrat proposal seems to be a moving target. The authors have changed things around, and not consistently. The included figure certainly doesn't meet USGS standards for labeling and explanation.

Same big issues as before. The current version does not make clear the distinctions between the rock material, the signals in the rock material, the inferences from the signals in the rock material, things that happened, time, and the nomenclature for those preceding concepts.

Note 71 was published. Yes, it had mistakes. Are the authors saying we need another proposal? They would do better by listing, for the Commission, the mistakes and how they propose to fix them.

One big mistake appears to be a misreading of the second- and third-order headings in the Code. "FORMAL UNITS DISTINGUISHED BY CONTENT, PROPERTIES, OR PHYSICAL LIMITS" is a second-order heading. "LITHOSTRATIGRAPHIC UNITS," "LITHODEMIC UNITS," etc. are third-order headings. Chemostratigraphic units cannot be a type of lithostratigraphic unit under a mistaken heading "FORMAL UNITS DISTINGUISHED BYCONTENT, PROPERTIES, OR PHYSICAL LIMITS AS LITHOSTRATIGRAPHIC UNITS" (p. 173).

Given this misunderstanding, I simply cannot follow the logic of the proposal. My notes say that chemostratigraphic units were intended to be in parallel with/comparable to biostratigraphic units. This proposal needs to state clearly what's what. Here's biostratigraphic.

- Material Unit based on content or physical limits: Biostratigraphic
- Material Category used to define temporal spans: Chronostratigraphic (optional prefix bio-)
- Temporal (Non-Material) category [isochronous]: Chron (optional prefix bio-)
- Temporal (Non-Material) category [diachronous, used only when the material referent is present]: Diachron (optional prefix bio-)

I think if the authors could be consistent and clear, we could make progress.

As to terminology and nomenclature, maybe we could make progress, if I pick a neutral example. Let's try the end of the Cretaceous.

- The impact of the Chicxulub bolide is an event. So is the extinction of the non-avian dinosaurs.
- The Danian Stage is a chronostratigraphic unit. The Danian Age is a geochronologic unit.
- The iridium spike at the base of the Danian Stage could be named as a chemostratigraphic unit.

- We would not say that there is an Ir spike at the base of the Danian Age, as that would be mixing rock and time.

Here is how the end of the remark on events might read:

A chemostratigraphic signal allows the recognition of an event; for example, the iridium spike at the base of the Danian Stage, representing the results of the Chicxulub impact event, could be formally redesignated as the IrDS Chemozone. A reference section could be designated [somewhere]. "Chemozone" is the preferred term for the material bearing such a conspicuous geochemical signal. Expressions such as "excursion" (the signal) or "event" (the happening) invite confusion when applied to stratigraphic successions with distinctive chemostratigraphic changes. [and possibly add: A "chemochronozone" would be the preferred term for all material of this age whether or not it bears the Ir spike, and a chemochron could be named for the time span of this material.]

- Vice Chair Joeckel suggested that a vote was in order; Commissioner Dockery advised on correct procedure; motion for a vote made and seconded;
- Chair Slate called for a vote: Do we approve Note #15 including revisions of Lucy Edwards?
- Vote results were 26 ayes, 2 nays, 2 abstaining
- Remaining question: Do we need to update #71?

18. Update on Formalizing Subseries in the Code (Commissioner Marie-Pierre Aubry)

- Marie-Pierre Aubry, Richard Fluegeman, Lucy Edwards, Brian R. Pratt, and Carlton E. Brett (2020) North American Commission on Stratigraphic Nomenclature Report 14 – Revision of Articles 73, 81, 82 and Table 2 of the North American Stratigraphic Code to Formalize Subseries and Subepochs; Stratigraphy,Volume 17, No. 4, pp. 315-316 - online 11 Dec 2020. https://doi.org/10.29041/strat.17.4.315-316
- Marie-Pierre Aubry, Werner E. Piller, Philip L. Gibbard, David A. T. Harper, and Stanley C. Finney (2021), Ratification of subseries/subepochs as formal rank/units in international chronostratigraphy; Episodes - online August 15, 2021. https://doi.org/10.18814/epiiugs/2021/021016
- By email from Marie-Pierre Aubry on 10/8/22:

I attach here a newly published paper on the formalization of the Neogene subseries. This grew out of the activities of the Commission, when we voted unanimously in favor of formal rank for subseries/subepochs in the chronostratigraphic hierarchy. I attach also the Episodes paper in which we announced the formal rank of subseries in the International Chronostratigraphic Chart and the International Guide on Chronostratigraphy (although it may have been distributed last year?). (The pdfs can be distributed after the meeting as I assume you are quite busy preparing the meeting.)

