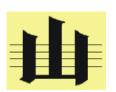
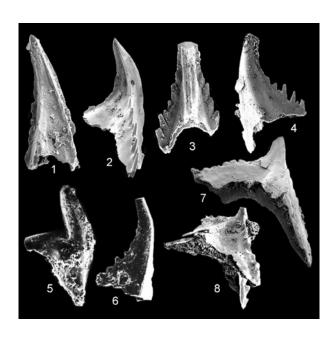
SUBCOMMISSION ON ORDOVICIAN STRATIGRAPHY INTERNATIONAL COMMISSION ON STRATIGRAPHY







Nº 24

2007

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URL:

http://www.ordovician.cn

http://seis.natsci.csulb.edu/ISOS

Cover:

The conodont index species that defines the base of the Middle Ordovician (Wang et al., 2005). *Baltoniodus? triangularis* (Lindström)

- 1) Sd element, posterior-lateral view, x150.
- 2) Pa element, lateral view, x150.
- 3) Sa element, posterior view, x180.
- 4) Sc element, lateral view, x180.
- 5) M element, lateral view, x120.
- 6) Sb element, lateral view, x120.
- 7) Pb element, lateral view, x120.
- 8) Pb element, lateral view, x90.

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NOTE FOR CONTRIBUTORS

The continued health and survival of *Ordovician News* depends on YOU to send in items of Ordovician interest such as lists and reviews of recent publications, brief summaries of current research, notices of relevant local, national and international meetings, etc. As more geological software becomes available, details of this would also be welcomed by many of us. Also please ensure the SOS's Secretary (responsible editor) is notified of any changes in address, telephone or fax number and e-mail address.

EDITOR'S NOTE

Welcome to the new issue of *Ordovician News* in soft version, the ninth one since I am serving as editor. Current number (24, 2007) is assembled as webpage for easier downloading of required information from the page of contents. Current number is not mailed as hard copy, with the hope all friends of the Ordovician are able to get into the network. Our previous electronic distributions were very successful, particularly by dramatically diminishing costs of printing and postage, as well as by allowing us to have the newsletter in the personal computer for permanent and easy access. In case members of the Ordovician community have any comment on this issue, the secretary would be pleased to hear from them. I would like to thank all of you for the many contributions for the current number.

Several important international meetings and field trips, particularly related to Ordovician stratigraphy and paleontology, are included. Recent advances on proposed stratotypes, and names for the global Ordovician subdivisions, are documented. Also you will find information on several new international projects, scientific reports and honorary notes. Finally, as always, your personal contributions on current research, publications, and updated addresses, are herein published. Current year represents a special opportunity for all of us, Ordovician workers, to meet at the "10th International Symposium on the Ordovician System" in Nanjing, China, by the end of June.

I am particularly grateful for the technical support provided by Fan Juanxuan (Nanjing Institute of Geology and Palaeontology, China), who uploaded current issue of *Ordovician News* in its web site: www.ordovician.cn I appreciate very much your confidence in my service to the secretariat of the Subcommission.

GUILLERMO L. ALBANESI

CHAIRMAN'S AND SECRETARY'S ADDRESSES

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CHAIRMAN'S REPORT

The Subcommission on Ordovician Stratigraphy is proud to announce that the Subcommission completed his business on seven Stage GSSPs as well as the stage names. The last Stage GSSP, the third stage of Ordovician, has been approved by IUGS very recently and two candidate names for this Stage are distributed to the voting members for vote. I expect that the name of this Stage may be selected before or at the coming Yangtze Conference. As I discussed with the voting members on the Glasgow meeting last year, the Subcommission will edit and publish a new Ordovician Stratigraphic Chart before the 33rd IGC in Oslo, 2008. This new job will be organized during the Yangtze Conference.

The Yangtze Conference is already prepared. A Subcommission business meeting and an open meeting will be organized. Three candidate countries applied for the next Ordovician conference in 2011. They are USA, Denmark and Spain. Chuck Mitchell, David Harper and Juan Carlos Gutiérrez-Marco will introduce their proposals during the conference.

The current leadership of the Ordovician Subcommission will be replaced in 2008 during the 33rd. IGC in Oslo. I will suggest a nominating committee for working on electing the next Subcommission officers. I would like to receive any comment from the voting members and corresponding members from now.

CHEN XU

SOS ANNUAL REPORT FOR 2005

1. Name of constituent body:

Subcommission on Ordovician Stratigraphy (SOS)

Chen Xu

Chairman, SOS

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2. Overall objectives, and Fit within IUGS science policy:

The Subcommission promotes international cooperation on Ordovician Stratigraphy. Specific objectives are:

- a. To delimit and subdivide the Ordovician System (and Period) as a part of the overall ICS mission to elaborate the standard global stratigraphic scale. This work aims to establish the boundaries (GSSPs), the correlation of the subdivisions (Stages and Series), and the nomenclature of the subdivisions.
- b. To promote regular international meetings on aspects of Ordovician geology, especially those devoted to clarifying stratigraphic procedures, nomenclature and methods for use in establishing a unified global time scale, and to prepare correlation charts with explanatory notes (this latter task is now completed).
- c. To encourage, promote, and support research on all aspects of Ordovician geology worldwide and to provide outlets, *Ordovician News*, international meetings, and a web page, for promoting discussions and reporting results of this research.
- d. To encourage, promote, and support interdisciplinary research on the Ordovician global Earth system, addressing topics that require high-resolution, global correlation.
- d. The ultimate goal of the Subcommission is to provide a high-resolution geological time scale that will be a critical foundation for interdisciplinary research on the global Earth system during the Ordovician Period. The work is broad based and must include specialists in paleontology, all subdisciplines of stratigraphy (bio-, litho-, chemo-, and magneto-), sedimentology, geochemistry, and tectonics. With active participants from more than 25 countries, the Subcommission involves much of the global geological community.

3. Summary table of Ordovician subdivisions:

AGES (Ma)	SYSTEM	GLOBAL SERIES	GLOBAL STAGES	KEY GRAPTOLITE/ CONODONT(C) BIOHORIZONS	BRITISH SERIES
445.6			HIRNANTIAN	(GSSP-Dob's Linn) N. extraordinarius	
455.8		UPPER	KATIAN	(GSSP-Wangjiawan North)	ASHGILL
460.9-	z		SANDBIAN	← D. caudatus (GSSP-Black Knob Ridge) N. gracilis	CARADOC
400.0	ORDOVICIAN	MIDDLE	DARRIWILIAN	(GSSP-Fagelsang)	LLANVIRN
468.1 - 471.8 -	ORD(MID	Third Stage	U. austrodentatus (GSSP-Huangnitang) B. triangularis(c)	ARENIG
478.6-		~	FLOIAN	(GSSP-Huanghuachang) T. approximatus	ANEMIO
488.3		LOWER	TREMADOCIAN	(GSSP-Diabasbrottet) I. fluctivagus (c) (GSSP-Green Point)	TREMADOC

International Subcommission on Ordovician Stratigraphy, ICS, IUGS, 2006 http://www.ordovician.cn

4. Organization:

a. Subcommission Executive
Chairman, Chen Xu (P.R.China)
Vice Chairman Juan Carlos Gutiérrez-Marco (Spain)
Secretary, G.L. Albanesi (Argentina)
16 other Voting Members
Over 100 Corresponding Members
Subcommission website: www.ordovician.cn
http://seis.natsci.csulb.edu/ISOS (remains
active for facilitating discussion of GSSP proposals).

5. Interfaces with other international projects:

IGCP Project 503: Arguably the most sustained rise in marine biodiversity took place during the Ordovician, and the second largest mass extinction event took place close to the end of that Period, coincident with an episode of major climate fluctuation. The results of the very successful IGCP n° 410 "The Great Ordovician Biodiversification Event" not only included the development of an improved globally-integrated biozonation for graptolites, conodonts chitinozoans, but also generated biodiversity curves that have been constructed for all Ordovician fossil

Following the work of the numerous regional teams and of the clade teams, that were established for each fossil group in IGCP project n° 410, a new successor project was proposed in order to develop a better understanding of the environmental changes that influenced the biodiversity trends in the Ordovician and Early Silurian. In this project, the major objective

is thus to attempt to find the possible physical and/or chemical causes (e.g., related to changes in climate, sea level, volcanism, plate movements, extraterrestrial influences, etc.) of the Ordovician biodiversification, the end-Ordovician extinction, and the Silurian radiation.

