North American Commission on Stratigraphic Nomenclature
– 74th Annual Meeting –

Monday, September 23, 2019
Sheraton Phoenix Downtown Hotel, Encanto B,
Phoenix, Arizona

(Compiled by Jim Haggart and Brian Pratt)

MINUTES

1. Call to Order of the 74th Annual Meeting

2. Approval of the Agenda

Agenda Items 2 and 5 were switched in the order discussed, but minutes of the discussion are presented here in Agenda order.

Commissioner Pratt noted that the Minutes of the 73rd Annual Meeting, held in Indianapolis, had been circulated in January and changes and additions made then. Commissioner Pratt asked for a motion to approve the Minutes (Motion to Approve: Unknown; Seconded: Carl Brett; Accepted unanimously)

3. Roll-Call (Commissioner Pratt)

For the American Association of Petroleum Geologists (3)
- Richard Denne
- Kate Giles (absent)
- TBD

For the Association of American State Geologists (3)
- Nick Tew
- Matt Joeckel (absent)
- Dave Dockery

For the Geological Society of America (3)
- Bill Berggren
- Marieke Dechesne
- Joe Hannibal

For the U.S. Geological Survey (3)
- Lucy E. Edwards
- Nancy Stamm (absent)
- Julie Herrick (absent)

For the Geological Survey of Canada (3)
- Rob MacNaughton (absent)
- Rod Smith
- Jim Haggart

For the Canadian Society of Petroleum Geologists (2)

Brian Pratt
TBD
For the Geological Association of Canada (2)
Frank Brunton (absent)
John Johnston (absent)
For the Society of Sedimentary Geology (2)
Marie-Pierre Aubry
Howard Harper
For the Servicio Geológico Mexicano (2)
Rosario Isabel López-Palomino (absent)
TBD
For the Instituto de Geología, Universidad Nacional Autónoma de México (1)
Fernando Núñez Useche
For the Asociación Mexicana de Geólogos Petroleros (1)
Hilarión Sánchez Hernández (absent)
For the Sociedad Geológica Mexicana (1)
René Alejandro Téllez Flores (absent)

Commissioners-at-Large
Carl Brett
Tom Dignes (absent)
Mike Easton (absent)
Ismael Ferrusquía-Villafranca (absent)
Stan Finney
Rick Fluegeman
Ed Landing
Norm Lasca
Randy Orndorff (absent but represented by Janet Slate as alternative)
Bob Scott

Commissioner Pratt established that a quorum was etablished.

4. Introduction of New Commissioners and Guests (Commissioner Pratt)

Commissioner Pratt introduced new Commissioner Fernando Núñez Useche, replacing Ricardo Barragan as representative for Instituto de Geología, Universidad Nacional Autónoma de México, as well as new Commissioner Nick Tew, representing Association of American State Geologists for a new term. Commissioner Pratt also welcomed Guests Werner Piller (Chairman, ISSC) and David Donovan.

5. Approval of Minutes of 73rd Annual Meeting (November 5, 2018, Indianapolis, Indiana); Attachment 1 (Commissioner Pratt)

Agenda Items 2 and 5 were switched in the order discussed, but minutes of the discussion are presented here in Agenda order.

Commissioner Pratt asked for additions to the Agenda or new items of business.
Commissioner Edwards asked that Werner Piller provide a report on activities of the ISSC, added

as Item 12A.

6. In Memoriam of Past Commissioners

Fortunately, there were none.

7. Recognition of Awards Received by Commissioners

No awards were noted.

8. Chair's Report (Commissioner Pratt)

Commissioner Pratt delivered his report. Early in the year, he compiled and circulated Minutes from 73rd Annual Meeting. He worked to establish new members for replacing Commissioners, as well as a new Vice-Chair; it has been challenging to identify new representatives for some agencies, such as Canadian Society of Petroleum Geologists. Commissioners Pratt, Brett, and Landing worked on an amendment to the Code to include submembers, which was published last summer. Commissioners Fluegeman, Scott, Brett, and Pratt worked to coordinate the Special Session on Chemostratigraphy at the Phoenix GSA meeting (tomorrow). There was some discussion with AGI regarding payment of fees, but it was established that the Commission should not be paying any fee; Norm Lasca will be the NACSN representative to AGI.

