

International Subcommittee on Cambrian Stratigraphy

Business Meeting, Ouarzazate, Morocco, 18 September 2014

1. Thank you to organizers and field trip leaders of the Morocco meeting (Javier Álvaro, Sébastien Clausen, Samuel Zamora, Léa Devaere, Mohammed Benharref, Hassan Ezzouhairi, and Abderrahman Soulaïmani). Thank you to all who have made this meeting possible, and who have made us welcome here.
2. Introduction of officers and Voting Members (for term ending 2016): Loren Babcock (Chair), Per Ahlberg (Secretary), and Xingliang Zhang (Vice-Chair); additional VMs who are here: Javier Álvaro, Gabriella Bagnoli, Pierre Kruse, Linda McCollum, Shanchi Peng (also Vice-Chair of ICS), Rodolfo Gozalo, and Anna Zylinska.
 - 2.1. Chairs of Working Groups:
 - Terreneuvian: Maoyan Zhu (not present)
 - Stage 2: Michael Steiner (not present)
 - Stage 3: Xingliang Zhang
 - Stage 4: Jim Jago (not present)
 - Stage 5: Linda McCollum
 - Stage 10: Per Ahlberg
 - Web page: Malgorzata Moczydlowska-Vidal (Michael Streng, webmaster), not present.
 - Web page address: http://www.palaeontology.geo.uu.se/ISCS/ISCS_home.html
3. Current Voting Members (for the term 2012-2016):
 - 1, Per Ahlberg, Lund, Sweden per.ahlberg@geol.lu.se
 - 2, José-Javier Álvaro, Villeneuve d'Ascq, Spain jose-javier.alvaro@uni-lille1.fr
 - 3, Loren E. Babcock, Columbus, USA, and Lund, Sweden rlbtp@live.com
 - 4, Gabriella Bagnoli, Pisa, Italy bagnoli@dst.unipi.it
 - 5, Duck K. Choi, Seoul, Korea dkchoi@snu.ac.kr
 - 6, Olaf Elicki, Freiberg, Germany elicki@geo.tu-freiberg.de
 - 7, Gerd Geyer, Germany gerd.geyer@mail.uni-wuerzburg.de
 - 8, Rodolfo Gozalo, Valencia, Spain rodolfo.gozalo@uv.es
 - 9, James B. Jago, Mawson Lakes, Australia jim.jago@unisa.edu.au
 - 10, Pierre D. Kruse, Darwin, Australia pierre.kruse@dme.nt.gov.au
 - 11, Linda B. McCollum, Cheney, Washington, USA lmccollum@ewu.edu
 - 12, Malgorzata Moczydlowska-Vidal, Sweden malgo.vidal@pal.uu.se
 - 13, Elena B. Naimark, Moscow, Russia naimark@paleo.ru
 - 14, Tatyana V. Pegel, Novosibirsk, Russia pegel@mail.ru
 - 15, Shanchi Peng, Nanjing China scpeng@nigpas.ac.cn
 - 16, Leonid Popov, Wales, UK leonid.popov@museumwales.ac.uk
 - 17, Brian R. Pratt, Saskatchewan, Canada brian.pratt@usask.ca
 - 18, Matthew R. Saltzman, Columbus, Ohio, USA saltzman.11@osu.edu
 - 19, Michael Steiner, Berlin, Germany michael.steiner@FU-Berlin.de
 - 20, Alexei I. Varlamov, Moscow Russia varlamov@sniiggims.ru.vcf
 - 21, Mark Webster, Chicago, Illinois mwebster@geosci.uchicago.edu
 - 22, Xiangling Zhang, Xi'an, China xzhang69@nwu.edu.cn
 - 23, Maoyan Zhu, Nanjing, China myzhu@nigpas.ac.cn
 - 24, Anna Zylinska, Warsaw, Poland anna.zylinska@uw.edu.pl

4. Request for updated contact information (especially email addresses) from all VMs, Honorary Members, Corresponding Members; also alternate rapid contact (fax, etc.).
5. In 2013-2014, the new ISCS webpage was introduced and modified. Recent information is posted there.
6. ISCS sponsored/co-sponsored meetings this year:
 - 6.1. International Field Workshop on the Marwar Supergroup, NW India, January 2014
 - 6.2. IGCP 591 (with Ordovician and Silurian Subcommissions), Yunnan, China, August 2014
 - 6.3. Morocco meeting (this meeting; with Ediacaran Subcommission), September 2014
 - 6.4. Other related meetings:
 - International Palaeontological Conference, Mendoza, Argentina, September 2014
 - Gondwana 15, Madrid, Spain
7. Announcement of upcoming meetings.
 - 7.1. ISCS 2015, Newfoundland.
 - 7.2. IGCP 591, Quebec, Canada, 2015.
 - 7.3. Strati 2, Graz, Austria, 2015.
 - 7.4. 2016 June/July, Association of Australasian Palaeontologists, Australia.
8. Discussion of progress toward publication of stage and series names
 - 8.1. Ratified boundaries defined by GSSPs:
 - 8.1.1. Furongian Series/Paibian Stage – 2004, Lethaia
 - 8.1.2. Drumian Stage – 2007, Episodes
 - 8.1.3. Terreneuvian Series/Fortunian Stage – 2008, Episodes
 - 8.1.4. Guzhangian – 2009, Episodes
 - 8.1.5. Jiangshanian – 2011; GSSP, Episodes (2012); ASSP, Episodes 2013
9. Discussion of work toward defining remaining GSSPs.
 - 9.1. Stage 5 (*Oryctocephalus indicus* level): Three possibilities: FAD of *Oryctocephalus indicus*, FAD of *Ovatoryctocara granulata*, FAD *Paradoxides* s.l.. Possible GSSP sections: South China, Siberia, Nevada, Spain.
 - 9.1.1. Discussion of Stage 5 base– informal workshop later.
 - 9.2. Stage 10 (*Lotagnostus americanus* level). Alternate possibility for level: *Eoconodontus notchpeakensis* level. Possibilities for a GSSP section: Siberia, South China, Kazakhstan, Utah, etc.
 - 9.3. Stage 2: Possible levels - *Watsonella crosbyi* or *Aldanella attleborensis*. Possibilities for a GSSP section: Siberia, South China, etc.
 - 9.4. Stage 3 (approximately FAD trilobites): The earliest trilobite known seems to be *Profallotaspis jakutensis* (Siberia). Other early ones include *Hupetina antiqua* in Morocco and *Fritzaspis* in Laurentia. Possible GSSP levels - *Pelagiella subangulata* or *Microdictyon effusum*. Taxonomic revision of *Microdictyon* is needed (at least 8 species have been named.) Possibilities for a GSSP section: Siberia, South China, etc.
 - 9.5. Stage 4 (approximately FAD *Olenellus/Redlichia*): ISCS favors placing stage base at FAD of a single trilobite species. Possibilities: a species of *Olenellus* (s.l.), *Redlichia* (s.l.), *Arthricocephalus chauveaui*, *Judomia*, or *Bergeroniellus*. Such a position would

be at a level roughly corresponding to the base of the Dyeran Stage of Laurentia, the base of the Duyunian of South China, and the base of the Botoman Stage of Siberia.

9.6. Cambrian/Terreneuvian/Fortunian GSSP. A Working Group has been assembled to provide a recommendation about whether or not we should consider options for redefining the GSSP.

- We need to remind persons interested in sections for consideration as GSSPs of the ICS/ISCS procedure: the relevant Working Group must identify the preferred level first; then there will be a call for proposals from the WG; then the WG will decide on the best section and refer the decision to ISCS for a vote by the Voting Members.

10. Other matters?