6. Chief accomplishments and products in 2004:

- a. The Black Knob Ridge section, Oklahoma, USA, has been ratified by IUGS in May this year as the GSSP for the base of the Katian Stage of the Upper Ordovician Series defined at the level of the FAD of the graptolite *D. caudatus*. A formal report of the GSSP has been submitted to Episodes very recently by Dan Goldman and his colleagues.
- b. The Wangjiawan North section, Yichang, China, has been ratified by IUGS in May this year as the GSSP for the base of the Hirnantian Stage, the uppermost stage of the Upper Ordovician Series, defined at the level of the FAD of the graptolite *N. extraordinarius*. A final report to the GSSP is published in current issue of the Episodes (
- c. Three stage names have been approved by the Subcommission and ratified by the ICS and the IUGS this year. They are the Floian Stage (the second Stage), the Sandbian Stage (the fifth Stage) and the Katian Stage (the sixth Stage).
- d. Two GSSP proposals for the base of the Middle Ordovician Series, and its lower stage (the 3th Stage, yet to be named), have been considered for voting very recently. These proposals refer to the level of the FAD of the conodont *B.? triangularis* at Huanghuachang section in China, and the level of the FAD of the conodont *P.* cf. *aranda* at Niquivil section in Argentina. The Subcommission will report the result after two rounds of votes, already in progress.
- e. A discussion page on the Subcommission's website was further developed to allow for wide dissemination of the GSSP proposals and for extensive discussion of other Subcommission business.
- f. The Subcommission sponsored the IGCP 503 annual meeting <Changing palaeogeographical and palaeobiogeographical patterns in the Ordovician and Silurian> in Glasgow September this year. About 80 colleagues participated.
- g. The Subcommission sponsored the book of "Global Ordovician Earth System" editing by Stan Finney, whose results will be published in a special paper of the Geological Society of America.
- h. *Ordovician News No. 23* was produced and posted on the Subcommission web site recently.

7. Chief problems encountered in 2006:

The Subcommission is planning to publish an Ordovician time table after all of the GSSPs were approved and ratified. It was discussed at the Glasgow meeting and supported by all participants.

The Subcommission may face a financial support problem to publish this table.

As always, the lack of travel support limits the participation of Voting Members to attend the 10th Ordovician conference in China, 2007.

8. Summary of expenditures in 2006:

Support to the production of newsletter (Albanesi): 500USD.

Deposition for supporting third world country participants to the 2007 10th Ordovician conference in China: 500 USD.

TOTAL: 1000 USD.

9. Work plan, critical milestones, anticipated results and communications to be achieved next year:

- a. Preparing the 2007 10th Ordovician conference
- b. Production and internet distribution of *Ordovician News No. 24* in 2007.
 - c. Management of Subcommission website.

10. Budget and ICS component for 2006:

Ordovician News No. 24 production: 500 USD.

Travel subsidies for executive members to attend the 10th Ordovician conference in China and the GSSP dedication ceremonies: 1000 USD.

Support to the preparing work of the organization committee for the 2007 Ordovician conference: 300 USD.

Management of Subcommission website: 300 USD. Preparation of an Ordovician Time Table: 300 USD. TOTAL 2007 BUDGET REQUEST: 2400 USD.

Potential funding sources outside IUGS:

The IGCP Project 503, "Ordovician Palaeogeography and Palaeoclimate", will fund the four meetings (with related field trips) in 2007 in China with the 10th Ordeovician conference. This project will provide travel support to a significant number of Ordovician specialists, including voting members of the Subcommission, allowing for regular meetings at the annual workshops scheduled for the project.

The State Key Laboratory of Stratigraphy and Palaeobiology, Nanjing Institute of Geology and Palaeontology, Chinese of Academia of Sciences, provides a server for the Subcommission website. The Subcommission officers are also supported by their research projects for parts of their activities.

11. Review chief accomplishments over last five years (2000-2006):

- a. Approval, ratification, and dedication of the Green Point GSSP for the base of the Ordovician System.
- b. Approval, ratification, and dedication of the Diabasbrottet and Fågelsång GSSPs for the bases

of the upper stage of the Lower Ordovician Series and the Upper Ordovician Series, respectively.

- c. Approval, ratification, and dedication of the Black Knob Ridge section, Oklahoma, USA and the Wangjiawan North, Yichang, China GSSPs for the bases of the Katian and Hirnantian stages, respectively.
- d. Significant progress on definition of series and stages for the Ordovician System with only two GSSPs remaining to be selected and approved by the Subcommission, following change in strategy for stages of Upper Ordovician Series in August 2003.
- e. With publication in 2000 of A Revised Correlation of Ordovician Rocks in the British Isles, correlation charts have been completed for Ordovician rocks on all continents.
- f. The 9th International Symposium on the Ordovician System held in San Juan, Argentina, in August 2003, in conjunction with the 7th International Graptolite Conference and a Field Meeting of the Subcommission on Silurian Stratigraphy and publication of 556 page proceedings, 130 participants represented 18 countries, 124 papers were presented in technical sessions.
- g. Publication of *Ordovician News* nos. 17-23 and their posting on the Subcommission's web
- h. Development of the web site "Ordovician Stratigraphy Discussion Group" to facilitate discussions on selection of the GSSPs. This site has evolved into the Subcommission's web site and also includes postings of *Ordovician News*.
- i. Sponsorship of a technical session and field excursion on the GSSP for the base of the Middle Ordovician Series at the Annual Meeting of the Geological Society of America in November 2000
- j. Sponsorship at the 31st International Geological Congress of the symposium "Paleontological, stratigraphical, and paleogeographical relations among South America, Laurentia, Avalonia, and Baltica during the Ordovician."
- k. Sponsorship at the 32^{nd} International Geological congress of the symposium "The global Ordovician Earth system".
- l. Launched GOES (Global Ordovician Earth System) Program to stimulate integrated multi-disciplinary studies of global events (mass extinction, sea-level changes, greenhouse conditions, tectonics) during the Ordovician Period.
- m. Sponsorship of a special symposium on the Ordovician System at the Geological Society of America Annual Meeting in 2000, of WOGOGOB 2001 in Copenhagen, and
- n. the meeting and field excursion "The Gondwanan Platform in Ordovician times: Climatic, eustatic and geodynamic evolution", in Morocco in February 2001.

- o. Selection of names for 2nd, 5th, 6th and 7th stages of the Ordovician System.
- p. Sponsorsjhip of the 2006 IGCP 503 Glasgow meeting on "Changing palaeogeographical and palaeobiogeographical patterns in the Ordovicvian and Silurian".

12. Objectives and work plan for the next 2 years (2007-2008):

- a. Completion of selection of GSSPs for all stages.
 - b. Publication of an Ordovician time table.
- c. Sponsor the 10th Ordovician conference, the Yangtze conference in China, 2007.
- d. Publication of the special volume of "The global Ordovician Earth system".
- e. Refocusing of Subcommission to address the global Ordovician Earth system.
- f. Development of a new website with transfer of Subcommission executive to new chair.

INTERNATIONAL SYMPOSIA, CONFERENCES AND FIELD MEETINGS

The Geological Survey of Spain (IGME) cordially invites you to attend the **4th European Meeting on the Palaeontology and Stratigraphy of Latin America (4EMPSLA)**, to take place at our facilities in Tres Cantos (Madrid, Spain), 12-14 September 2007. You can find more information, the first circular and the registration form at: http://www.igme.es/4empsla_

The Second Circular will only be sent to those registering before February 28th.

We are pleased to welcome you to the 9th WOGOBOB 2007 meeting, which will take place in Rättvik in the Siljan district, Dalarna, Sweden, on 17-20 August. Please find included second circular with call for abstracts, and registration information. We invite you to submit an abstract by 19 March on any aspect of Ordovician geology and palaeontology of Baltoscandia. Abstracts and field guides will be published in a volume of the Reports and Bulletins of the Swedish Geological Survey, to be printed at the end of May.