Commissioner Aubry led writing of a draft manuscript on recognition of biochrons, to which Commissioner Pratt contributed. Commissioner Pratt also contributed to the Chemostratigraphy GSA Session and proposal, led by Commissioner Scott.

He prepared the Agenda and revised the list of Commissioners and delegated the preparation of Scrolls to Commissioner Edwards.

9. Vice-Chair's Report (Commissioner Haggart)

Commissioner Haggart delivered his report. He worked to clean up the Commissioners' contact information files. He also consolidated various informal documents floating around identifying the duties of the Chair and Vice-Chair and organized these tasks in a chronological framework to be passed on to future Chairs and Vice-Chairs. He worked with the Chair to help identify potential new Commissioners and also in the search for the next Vice-Chair as part of the Nominations Committee. Finally, he provided the post-meeting wine selection.

10. Status of Provisionally Numbered Note 69, Commission Records 2013–2017 (Commissioner Fluegeman)

Commissioner Fluegeman reported that the draft manuscript on Commission Records by Commissioners Brett, Brunton, Edwards, Harper, and Scott has been circulated and can be submitted shortly to *Stratigraphy*.

11. Report on AGI Business (Commissioner Lasca)

Commissioner Lasca attended the AGI business meeting and relayed AGI's request for nominations for their executive committee and awards committee. He and Nick Tew spoke to the executive director, Alysson Anderson Book, in order to resolve the issue of outstanding dues, explaining that the Commission is a volunteer group and that Commissioners do not pay membership dues to NACSN, but do pay dues to societies which belong to AGI. It was agreed that AGI dues would not be charged, but henceforth AGI should be noted as a co-sponsor for all NACSN activities, such as conference sessions.

Commissioner Lasca noted that a Call for Nominations to the AGI Executive Committee, as well as a call for the awards that AGI sponsors, have been released. Recommendations for these should be submitted by February 1.

It was noted in the AGI discussion that there is a changing culture in geoscience and that organizations need to reach out to the younger generation, embracing the social media opportunities that are common. AGI is also interested in various perspectives on the challenges facing our science, such as reducing our carbon footprint, and suggestions should be passed on to them.

Finally, AGI has expressed significant concern regarding the possible relaxation of licensing requirements for some state geologists.

Commissioner Harper added that societies like SEPM are grappling with declining membership, open-access issues, and reduced income. Evolving trends in publishing are highlighting open-access publication, and many geoscience societies will increasingly need to provide such publishing options to the research community.

12. Report on IUGS and ICS (Commissioner Finney)

Commissioner Finney, Secretary-General of IUGS, outlined that *Episodes* is now open-access and past issues are archived and available. The journal welcomes relevant papers and articles about proposed GSSPs, as well as keynote papers. He noted that the IUGS website is being re-designed to be more user-friendly and that an expanded use of social media has been established, providing authors with even broader distribution of their science. Planning is underway for the 36th International Geological Congress, which will be held in New Dehli in early March, 2020. Commissioner Finney noted that there are a number of commissions in IUGS which are benefitting from a positive flow of funds that have accumulated recently in IUGS coffers. New GSSPs have generated a lot of attention globally. The Geoheritage Group is up and running as is the Geoheritage Sites Group, and both are working actively to identify areas of global geoscience interest, as well as to establish standards for the creation of Geoparks. IUGS has great relationships with UNESCO and IGCP, and provides significant funding and support to those agencies. IUGS has initiated a new program to link geological databases worldwide, inspired by global biodiversity databases. It has been challenging to establish positive and useful communication about stratigraphy with the Chinese geological community, and IUGS is working actively to try and improve this.