- Commissioner Aubry comments during meeting: commented on parallel moves by International Commission on Stratigraphy (ICS); brief paper published; establishes consistency in subseries; encouraging Subcommission on Paleogene Stratigraphy to procced with the formalization of Paleogene subepochs.

10-minute break suggested by Commissioner Orndorff and approved by Chair Slate

Meeting reconvened at approximately 3:10 pm MDT

**19. Unit names and encouraging the use of indigenous place names (Commissioner Lynn Dafoe on behalf of the committee comprising Commissioners Robert B. MacNaughton, Lynn T. Dafoe, and James W. Haggart)

- NORTH AMERICAN COMMISSION ON STRATIGRAPHIC NOMENCLATURE Note 72 - Application for Revisions to the North American Stratigraphic Code to Address Culturally Offensive or Inappropriate Unit Names and to Encourage the Use of Indigenous Place Names, Robert B.MacNaughton, Lynn T. Dafoe, and James W. Haggart. Stratigraphy, Volume 19, No. 3, pp. 187-200 - online 15 Sep 2022. https://www.micropress.org/microaccess/stratigraphy/issue-384/article-2299 https://doi.org/10.29041/strat.19.3.03
- Any vote would need to take place next year (2023) or after (per the bylaws).
- Commissioner Dafoe in meeting: assembled draft manuscript that would propose changes; "counsels against the use of offensive unit names" and suggests a process to rename offensive, encourages use of indigenous place names, recognizes maps produced by indigenous organizations as valid data sources. Manuscript was reviewed internally and published September 15. Can be voted on at 2023 meeting.
- Commissioner Orndorff in meeting: described parallel efforts at USGS.
- By email from Lucy Edwards on 9/22/22:

Like all proposed amendments, there is a comment period. In the past, we have actively sought comments and publicized the proposed amendment to those who might not read *Stratigraphy* (or AAPG *Bulletin* before that). We need an action plan for publicizing this amendment. suggest something in *GSA Today*, *Eos*, and/or whatever others can think up. Rob MacNaughton should take the lead, but typically the old or new Chair gets involved.

Yes, we need an agenda item for this.

To me, this proposed amendment is a big deal. The USGS' Need-to-Know (NTK) this week states "On September 8, the Board of Geographic Names (BGN) voted to approve the removal and replacement of nearly 650 derogatory geographic names across the country." Note 72 shows that the Commission can move reasonably fast, and even proactively. The proposal was in press BEFORE the BGN vote. I quickly went to GEOLEX and there are 7 entries for the SQ_ word. Hopefully, by next October these will be gone (or allowed to be gone). Randy may want to consider an article in the new Stratigraphic Notes. Although Note 72 was proposed by our Canadian colleagues, USGS representatives were heavily involved (see acknowledgments –Orndorff, Soller, Stamm, Edwards) and Slate as Chair.

Since Kevin Gallagher wrote the feature in NTK, someone should contact him and let him know we are on this. He will know if it should go up as high as Deb Haaland.

- By email from Rob MacNaughton on 10/7/22:

Following the positive reception of their presentation on offensive unit names at the 2021 NACSN annual meeting, Commissioners MacNaughton, Dafoe, and Haggart prepared a draft manuscript proposing revisions to the North American Stratigraphic Code ("the Code"). If adopted, these revisions will ensure that the Code (1) counsels against the use of offensive unit names; (2) provides a simplified process to replace offensive names of otherwise scientifically valid units; (3) invalidates nomenclatural stability as a justification for retaining offensive unit names; (4) recognizes maps produced by Indigenous governments or organizations as valid sources of geographic names; and (5) encourages respectful use of Indigenous place names. The manuscript received internal comments from several colleagues at the Geological Survey of Canada (GSC), including representatives of GSC's Indigenous Relations Network. Once submitted to *Stratigraphy*, the manuscript received helpful and positive reviews. Editor Jean Self-Trail appropriately ensured that one of the reviewers was an Indigenous scientist. Following revisions, the manuscript was published on September 15, 2022. This publication date should permit a vote on the revisions at the 2023 NACSN annual meeting. Particular thanks are due to Commissioner Lucy Edwards for her helpful comments and suggestions at various points and to the GSC for providing funding to translate the manuscript into French and Spanish. Comments on the proposed revisions can be sent to Commissioner MacNaughton: Robert.MacNaughton@NRCan-RNCan.gc.ca