Please, for further details visit our home page: http://www.palaeontology.geo.uu.se/Mainpages/WOGOGOB/Layout.htmfor

JAN OVE R. EBBESTAD

IGCP 503 meeting at Paris: 1st International Palaeobiogeography Symposium

Dear Colleagues,

We would like to remind you the deadlines for registration and sending abstracts for the 1st International Palaeobiogeography Symposium. The Symposium will be held in Paris, from 10 to 13th July, at the Université Pierre et Marie Curie (Paris 6). March 31st 2007: final registration and payment. You can fill out the form electronically http://sgfr.free.fr/general/calendrier.html

May 10th 2007: deadline for sending abstracts.

The topical categories and Special Sessions of the Symposium are 1 - Palaeozoic palaeobiogeography 2 - Biogeographical constraints in Palaeozoic palaeoreconstructions. 3 - Mesozoic palaeobiogeography (including break-up of Pangaea). 4 - Shaping Modern biogeography (including Cenozoic biogeography). 5 - Biotic interchanges. 6 - Analytical methods in biogeography.

We list here below the most important informations in the case you did not receive the 2nd circular.

See you in Paris!!

Contributions

Oral communications: 15 minutes + 5 minutes for questions.

Poster: dimensions 92 x 120 cm. For students: A student prize for the best presentation and a prize for the best poster will be awarded on Friday 13th at the (send end of the meeting. Abstracts palstrat@ccr.jussieu.fr). Each abstract should not exceed one page A4 format (including refernces and figures) and should be organized as follows: (1) title (in normal, not block letters), (2) full names of the author(s) (in capitals) and affiliation(s) in full name, address(es) including e-mail, (3) text in times 12 and figures (if necessary, with its description at the end). Please indicate whether your submission is for a poster or a talk, and indicate the session.

Official languages

French and English.

Registration fees

Before March 31st 2007: Full Registration: 150 euros

SGF Members Registration: 120 euros

Student Registration: 100 euros

SGF student members Registration: 80 euros

After March 31st 2007 Full Registration: 190 euros

SGF Members Registration: 170 euros

Student Registration: 120 euros

SGF student members Registration: 100 euros.

Please note that all refunds (including non-attendance) will incur a 25% charge. The registration fee will include Symposium programme and abstract, an icebreaker party and coffee breaks. Delegates are expected to organise their own lunches.

A social dinner will take place in the evening of July 12th at the "Train Bleu" restaurant (within the train

station "Gare de Lyon"), with a typical traditional French menu. The cost of this dinner is 50 Euros and it is not included in the registration fees. *Publication*

The papers derived from presentations and posters presented at the symposium can be submitted for publication in a special issue of the Bulletin de la Société géologique de France. Authors must submit their manuscripts during the Symposium (hard copy and CDrom). For instructions see http://sgfr.free.fr/publier/editions/InstrucAut_gb.html Payment procedures. Download the form: http://sgfr.free.fr/rencontrer/seances/s07

07 pale obiogeo.html

You can pay with VISA or MASTER cards, or by cheque on French bank to the order of "SGF Paléobiogéographie". During the congress we shall only accept cash and French cheque. Administrative payment is possible by order form to "SGF Paléobiogéographie".

FABRIZIO CECCA

7th Baltic Stratigraphical Conference Tallinn, Estonia, 17-20 May 2008

The Baltic Stratigraphical Conference is a traditional meeting devoted to various aspects of regional geology and stratigraphy of the Baltic region and Baltica Palaeocontinent. The previous conference held in St. Petersburg (2005) was a highly successful meeting with more than 100 participants from the Baltic countries and Russia, but also Poland, Germany, Sweden, France, USA, China and others. Nearly half of the papers presented were devoted to Ordovician and Silurian topics.

The 7th Baltic Stratigraphical Conference will be held in Tallinn, Estonia, on 17-18 May 2008, followed by a 2-days geological excursion on 19-20 May 2008. Contributions on all topics related to stratigraphy and palaeontology of the Baltic region and neighbouring areas are most welcome. A separate session on Ordovician and Silurian will be held in conjunction with IGCP project 503.

The conference will be organized by the Baltic Stratigraphical Association, Tallinn University of Technology, University of Tartu and Geological Survey of Estonia.

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SCIENTIFIC REPORTS

Ordovician timescale update – comment invited

The Global Geochronological Scale (GCS) published by Cambridge University Press (Gradstein et al. 2004) is being revised, updated, expanded and developed as an online resource in the form of a standard PDF file with a "sophisticated searching and browsing front menu". Each chapter will have the same set up and focus as in the published book and there will be several new chapters on topics such as sequence chronostratigraphy, carbon and oxygen chronostratigraphy, history of radiometric dating, Cryogenian and Ediacaran Periods, and an archaeological timescale. The current C.U.P. plan is to produce a concise version in 2008, and a full version both on the web and as a limited edition high quality book in 2010.

We therefore have the opportunity to update the Ordovician chapter (by R.A. Cooper and P.M. Sadler) as well as correct any errors, and add new material. The new GSSP's and names for Ordovician stages will be added and hopefully some additional biostratigraphic schemes included. Colour illustrations of all GSSP's are sought.

This is to invite users of the Ordovician timescale to give us your comments (and criticisms) on how or where the scale could be improved.

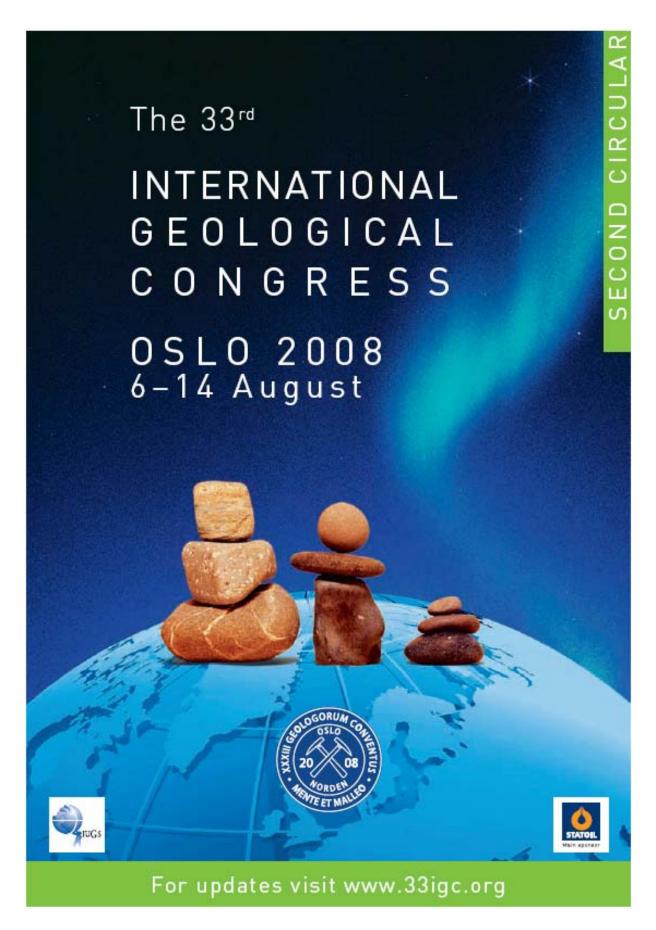
Calibration: Radiometrically dated samples used for calibration of both the Ordovician and Silurian were listed in table 12.1 in Gradstein et al (2004), and were incorporated into the composite sequence of 1400 bioevents which was independently scaled by the constrained optimisation procedure. The dates were first used to remove low-order non-linearity in the scale and then to calibrate the composite sequence via regression analysis. This method has the advantage that the calibration of stage boundaries derives not from just the nearest one or two dates but from potentially all dates in the composite. The addition of one or two new dates will therefore be unlikely to alter the calibration significantly. However, we would like to hear of any U-Pb (zircon) or Ar-Ar dates done in the last 4-5 years that are biostratigraphically well controlled (by graptolites or conodonts).

Correlation: The correlation of stages and zonal schemes used very largely followed those in Webby et al. (2004). Are there any significant changes to the names and correlation of zones?

Replies: Please respond to: r.cooper@gns.cri.nz *References:*

Gradstein, F.; Ogg, J.G.; & Smith, A.G. 2004: A Geological Time Scale. Cambridge Univ Press. 589 p. Webby, B.D.; Droser, M.L.; Paris, F. 2004: The Great Ordovician biodiversification event. Columbia University Press. Columbia University Press. 484 p.