12.5. Report on ISSC (Guest Piller)

Guest Werner Piller, chair of ISSC, brought commissioners up to date on the status of the review papers sponsored by the Subcommission ahead of a revision of the International Stratigraphic Guide (which is more than 20 years old) and published open-access in *Newsletters on Stratigraphy*. An Introduction and review papers on Cyclostratigraphy, Chemostratigraphy, Magnetostratigraphy, and Sequence Stratigraphy have been published, and the paper on Lithostratigraphy will hopefully be finished soon. Review papers on Biostratigraphy and Chronostratigraphy are still outstanding, and much work and leadership appears needed to bring these chapters forward. There was some discussion about the differences between chronostratigraphy and geochronology, cycles, and astrochrons, and their potential inclusion in the next Guide, and that chemostratigraphic units are not time units *per se*. Additional discussion was undertaken on the pros and cons of the Anthropocene. Werner suggests that there are discrepancies between the International Guide and the North American Code that need to be resolved, and that there is still quite a bit of work to be done before the revised Guide is finally published, probably a number of years yet.

13. Report on the NACSN Archives (Commissioner Lasca)

Commissioner Lasca reported that most of the communication he received over the course of the year was during the summer period and on the subject of Chemostratigraphy. He reminded fellow commissioners to copy him in all correspondence and asked for past Chairs to send archival material. Commissioner Lasca outlined the nature of the digital archives and how his university library in the State of Wisconsin is the permanent custodian. The archives consists of both hard-copy and digital files.

14. Report on the NACSN Website (Commissioner Orndorff)

Commissioner Edwards noted that the AGI webpage hosting the NACSN site is inadequate, and this may be due to the perception within AGI that NACSN "has not paid its dues for years." Commissioner Herrick is taking over the NACSN website from Commissioner Orndorff, and suggested that USGS may be able to host the website may be able to be hosted by the USGS rather than AGI, as it is seen as an important stratigraphic resource. It was added that Commissioner Stamm is in charge of the Lexicon of Stratigraphic Names for the USGS. A question was asked if the NACSN website comes up if the Commission is Googled, and it does. Discussion ensued about having links to the NACSN website on multiple hosts and this was seen as useful as it increases linkages and access, although it is imperative that updates on one site also flow through to the other sites.

Commissioner Pratt suggested that we try to promote open-access of the Code so that it is downloadable by the wider community.

15. Report on Latin American Geoscience Societies (Commissioner Pratt)

Commissioner Pratt reported that Commissioner Barragán had not been able to get very far with this, and in the past neither had Commissioner Ferrusquía-Villafranca.

16. Discussion on Inclusion of Cuban Stratigraphers in NACSN (Commissioners Pratt,

Fluegeman)

Commissioner Pratt reported that Commissioner Barragán had been in contact with ##### and the idea was received favorably. It was noted that oil and gas exploration in Cuba is ramping up. Commissioner Núñez offered to pursue this.

16.5. Quorum

This item was an addition to the Agenda. It was noted that increasing the membership of NACSN with Commissioners-at-Large could potentially make it difficult to achieve quorum at meetings, currently set at greater than one-half of the full number of commissioners, which Commissioner Edwards stated is thus 17 at present. One way around this is for commissioners who cannot attend a meeting to have their representative agency appoint an alternate attendee, as Commissioner Orndorff did for this meeting.

It was agreed that Commissioners Harper, Tew, and Edwards will form an *ad-hoc* Committee which will review and make recommendations to changes in the Bylaws. Lucy will chair the Committee.

17. Discussion on Inclusion of Chemostratigraphy in the Code; Attachment 2 (Commissioner Scott)

This item was moved to Agenda item 18 and discussed there, but minutes of the discussion are presented here in Agenda order.

Commissioner Scott reported that a revised manuscript proposing formalization of chemostratigraphic units, in development for several years now and authored by Commissioners Scott, Pratt, Edwards, Fluegeman, and Brett, is being finalized and will eventually be submitted to *Stratigraphy* for publication; once the paper has been published for a year, it can then be voted on by the Commission. Commissioner Scott gave an overview of the concepts of chemostratigraphic units that are addressed in the chemostratigraphic units manuscript. The authors have documented usages of chemostratigraphic terms in the published literature and have noted that these have been used quite inconsistently; thus, formal establishment of chemostratigraphic terms is required, as are reference sections for the terms. Some extended discussion on the proposed terms and their applications ensued, with suggestions for changes and clarifications being proposed by several commissioners. Commissioner Scott requested that commissioners provide their suggestions to him in writing and he and the other authors will take these suggested changes into consideration in the next revision of the manuscript. Suggestions should be directed to Commissioner Scott by January 1, 2020, so that the manuscript can then be revised and submitted early in the new year.