20. 2021 version of the North American Stratigraphic Code (Commissioner Randy Orndorff)

- North American Stratigraphic Code, North American Commission on Stratigraphic Nomenclature; Stratigraphy, Volume 18, No. 3, pp. 153-204 - online 16 Sep 2021. https://doi.org/10.29041/strat.18.3.01
- Invitation to commissioners to publish in USGS' Stratigraphic Notes, https://ngmdb.usgs.gov/Geolex/stratres/strat_notes.
- Commissioner Orndorff had nothing more to report.

21. French Translation of the Code (Guest Stéphanie Larmagnat)

- Larmagnat: was contacted 2 years ago and proposed to try and update 1983 French version; has compared with English 2021 version and looked for updates and terminology issues; 2 weeks ago had meeting to work with another individual on every article one-by-one; will have a version to circulate online in 6-8 months; logistics will be "long and complicated" otherwise

22. Spanish Translation of the Code (Commissioner Fernando Núñez Useche)

- Commissioner Núñez Useche: Likes idea of having articles posted in parallel in English, French, and Spanish online. Spanish version is done and will be posted next year in first issue of Boletín de la Sociedad Geológica Mexicana. Expresses desire to homogenize/standardize Spanish terms, especially relative to southern South America.

23. Articles Committee Report (Commissioner Janet Slate on behalf of Commissioner Jim Haggart)

- By email from Jim Haggart on 10/7/22:

I did not make any progress on this important issue during the year. One of the major changes in the Articles that will have to be dealt with in the coming year is the changing of the composition of the

Commission to include more representation from Central and South America (and perhaps less from North America?), and I have discussed this at length with Commissioner Dafoe. I am prepared to serve again as the lead on the Articles Committee in the coming year and work to address this and other issues with the Articles, should the Commission be willing to have me continue. If the preference is for someone else to take it on, this would of course be fine with me.

24. Report of the Nominating Committee and Election of Officers for 2022-2023 (Commissioner Lynn Dafoe on behalf of the committee comprising Commissioners Lynn Dafoe, Lucy Edwards, and Howard Harper)

- Commissioner Dafoe named the incoming officers.

25. Discussion on Future Directions of NACSN

- **Discussion on Inclusion of Central and South American Stratigraphers in NACSN** (Commissioner Fernando Núñez)

My understanding is that including Central and South American stratigraphers as commissioners requires an amendment of the Articles of the commission. I welcome such an expansion and propose that the name be changed to Pan-American Commission on Stratigraphic Nomenclature (PACSN) or Commission on Stratigraphic Nomenclature for the Americas (CSNA). One question to resolve is whether one or more commissioners would represent the added countries.

I motion to amend the Articles of the commission to include at least one stratigrapher from each of the Central and South American countries to represent their country as commissioners.

- Commissioner Lucy Edwards: suggested possible role of corresponding members.
- Motion to Amend suggested by Chair Slate.
- Commissioner Núñez Useche: considered this a good idea
- Commissioner Tew made the motion accordingly.
- Commissioner Lucy Edwards: made a friendly amendment
- Commissioner Howard Harper seconded Nick Tew's motion
- Vote: unanimous aye
- **Discussion of Possible Junior Stratigrapher Commissioner-at-large** (Commissioner Janet Slate on behalf of Commissioner Jim Haggart)

By email from Jim Haggart on 10/7/22:

Although I am keen to see this position established, not much progress was made on the item over the past year, beyond initial discussions of the individuals who wished to participate. Again, I am willing to continue to see this issue addressed over the coming year, if the Commission at large is supportive; if the preference is for someone else to take this on, I understand and agree fully.

26. Appointment of Nominating Committee for 2022–2023 (Commissioner Janet Slate)

Response to query about nominating committee is as follows:

- By email from Lucy Edwards on 10/8/22:

The bylaws, under Officers, say that it has to be a new committee, of those in their third year.

A Nominating Committee to be composed of three members in the third year of their terms, reasonably representing constituent organizations of the Commission, shall be selected by the current Chairman and Vice Chairman at the end of the annual meeting. The Nominating Committee, through its elected Chairman, shall provide the Commission Chairman, at least 90 days before the next annual meeting, with nominees for office.