ROGER COOPER & PETER SADLER



HONORARY NOTES



IGOR F. NIKITIN (1924-2007).

Professor Igor F. Nikitin, distinguished geologist and palaeontologist died on January 16th 2007 in Almaty. His name and his long professional career were associated mainly with the early Palaeozoic of Kazakhstan and with the Institute of Geological Sciences, Almaty, where he was working productively until the last days of his life. From 1976 to 1985 he was employed in the All-Union Geological Research Institute (VSEGEI) where he took care of the Ordovician stratigraphy of the USSR. Igor Nikitin was widely acknowledged as the leading expert on the Ordovician geology, palaeontology and stratigraphy of Kazakhstan. His book on the Ordovician of Kazakhstan, published in two parts in 1972-1973, remains the single most important source of information on general aspects of the Ordovician geology of this vast country, while his numerous publications on Cambrian and Ordovician brachiopods represent the major contribution to the our current knowledge of Kazakhstanian brachiopod taxonomy and biogeography. The last of these seminal works, dealing with diverse but poorly known brachiopod faunas associated with Late Ordovician carbonate build-ups, was published in August of 2006, less than half a year before his death. Igor Nikitin also made important contributions to studies of various aspects of the Ordovician – Silurian boundary, and to

the geology and biostratigraphy of the Ordovician radiolarian cherts that are wide spread in Kazakhstan as part of early Palaeozoic ophiolite complexes.

Igor was a first class field geologist and was happy to share his knowledge with younger generations of Kazakh and Russian geologists. Even in the last fifteen years, when he was not able to take part in fieldwork due to progressive illness, the doors of his house were a starting point for numerous research teams that came from outside Kazakhstan to explore Kazakhstanian geology, and everybody was given a warm welcome, together with sound advice and guidance.

Since the time of Kazakhstanian independence in 1991, Igor Nikitin had been involved actively in the management of the Kazakhstanian geological sciences as chairman of the Kazakhstanian Interdepartmental Stratigraphical Committee and the Kazakhstanian Palaeontological Society. He also took part in the activities of the International Subcommission on Ordovician Stratigraphy of IUGS as a voting member and as a Vice-Chairman.

As a close friend, advisor, and source of wide experience with particular reference to the Ordovician System, he will be sorely missed. To his daughter Olga, and to his other family and many scientific colleagues, we extend our sympathies, coupled with warm memories.

LEONID POPOV, ANDREY DRONOV, TATIANA MODZALEVSKAYA, TATIANA TOLMACHEVA, MICHAEL BASSETT

MISCELLANEA

International Commission on Stratigraphy ICS Stratigraphy Prizes

The International Commission on Stratigraphy (ICS) is a leading entity of the International Union of Geological Sciences (IUGS) with responsibility for establishing international standards in stratigraphy, such as the Geological Time Scale and the International Chronostratigraphical Scale, defined by boundary stratotypes (GSSPs).

Stratigraphy is the core discipline of the geological sciences, concerned with the relationships in time and space of rocks (not just sedimentary, but also igneous and metamorphic rocks) and the varied processes that have formed and affected them. Results and interpretations deriving from other disciplines can only be integrated into a coherent all-embracing geological history if they are based on sound stratigraphy.

To emphasise this key role of stratigraphy, the International Commission on Stratigraphy awards two ICS Prizes to outstanding geoscientists every four years during an International Geological Congress.

The first awards were made at the 32nd IGC in Florence, 2004; the second will be made at the 33rd IGC in Oslo, 2008.

The awards are made at two levels:

- 1. The **Digby McLaren Medal** is awarded to honour a significant body of internationally important contributions to stratigraphy sustained over a number of years. The contributions can be in research (through publication of papers, monographs or books) or in education (through development of influential educational material or resources). It is expected that a major proportion of this work will have been published in an international language. The medal is named in honour of the Canadian geologist Digby McLaren who was so influential in developing the key "golden spike" concept of a Global Stratotype Section and Point (GSSP) with reference to the Silurian -Devonian boundary, and a major force behind the International Geological Correlation Programme (IGCP) of UNESCO.
- 2. The ICS Medal is awarded to honour high-quality research in stratigraphy by recognizing a single major achievement in advancing stratigraphical knowledge. The research can be either in the development of new methods of analysis or in the presentation of new data and/or interpretation of the geological history of a particular area or time interval. There are no limitations to the size or scale of the subject matter. The geographical scope of the work need not be international, but the work should be of an international scientific caliber. The language of publication of the work is not a criterion, and it may comprise a single paper of distinction or a series of papers over a short period of time that have similar impact.

Nominations and Selection:

Nominations for either of the Awards are solicited from any source, not just members of the Commission or other entities within IUGS. Nominations should include a brief biographical background of the Nominee, a reasoned case based on the Nominee's contributions, and, if necessary, translation into English of at least abstracts of this material so that independent judgement can be made.

The ICS has established a committee to elicit and evaluate nominations for the two Prizes, and afterwards to make recommendations to all members of ICS, who must then approve the nominations by a clear majority vote. The committee includes Stan Finney (Vice-Chair of ICS, California State University at Long Beach), Brian Pratt (University of Saskatchewan, Canada), André Strasser (University of Fribourg, Switzerland), and Finn Surlyk (University of Copenhagen, Denmark).

Nomination documents should be submitted to: Prof. Stan Finney Chair of ICS Stratigraphy Prizes Committee Dept. of Geological Sciences California State University at Long Beach Long Beach, CA 90840 USA

Tel.: 001 562 985 8637 E-mail: scfinney@csulb.edu

By October 1, 2007

For further information please contact Stan Finney or other members of the committee.

Comments

Three of our Australian colleagues (Anne Kemp, Susan Turner and Carole Burrow) have initiated a polemic paper on the relationships of conodonts with vertebrates, to develop the idea that conodonts are NOT vertebrates. This is agreed in majority by the early vert experts, and perhaps also by many (if not a majority of) conodont experts. This paper will be coauthored by a group of people including Turner S., Burrow C.J., Blieck A., Hanke G.F., Männik P., Nowlan G.S., Reif W.-E., Rexroad C.B., Trotter J., Viira V. & Young G.C. (provisional list).

ALAIN BLIECK

Call for cooperation: I am continuing my investigations on the chemical composition of the chitinozoan vesicles. During the processing of my samples, I sorted graptolites (rhabdosomes and sicula) and made similar chemical analyses for comparison with the composition of the chitinozoans. If some graptolite workers have already made similar analyses or are interested by some collaboration, please contact me.

FLORENTIN PARIS

In the framework of the IGCP Project 503 I plan to organize in the Paleontological Institute RAS (Moscow) the conference "Early Palaeozoic biodiversity development: role of biotic and abiotic factors and events' correlation". The beginning of the conference: June, 24, 2008, Post-conference excursion is planed to the Ordovician of the Altay by N.V. Sennikov (Novosibirsk).

SERGEI V. ROZHNOV

CURRENT RESEARCH

ACEÑOLAZA, FLORENCIO GILBERTO (Argentina). I am actively working on the paleontology of Ordovician of northern Argentina, with new data from some classical areas as the Cordillera Oriental. Recent research has also been done on the Lower Palaeozoic strata of Atacama (Northern Chile), considering the whole region with its Argentine connection. Additional work is being done on the palaeogeographic signatures of the Precordilleran faunas, and their relation to sea current dynamics.

ACEÑOLAZA, GUILLERMO F. (Argentina). Highly fossiliferous sequences of the Cordillera Oriental and Sierras Subandinas of northwest Argentina are being studied under a multi-disciplinary project with Juan Pablo Milana, Susana Heredia (San Juan), Franco Tortello (La Plata) and Marilyn Vergel (Tucumán). The new area of Zenta has proved to be a key region on the interpretation of the little known Tremadocian / "Arenig" transition of the South American Central Andean Basin. Exceptionally preserved *Cruziana* associations are the focus of integrated taxonomical and ecological research. In addition, taphonomic studies of bioclast accumulations are done in collaboration with Marcello Simoes (Brazil).