Commissioner Scott also noted that Tuesday's morning and afternoon sessions on Chemostratigraphy at the GSA meeting are fully subscribed.

18. Discussion on Formalizing Biochron in the Code (Commissioner Aubry)

This item was initially moved to Agenda item 20 to deal with more pressing business, but minutes of the discussion are presented here in Agenda order.

Unfortunately, owing to the shortage of time remaining in the meeting, and the fact that a revision of the Biochron proposal has not yet been finished, further discussion on this topic was deferred to the next meeting.

19. Discussion on Formalizing Subseries in the Code; Attachment 4 (Commissioner Aubry)

Commissioner Aubry noted that the proposal has been published in *Stratigraphy*. However, a full year for comments on the proposal from the broader community has not passed, so the proposal will be considered at the 75th Annual Meeting. Some discussion took place on the utility and validity of specific aspects of Cenozoic chronostratigraphy. Discussions over the next year, particularly at the international level, will inform the further development of the proposal.

20. Discussion on Proposal to Formalize Submembers in the Code; Attachment 3 (Commissioner Brett)

This was moved to Agenda item 17 and discussed there, but minutes of the discussion are presented here in Agenda order.

Commissioner Brett noted that the proposal has now been published for the requisite year in *Stratigraphy*, and is therefore available to be voted on. Commissioner Brett stated that the only comments received on the proposal were those that were raised at the 2018 meeting, and these were incorporated into the revised document. There was some useful discussion on the nature of stratigraphic units and their correlation. Commissioner Edwards read a note from absent Commissioner Stamm in opposition to the proposal. A vote was taken on incorporating the proposal as an addition to the existing Code. The proposal was approved by the Commission and the North American Code will be amended.

21. Discussion on Future Directions of NACSN

Commissioner Pratt reminded commissioners that a proposal for a Special Session at next year's annual meeting of GSA should be established.

It was also noted again that the issue of representation by Cuban stratigraphers should be addressed.

22. Appointment of Nominating Committee for 2019–2020

The Nominating Committee to identify a candidate for the next Vice-Chair year was appointed, consisting of Commissioners Brett and Deschesne. Commissioners MacNaughton, Johnston, and Brett were identified as having their terms end in 2020.

23. Election/Renewals of Commissioners-at-large

It was noted again that Commissioner Núñez has replaced Commissioner Barragán, who had to step down.

Commissioners Brett, Fluegeman, and Ferrusquía-Villafranca were each reappointed to another term as Commissioner-at-Large.

24. Presentation of Scrolls

Scrolls in dedication to their service were presented to Commissioners Brunton, Dignes, Edwards, Fluegeman, Harper, MacNaughton, Scott, Telles-Flores, and Tew.

25. Adjournment of the 74th Annual Meeting

Commissioner Fluegeman moved to adjourn the meeting, and was seconded by Commissioner Brett, passed unanimously.

26. Call to Order of the 75th Annual Meeting (Commissioner Haggart)

27. Report of the Nominating Committee and Election of Officers for 2019–2020

Commissioner Pratt noted on behalf of the Nominating Committee that Commissioner Johnston has agreed to be Vice-Chair for the next year. Approved by acclamation.

28. Remarks by Incoming Chair (Commissioner Haggart)

Commissioner Haggart thanked all Commissioners for their efforts and the work they have done through the year. He stated his desire to work with everyone in the coming year to further the interests of the Commission and stratigraphy in general, in particular, in helping to advance the inclusion of chemostratigraphic units in the Code. Commissioner asked that anyone who encounters any issues of stratigraphic interest, or misapplication in journal papers(!), to please forward them to him for follow-up.