- Asked for recommendations of those who will be in the last year of their terms—Doug Sprinkel, Gordon Baird, Julie Herrick, Robert MacNaughton, John-Paul Zonneveld, John Johnston, and me. I volunteered but need two more. I asked Rob MacNaughton and John Johnston. If these two do not agree, I will ask for volunteers from the remainder of this group during the meeting (unless the current committee has recommendations prior to the meeting).
- Chair Slate asked if there were additional nominations for Commissioners-at-Large.
- Vice Chair Joeckel nominated Jon J. Smith (Kansas Geological Survey) to serve as a Commissioner-at-Large for three years beyond the conclusion of his present term. A motion was made by Vice Chair Joeckel and seconded by Chair Slate and Lucy Edwards, then approved unanimously by attendees.

27. Election/Renewals of Commissioners-at-large (Commissioner Janet Slate)

- Thanks to those who are continuing their terms: Carlton E. Brett [2022-2025], Ismael Ferrusquía-Villafranca [2022-2025], Richard H. Fluegeman [2022-2025]
- Thanks to Robert W. Scott [2019-2022] who is stepping down from the Commission; we thank him for his 13 years of service.

28. Presentation of Scrolls (Commissioner Janet Slate)

- To those whose terms are ending in 2022: Berry H. (Nick) Tew [2019-2022], Jon J. Smith [2020-2022]
- To those who are continuing their terms: Katherine Giles [2022-2025], Lucy Edwards [2022-2025]

29. Adjournment of the 77th Annual Meeting (Commissioner Janet Slate)

- Chair Slate called for a motion to adjourn at 4:04 pm.
- A motion to adjourn was made and seconded, then approved unanimously.
- Chair Slate declared the 77th Annual Meeting adjourned at 4:06 pm MDT.
- New leadership in NACSN for 2022-2023:
- Commissioner Joeckel has agreed to be Chair for 2022-2023. Approval by acclamation.

- Commissioner Richard Denne has agreed to be Vice Chair for 2022-2023. Approval by acclamation.

30. Call to Order of the 78th Annual Meeting (Commissioner Matt Joeckel)

- At 4:00 pm MDT, 2022-2023 Chair Joeckel began his comments and called to order the 78th Annual meeting, to be held at GSA Connects 2023 in Pittsburgh, PA during 15–18 October of that year.

31. Remarks by Incoming Chair (Commissioner Matt Joeckel)

"It is my (nervous) pleasure to undertake the role of 2023 NACSN Chair. The learning curve, for me, will doubtless by steep. With your help, however, I trust that I can fulfill my commitment to serve.

I ask that you please forgive me in advance for any missteps that I will doubtless make, and I assure you that my "electronic door" will be open to you all during the forthcoming year.

My duties today are but slight. But I now open the business of our commission for the coming year and invite you all to attend our meeting during GSA 2023 in the period October 15–18 October in Pittsburgh, Pennsylvania, USA. There, I will call you to order once again.

But I beg your indulgence for a few more moments while I attempt to convey some personal feelings about who we are and what we do.

We operate at a time in which the importance of stratigraphy, nay, the importance of much of the science of geology, appears to be diminishing in the minds of our colleagues, of those in other disciplines, and of our overseers. I find myself slightly alarmed when so many fellow geologists seem unaware of the NACSN and of the Code.

Given our collective years of experience, we have reason to assume that these things will pass—or in the least not worsen—if we dutifully go about our business and diligently pursue excellence in our science. There will be other tasks, of course, perhaps chief among them the nurturing of a new generation of stratigraphers.

We should definitely take heart.

So, pause and consider. Stratigraphic principles are, and always have been, at the core of the science of geology. They are immutably embedded in the study of our wondrous Earth. They are much of what makes geology a unique and beautiful science.

Although there is no Nobel Prize in geology, we are the joyful offspring of intellectual giants. And I will wager that not a one of us came into our discipline so much out of necessity so much as out of perpetual curiosity and an unreserved fascination with the subject material.

The work we do in this Commission remains of fundamental importance. It has stood the test of time. So let us undertake our work with diligence and in consideration of our duty to stratigraphers past, present and future.

I thank those of you who are leaving, I rely upon those of you who will remain, and I welcome those of you who are just arriving. I wish you all success, happiness, and joy in the coming year!"

Chair Joeckel concluded remarks and meeting ended at 4:17 pm MDT

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