ALBANESI, GUILLERMO L. (Argentina). I am working on lower Paleozoic conodont faunas from western and northwestern Argentine basins. In particular, we are developing an extended project on high-resolution conodont-graptolite biostratigraphy for the Ordovician and Silurian systems of Argentina in cooperation with Gladys Ortega. A new project on conodont paleothermometry from the Precordillera and Eastern Cordillera is being carried out with two PhD students, F. Zeballo and G. Voldman, under my supervision. I am collaborating with colleagues from universities of Argentina and other countries on diverse topics of historical geology from the lower Paleozoic of South America, including conodont biostratigraphy, sequence stratigraphy, events, and paleothermometry.

ALDRIDGE, RICHARD J. (UK). My work continues on the Soom Shale Lagerstätte of South Africa: a paper on the bromalites was published in 2006, one on caryocaridids was submitted (fronted by Rowan Whittle), and the continuing endeavours on the brachiopods, agnathans and new conodont apparatuses edge ever nearer completion. A paper on Upper Ordovician conodonts from Estonia has also been published (with Viive Viira and Stephanie Curtis).

ÁLVARO, JOSÉ JAVIER (Spain). I am studying the benthic community replacements recorded in the western Mediterranean region during two time spans: the Furongian-Tremadocian transition and the Ashgill. Recent papers include collaborations with other specialists of brachiopods, conodonts and trilobites.

Future results will cover systematic descriptions of Early Ordovician trilobites and paleoecological modifications associated with volcanoclastic events and glaciogenic processes recorded in the Iberian Peninsula, France and Morocco.

ARMSTRONG, HOWARD A. (UK). Report of activities: Two lengthy spells off work have mean't this has been a low productivity year. I'm actively working on various aspects of Ordovician climate particularly the role of the Intertropical Convergence Zone as a driver of climate-ocean change. Tom Challands and I are extending this work to midpalaeo-latitudes in a detailed study of the sedimentary fill of the Welsh basin through the Boda and Hirnantian events. Work also continues on growth and ecospace utilization in Ordovician conondonts.

BARNES, CHRIS (Canada). Work with Shunxin Zhang is using my extensive conodont database to relate conodont biostratigraphy, biofacies and biogeography to the pattern of eustasy and tectonism that affected northern Laurentia in the early Paleozoic. Several joint papers have appeared recently with others in press and preparation, which deal with Ordovician and Silurian conodont taxonomy, evolution, paleoecology, cladistic analyses and the response of the conodont communities to eustatic change. The geochemistry of conodonts is being pursued further in collaboration with Julie Trotter (Australian National University and CSIRO). Other work in press includes: Late Ordovician-Early Silurian condonts from the Edgewood Group, Missouri-Illinois (with Tyler Kuhn and Felicitiy O'Brien); Late Ordovician-Early Silurian conodonts from the Kolyma Terrane, NE Russia (with Shunxin Zhang). Other work nearing completion includes: Ordovician-Silurian conodonts from Hudson Bay (with Shunxin Zhang); Late Ordovician condonts from southern Ontario (with Shunxin Zhang and Glen Tarrant); Ashgill-Wenlock conodonts from the Canadian Arctic with David Jowett; and Ashgill conodonts from the Whitland section, South Wales with Annalisa Ferretti.

BAUER, JEFF (USA). I am working on a final draft of a report on conodonts from the Joins and Oil Creek Formation, Arbuckle Mountains, Oklahoma. I hope to have a manuscript submitted for publication soon.

BERESI, MATILDE SYLVIA (Argentina). I continue working on Ordovician biostratigraphy from several carbonate and siliciclastic sequences of Mendoza and San Juan Provinces, western Argentina. I am involved in ongoing collaborations with Susana Heredia (conodonts) on biostratigraphy, microfacies. conodonts biofacies and sedimentary environments of the carbonate sequences in the Central and Eastern Precordillera of the San Juan. In the Mendoza Province, we continue working at the San Isidro area, Precordillera and at the Ponon Trehué section, San Rafael block. Matilde ioined forces with Biörn Kröger (Berlin) to describe the first Orthocerida and

Lituitida of the Early and Middle Ordovician of the Argentine Precordillera. Guillermo Aceñolaza and Sergio Nievas (Tucumán University) working with me describing the first Cambrian-Ordovician sponge in the Sierras Subandinas and a new spicule assemblages in the Cordillera Oriental of Northern Argentina, western Gondwana.

BLIECK, ALAIN (France). Unfortunately not a lot of activities on Ordovician, last year ... I am currently supervising Zivile Zigaite's Ph. D. thesis on Silurian vertebrates (thelodonts and others) from Lithuania, Siberia, and Mongolia. It also includes a bit of Late Ordovician material. Zivile is at the University of Vilnius, Lithuania. In the same time, I still have to finish a thick review paper on the Cambrian and Ordovician vertebrates (database), in collaboration with Susan Turner (Queensland Museum, Australia).

BOCKELIE, J. FREDRIK (Norway). I have worked on the Ordovician stratigraphy and paleontology of Scandinavia for many years, particually the Middle and Upper Ordovician. I am currently working on the Late Ashgillian of the Oslo Region, Norway and Dalarna, Sweden, with emphasis on the Paleogeography, facies distribution patterns and palaeoecology. My main interests are in the Middle and Late Ordovician stratigraphy, palaeogeography and in primitive echinoderms (crinozoa).

BRETT, CARLTON E. AND STUDENTS (USA). My research in 2005-2006 was focused on development of a refined sequence stratigraphic model for mixed siliciclastic-carbonate facies in foreland basins using data gained from the past two year's research on Ordovician successions through Appalachian Basin and the Lexington Platform. In particular, we document consistent patterns requiring some modification of sequence stratigraphic models. including a two-part subdivision of transgressive systems tracts and a two-part division of highstands (McLaughlin, 2006; McLaughlin and Brett, in press). The model attempts to bridge processes on the siliciclastic- and carbonate-dominated sides of a foreland basin. Another aspect of our research involved development of an integrated model for different types and scales of discontinuities. In particular, we documented over 50 hardgrounds, concretionary and condensed beds in the Upper Ordovician. A hierarchy of different types of discontinuities was identified; the type and complexity of the condensed bed/discontinuity is related to its temporal importance. Simple hardground/firmgrounds reflect diastems of 100 to 1000 yr durations, whereas polymictic hardground conglomerates are typical of marine erosion surfaces of ~10,000 year durations. A series of distinctive types of discontinuities can be traced widely and these permit recognition of similar sea-level and sedimentation-related effects on both the active siliciclastic side and the passive offshore carbonate side of foreland basins (McLaughlin, Brett and Wilson, in press). An initiative developed with

Brooks Ellwood (Louisiana State University) uses magnetic susceptibility (MS) to corroborate physical and biostratigraphic correlations. An initial case study yielded an excellent pattern among independently correlated sections (Ellwood et al., 2006). We are now extending this technique into the subsurface as a test of correlations. A related project begun in 2006 relates patterns of MS and rates of sedimentation in small-scale limestone-shale cycles in the Upper Ordovician Kope Formation to sulfur isotopes. This project was carried out in cooperation with Dr. Barry (University of Cincinnati) Maynard undergraduate researcher Meghan Welch, as a part of the University's WISE (Women in Science and Engineering) internship program. Because sulfatereducing bacteria fractionate ³²S less effectively when sediment-borne food delivery is rapid, the ³⁴S/³²S ratio has proved to be a useful proxy of sedimentation rate. Isotopic results confirm very low rates of sedimentation associated with thicker limestone beds, which we had interpreted as condensed on the basis of sedimentology and taphonomy. Calcareous siltstones also show a progressive increase in calculated sedimentation rate upward through meterscale cycles, followed by a very abrupt return to lower values in overlying limestone. Thus, we have refined a technique for determining relative sedimentation rates that may be broadly applicable. Furthermore, the results provide important insights into the processes acting during a typical cycle. The pattern of gradual increase and sudden decline of sedimentation rate suggests that the limestones reflect shut-off of clastic sediment influx; this also accounts for the low MS values observed in these portions of the cycles; this is followed by progressive sediment progradation. Such a pattern is compatible with a model of rapid minor sea level rise to stillstand, followed by progradation. Research with Gordon Baird (SUNY College, Fredonia), in 2005-2006 involved detailed logging and correlation of some 30 recently available drill cores totaling over 900 m of section, from the Mohawk Valley region in New York State. A particular concentration of drill cores in the area of Herkimer County helped to shore up detailed correlations of the shelf-to-basin transition in the Upper Ordovician during a time of transition from passive platform and ramp margin in the Mohawkian to active foreland basin conditions. Among the important discoveries of this research were the finding of numerous K-bentonites in the cores; these are still under study to establish more defined correlations. In addition we established the eastward correlation of highstand black shale and regressivelowstand calciturbidite packages from central New York nearly to the Taconic front. Finally the eastern set of cores revealed several distinct sub-horizontal fault surfaces and fracture zones in upper Ordovician shales that may record syn-sedimentary decollements developed some 30 km into the foredeep during the

time of emplacement of Taconic thrust sheets in the hinterland. Thus, the core research has helped further to establish the dual effects of tetonics and eustasy in the active Taconic foreland basin. Student research projects, including Masters thesis (Susanna Taha McLaughlin) and one PhD dissertation (Patrick McLaughlin), on aspects of Upper Ordovician sequence stratigraphy and paleontology, were both completed in 2006. A second dissertation on Ordovician syntectonic sedimentation by Sean Cornell and a Masters thesis by Jessica Bazeley on faunal comparisons of deep vs. shallow cycles in the Kope Formation, are nearing completion. An edited volume. derived from a 2005 field conference for IGCP project 503 (Ordovician Bioevents), and featuring ten papers on Ordovician research in the Cincinnati area by Brett and student colleagues, is now in press through the Cincinnati Museum.

BRUSSA, EDSEL (Argentina). I am actively working with Ordovician and Silurian graptolites from Argentina. I am also involved in the paleobiogeographic analysis of other Gondwana regions (Bolivia, Chile and Peru) with Chuck Mitchell and Jörg Maletz. I continue working with Blanca Toro in the study of new material from the Cordillera Oriental, Puna and Precordillera. I am also collaborating with Patrick Racheboeuf in the analysis of Ordovician phyllocarids of Argentina and Bolivia.

CARRERA, MARCELO G. (Argentina). I'm continues working on the Early Paleozoic sponges and their contribution to the evolutionary history of the Phylum Porifera. A new data base from the Cambrian sponges was finished and a revision paper on their early evolutionary history is in press. Descriptions of new sponge specimens discovered from the Argentine Precordillera were completed and cited below.

CATALANI, JOHN A. (USA). Taking advantage of my retirement, I have continued and expanded my search for nautiloids in the carbonates of the Platteville Group (Mohawkian Series, Turinian Stage--lower Caradoc equivalent) of the Midwest USA. Excavation (by hand) that began in late 2003 continues on a section that was exposed during the final quarrying activities in a now abandoned quarry in northern Illinois (continues but at a slower pace since about a meter of overburden must now be cleared before the fossiliferous layer is reached). This section exposes the Cowen Member of the Grand Detour Formation. The Cowen is significant because it lies between the other two units of the Platteville that display a diverse and abundant nautiloid fauna: the underlying Mifflin Formation and the overlying Forreston Member of the Grand Detour Formation. This exposure is significant since Cowen exposures are rare compared to the other two units. The diversity of the nautiloids recovered so far consists of 36 species in 24 genera including 7 species and 2 genera that are unpublished. This particular exposure is the most diverse Cowen exposure so far discovered. A large associated

molluscan fauna has also been recovered including extremely large monoplacophorans. Several other sites previously closed have once again become available adding greatly to the nautiloids recovered. Of additional interest is the discovery of several more endoceroids with "rhythmic" variably spaced septa similar to one reported by Rousseau Flower in 1968. Work continues with Bob Frey on a series of papers describing both the new genera and species of nautiloids discovered in the Platteville as well as a reassessment of the entire nautiloid fauna found in Platteville rocks.

CHEN, XU (China). From 2006 I am the cheif editor of a Chinese journal "Journal of Stratigraphy". I am working with Zhang Yuandong, Fan Junxuan and Dan Goldman on a graptolite monograph "Upper Darriwilian to Sandbian graptolites of China".

CHOI, DUCK K. (Rep. Korea). I have been mainly working on the Cambrian-Ordovician trilobites of Korea and North China. Currently I am heavily involved in studying a newly discovered trilobite fauna from the interval across the Cambrian-Ordovician boundary in the shallow-water facies of the Taeabeksan Basin, an early Paleozoic sedimentary basin fringing the Korean peninsula. It is expected to provide more reliable information for intercontinental correlation and paleogeographic configuration.

COCKS, ROBIN (UK). I had another busy year in 2006. Papers were finished and submitted on a substantial (41 taxa) Lower Aeronian brachiopod fauna from Newlands, Girvan; on Palaeozoic climate changes; with Trond Torsvik on the Palaeozoic history of Siberia; and with Rong Jia-yu on a survey of Rhuddanian brachiopod genera worldwide to determine how and where they picked up after the Hirnantian glaciation. New work started on compiling a revised review of British and Irish Lower Palaeozoic brachiopods for the Palaeontographical Society; a paper with Trond Torsvik on the Lower Palaeozoic palaeogeography of peri-Gondwana; and with Richard Fortey on the history of Avalonia.

COOPER, ROGER (New Zealand). With Peter Sadler I am currently revising the Ordovician time scale for the new C.U.P. format Global Geochronological Scale (GTS). The C.U.P. plan is for a concise atlas type book issued in 2008, a full (expanded) web edition (2010), and a limited edition high quality book version (2010) - see separate article in this Newsletter. Other work includes the ongoing analysis of the CONOP composite for diversity and longevity studies (with Peter Sadler).

COUTO, HELENA (Portugal). I'm working on the study of Palaeozoic stratigraphy, palaeontology and gold-antimony mineralizations in Baixo-Douro area (North Portugal). These studies aim defining prospecting guides for metals and contributing for a better knowledge of the Palaeozoic stratigraphy. Concerning the Ordovician, detailed studies were and

are being developed on the Lower Ordovician volcano-sedimentary layers, on black layers bearing volcanogenic prints with organic matter, hydrocarbures, fossil algæ and bryozoa that exert a control of gold mineralization and on ironstones.

DI CUNZOLO, SONIA C. (Argentina). I'm actually working in Bioestratigraphy of Cambrian-Ordovician boundary in Quebrada de Humahuaca, Jujuy province, Argentina. I'm doing my PhD in this topic, with Dr. Aceñolaza and Dr. Cingolani. I especially work whit trilobites, and I'm studying isotopes in order to know the material's provenance.

DRONOV. ANDREI (Russia). I'm continuing to work on the Ordovician facies and sea-level changes of the Baltoscandian basin. Together with Tonu Meidla, Leho Ainsaar, Oive Tinn, Tõnis Saadre, Linda Hints, Olle Hints and other Estonian colleagues we are trying to reconstruct stratal geometry of depositional sequences and estimate the magnitude of sea-level fluctuations based on the core materials from Estonia. I am also collaborating with Radek Mikuláš in the study of the Ordovician trace fossils and ichnofabrics mainly from St. Petersburg Region. There was a productive field trip to the Ordovician of Siberian Platform (Kulyumbe River section) where we worked together with Alexandr Kanygin, Alexandr Timokhin and Tatiana Tolmacheva. Hopefully this work will have a continuation in a comparative study of the biotic events and sea-level changes on the Russian and Siberian platform.

EBBESTAD, JAN OVE R. (Sweden). Recently I joined the Museum of Evolution in Uppsala on a short term contract. Though not a research position, I will continue to work on biogeography of Ordovician and Silurian gastropods and monoplacophorans. The most immediate plans will be compilation of distributional data to quantitatively evaluate biogeographic patterns. A great many collections have been studied in North America and Europe yielding much data to compile. The spring, however, will be devoted to organizing the 9th WOGOGOB-meeting in August (see information elsewhere).

ELIAS, BOB (Canada). I welcome Boo-Young Bae (from Andong National University, Korea) as a Postdoctoral Fellow. Boo-Young, Dong-Jin Lee (Andong National University), and I are completing studies of tabulate chain-corals, including Manipora, from the Ordovician of Manitoba. Multivariate analysis is being applied for differentiation of closely related species, and life-history strategies in response to environmental conditions are being examined in detail. Together with Mari-Ann Motus (Tallinn University of Technology), we have started work on growth patterns and morphologic variability of the tabulate coral Eofletcheria from the Ordovician of Estonia. Dong-Jin, Sung-Kyu Woo (Andong National University), and I are preparing a publication on species of Lichenaria from the Ordovician of Tennessee. The degree of paleobiologic complexity

and level of colony integration are surprisingly high for a tabulate coral considered to be primitive. I, together with Graham Young (adjunct professor), welcome inquiries and applications from students interested in graduate studies at University of Manitoba. M.Sc. and Ph.D. projects are available on Ordovician corals, paleoecology, and stratigraphy [seehttp://www.umanitoba.ca/science/geological scie nces/people/faculty/elias/elias.html]. Adam Melzak's Ph.D. dissertation on rugose corals of the Late Ordovician to earliest Silurian Vaureal, Ellis Bay, and Becscie formations of Anticosti Island, Quebec, is being prepared for publication. Lori Stewart completed a B.Sc. thesis on borings and their occupants in stromatoporoids and colonial corals from an Ordovician unit in Manitoba.

ESTEBAN, SUSANA B. (Argentina). I continue working on Cambrian-Ordovician fine clastic rocks of west and northwest Argentine basins. Our approach is based on the integration of sedimentologic and biostratigraphic data within a sequence stratigraphic. This work is being done in cooperation with Franco Tortello (Universidad de La Plata). Now we are involved in the study of oxygen-deficient facies and the trilobite faunas associated.

FAN, JUNXUAN (China). I am working on the following aspects: 1) the Late Ordovician graptolite extinction event and succeeding survival and recovery in South China which is financially supported by the Natural Science Foundation of China. My colleagues and I made some new collections recently. 2) Chemostratigraphy near the Ordovician–Silurian Boundary in South China. 3) paleobiological and stratigraphical database and macroevolution. 4) manage the new websites for the Ordovician Subcommission (ISOS) and Silurian Subcommission (ISOS).

FINNEY, STAN (USA). I am presently working on several projects: 1) final editing of volume "Ordovician Earth Systems" with 14 papers to be published as GSA Special Paper; 2) writing up results for publication of voluminous dataset of U-Pb geochronology of detrital zircons from Cambrian to Carboniferous sandstones of Argentine Precordillera and developing new projects following upon this theme; 3) working with Petr Storch in monographing ornatus to persculptus zone graptolites from Vinini Creek and Monitor Range sections in Nevada; 4) further studying late Ordovician events based on Nevada sections as part of global project with diverse, multi-disciplinary team led by Chuck Mitchell; 5) writing parts of chapters on lithostratigraphy and chronostratigraphy for new revision to International Stratigraphic Guide; 6) serving as Vice-Chair of ICS, including leading ICS Stratigraphy Prize Committee: and 7) still serving as Chair of Geological Sciences at CSULB, my home institution.

GANIS, G. ROBERT (USA). I am working on a synthesis of the Taconic event in mid- Appalachian

North America, especially the sedimentary/tectonic signal preserved in the foreland dateable with graptolites.

GHOBADI POUR, MANSOUREH (Iran). I am currently working on the Lower and Middle Ordovician trilobites of the Alborz Mountains, Kopet-Dagh and Central Iran. I also cooperate with Rober Owens and Lucy McCobb (National Museum of Wales, Cardiff) in the study of the Late Ordovician (Katian) trilonbites of Tarbagatai Range in Kazakhstan. In addition to trilobites the Lower to Middle Ordovician deposits of Alborz Mountains contain a moderately diverse brachiopod fauna which is presently under the study jointly with Leonid Popov (National Museum of Wales, Cardiff).

GONCUOGLU, M. CEMAL (Turkey). I am actively working on the Ordovician stratigraphy and palaeogeography of the Ordovician in Turkey with international biostratigraphic contribution.

HARPER, DAVID A. T. (Denmark). Research continues on Ordovician stratigraphy and faunas in Scotland (with Yves Candela, Euan Clarkson and Alan Owen), Ireland (with Matthew Parkes, George Sevastopulo and Svend Stouge), Greenland (with Jan Audun Rasmussen, Christian Mc Ørum Rasmussen and Svend Stouge), western Russia (with Christian Mac Ørum Rasmussen and Arne Thorshøj Nielsen) and the greater Himalayan region (with Nigel Hughes and Lars Holmer). Work continues with Rong Jia-yu, Chen Xu and Zhan Ren-bin on refining events during the late Ordovician and early Silurian in South China, a critical area for the understanding of the Hirnantian Substage, the late Ordovician extinctions and early Silurian recovery. Further additions to PAST have continued to enhance the popularity of this free software package for palaeontologists and a book based on techniques in the package was published by Blackwell in late 2005. (PAST - PAleontological STatistics Software. Version 1.62 is available at http://folk.uio.no/ohammer/past). The success of the Ordovician IGCP (503) 'Ordovician palaeogeography and palaeoclimate' continues; newsletters are now available (http://sarv.gi.ee/igcp503/). Within the frame of the project Harper is a co-leader and is currently assembling a group of specialists to investigate the relationships between sea-level change, biofacies and bioevents. All are welcome to join.

HINTS, LINDA (Estonia). I'm working on Ordovicin brachiopods (taxonomy, distribution) and stratigraphy in the frame of a project "Ordovician-Silurian stratigraphical schemes: analyse and improvement of global and Baltic regional units based on high-resolution biostratigraphy, isotope geology and sequence stratigraphy" (2003-2007). In collaboration with David Harper a manuscript "The brachiopods Alwynella and Grorudia: homeomorphic plectambonitoids in the Middle and Upper Ordovician of Baltoscandia" was submitted for publication. In collaboration with Mike Bassett the taxonomic

revision of genus *Cyrtonotella* is in progress (together), and a study of the litho- and biofacies of the Upper Ordovician Vormsi Stage in the East Baltic was started.

HINTS, OLLE (Estonia). I am continuing studies on Ordovician-Silurian jawed polychaetes (scolecodonts) and other organic-walled microfossils. In order to recover scolecodonts from China, a collaborative research with Li Jun (Nanijng) started in 2007. Together with Thomas Servais, Marco Vecoli (Lille) and Jaak Nõlvak (Tallinn) we are running a joint project to compare microfossil assemblages (emphasis on acritarchs. chitinozoans scolecodonts) from Gondwanan realm and Baltica. Together with Jaak Nõlvak and Mairy Killing (Tallinn) are currently studving micropalaeontology (chitinozoans, scolecodonts and conodonts) of Darriwilian limestones of Estonia. Ordovician and Silurian stratigraphy, especially what is related to the Baltic region, continue to be of my interest too. In 2006, more than half a year was put into packing and moving the Institute of Geology at Tallinn University of Technology to a new location. The new rooms and labs at the university campus are nevertheless much more convenient than the old ones. KALJO, DIMITRI (Estonia). I continue (hopefully a couple of years more) studies in two fields palaeontology of rugose corals of Estonia and application of stable isotopes in the Ordovician and Silurian chemostratigraphy of Baltoscandia, Podolia and Russian Far East. Under the latter several research projects are in progress in co-operation with colleagues from Norway (A. Mörk, H-A. Nakrem, K. Rönning), Russia (T. Koren), Ukraine (V. Gritsenko), USA (S. Young) and our institute (L. Hints, O. Hints, T. Martma M-A. Mõtus, P. Männik, J. Nõlvak, H. Pärnaste a.o.). We just moved into new premises in the university campus (please note changed address) and got a new mass-spectrometer allowing increase our analysing potential.

KRAFT, JAROSLAV (Czech Republic). I continue studies on Ordovician graptolites (including dendroids) and stratigraphy, especially in the Bohemian Ordovician. I collected new material of graptolites, especially dendroids, and problematic fossils together with Petr Kraft.

KRAFT, PETR (Czech Republic). I continue studies of Ordovician stratigraphy, graptolites and other fossils, especially from Bohemian Ordovician. I also continue to study an early history of the Prague Basin and its faunal responses in framework of the IGCP project no. 497 (co-operation with J. Fryda and O. Lehnert). During the field season I focused with my father on extensive excavations in the Klabava Formation (Arenig). We collected many dendroids and problematic fossils for subsequent studies.

LENZ, ALFRED (Canada). Dennis Jackson (UK) and I have submitted for publication, our study of Arenig graptolites from northern Yukon, Canada, and will be

published in the Canadian Journal of Earth Sciences. The abstract is as follows.

LI, JUN (China). This year I continue working on IGCP 503. In June, I participated the 2nd International Palaeontological Congress in Beijing, with Thomas Servais I co-chaired the T4 session "Ordovician world: temporal and spatial changes in physical and biotic environments (IGCP 503)" of the congress and gave talks. In August I visited Lille to work with Thomas Servais. At beginning of Sept I participated the 3rd annual meeting of IGCP 503 in Glasgow and gave a talk as well. Apart from being busy in researching, with my colleague's help. I continue organizing the 10th ISOS, 3rd ISSS and IGCP 503 conference 2007, Nanjing. The 2nd circular of the conference and paper-call have been sent to colleagues via emails. If any colleagues want the information, please contact me, or download it from the following websites: http://www.ordovician.cn/home.asp; http://www.silurian.cn/home.asp http://sarv.gi.ee/igcp503/

LOCH, JAMES D. (USA). Teaching and service activities have slowed my research progress over the last 2 years but I'm making some advances. The Oklahoma Geological Survey has received the page proofs on my manuscript on the trilobites of the Kindblade Formation of Oklahoma. I'm hopeful of publication within the year. An older project examining the base of the Stairsian at Missouri Gulch, Colorado, has been re-invigorated to provide comparative data for J.F. Taylor's work on that boundary in New Mexico. Thundersnow cut short a trip to finalize details on the Lower -Middle Ordovician boundary trilobites at the Whiterock Canyon Narrows but I hope to stop there in May. Work on the Aulacoparia-dominated, low diversity fauna of the Jose Oolite of New Mexico is coming along nicely with a nicely preserved fauna in the overlying McKelligon Formation preparation. We have instituted a new Environmental Studies Master's degree at the University of Central Missouri. I have a student accepted into the program that will be looking at the Cool Creek Formation of Oklahoma in hopes of integrating trilobite data with carbon isotopes (in collaboration with Rob Riperdan).

LÖFGREN, ANITA (Sweden). I continue with studies of Lower and Middle Ordovician condont faunas, mainly from Sweden. The year 2006 was a lean one for me regarding published papers, due to my stroke in 2005. I have submitted a few manuscripts this year, however, and they will hopefully appear in print in 2007 or 2008, so I feel back on track again.

MCCRACKEN, ALEXANDER (SANDY) D. (Canada). I continue to work on Middle to Upper Ordovician, Silurian, Devonian and Carboniferous conodonts from various locations in Canada. Much of my time is now assigned to outreach and paleontological databases.

MUNNECKE, AXEL (Germany). I am currently working on Ordovician and Silurian

palaeoclimatology based on stable carbon and oxygen isotopes (co-leader of IGCP 503), on the origin and diagenesis of limestone-marl alternations, and on Palaeozoic calcareous microfossils.

NARDIN, ELISE (France). My primary research deal with the radiation of blastozoan echinoderms during the early Palaeozoic (PhD subject with Bertrand Lefebvre and Bruno David, Univ. Dijon). My current activities focus on the morphology of the eocrinoid group and its phylogenetic relationships with the other classes of blastozoans (e.g. rhombiferans, diploporans, paracrinoids, ...). I am also working on the description of numerous new specimens of eocrinoids, diploporans and rhombiferans from the Ordovician of Morocco (some submitted papers with Bertrand Lefebvre and Aaron Hunter and Serge Régnault on the description of an echinoderm assemblage from the Late Ordovician of Morocco).

NÕLVAK, JAAK (Estonia). I am currently working with Ordovician chitinozoans and biostratigraphy of the Baltica paleocontinent. We focus our activity (1) together with colleagues to the biostratigraphy of the East Baltic material from boreholes and outcrops, (2) to the Ordovician and Silurian boundary beds together with polish colleagues and (3) to some Scandinavian sections together with Yngve GRAHN.

ORTEGA, GLADYS (Argentina). I continue studying Tremadocian and Floian graptolites from the Eastern Cordillera, NW Argentina. I am preparing a paper about the A. matanensis fauna and its correlation with trilobite and conodont assemblages of the NW Argentina. I have also investigated Darriwilian-Katian sections from La Invernada Range and other localities of the Precordillera. A paper about the Climacograptus tubuliferus Zone was recently submitted and a new paper regarding the *P. elegans*, H. teretiusculus, N. gracilis, C. bicornis, D. caudatus and C. tubuliferus zones from the La Invernada Range is in advance. A graduate student is working on Lower Ordovician graptolites from the Eastern Cordillera and an undergraduate student is studying Katian graptolites of the Cerro Viejo, San Juan Precordillera under my supervision.

PARIS, FLORENTIN (France). I am working on two main topics: 1) the sea level changes in northern Gondwana regions during the Early Palaeozoic and especially during the Ordovician and 2) the $\delta^{13}C_{org}$ excursions during the Late Ordovician and Early Silurian in northern Gondwana regions. For the first topic, I supervised the post-doctoral work of Blaise VIDET (who was financially supported by TOTAL S.A. oil company) and I calibrated (by mean of the northern Gondwana chitinozoans biozones) the recorded third order cycles. Several transgressive events (especially the *bulla*, the *formosa*, and the *fistulosa* events) are well documented in most of the northern Gondwana regions. These events are at least of regional value and likely of global significance.

The second topic concerns the $\delta^{13}C_{org}$ variations recorded in Late Ordovician sequences documented in subsurface and outcrop samples from various northern Gondwana countries (e.g. Algeria Sahara, Anti Atlas, in Morocco). The data are obtained on carefully sorted chitinozoans and not on the bulk organic matter as many samples contain inherited graphite flags (the latter may have an impact on the $\delta^{13}C_{org}$). High resolution biostratigraphic work on chitinozoans in continued, especially on Late Ordovician and Llandovery shallow core samples from Saudi Arabia (CIMP/ARAMCO projects), and on Ordovician-early Llandovery subsurface samples from (consulting work for PDO).

PÄRNASTE, HELJE (Estonia). In 2007, I'll continue my research on Lower Ordovician (Second and Third Stages) trilobite distribution and zonation of the Baltic region, and on systematics of suborder Cheirurina. We are working on the upper Ordovician Cheiruridae of Baltoscandia together with Jan Bergström, and I also hope to continue with the other near-shore trilobite group - the Illaenidae in cooperation with David Holloway.

PERALTA, SILVIO H. (Argentina). Currently I'm devoted to the tecto-sedimentary study of the Cambrian to Devonian basins of Cuyania (=Precordillera) Terrane. To carry out this task, four strategic points of Precordillera, where extensive carbonate and siliciclastic Ordovician rocks outcrop, have been focused: The Guandacol Sub-basin, on the northern part of Central Precordillera, at the boundary between La Rioja and San Juan Provinces; the Villicum Sub-basin, in the Eastern Precordillera, near of San Juan city: the Upper Ordovician siliciclastic deposit of the Yerba Loca, Sierra de la Invernada and Portezuelo del Tontal formations, all of them placed between the Central and Western Precordillera and; the Upper Ordovician siliciclastic deposits of the San Isidro Sub-basin, placed on the southern end of the Central Precordillera at Mendoza Province. Currently, the Ph.D. student, Carlos Villegas (San Juan University) is carrying out his Ph.D. Thesis, addressed to the study of Upper Ordovician conglomerate distributed all over Precordillera, with the aims to recognize the nature of the sources, and the paleogeographic and geotectonic significance of these deposits, in concern to the evolution of Precordillera. In the La Dehesa range, Central Precordillera of San Juan Province, the Ph.D. student, Geologist Estela Pereyra, carry out stratigraphic and sedimentologic studies on the Lower-early Middle Ordovican carbonate succession of the San Juan Formation. Finally, isotope studies are carried out, together with Alcides N. Sial (Universidade Stadual Pernambuco, Recife, Brasil), on the Upper Cambrian and Lower Ordovician Carbonate Sequences of the Argentine Precordillera. As result of these studies, the Steptoean C-Isotope Positive Excursion (Spice) has been

recognized. On the other side, two students of Geology are carry out their thesis degree on different Ordovician to Devonian section of Central Precordillera. A Project founded by the National University of San Juan, is running from January 2006 to December 2007, involving Early Ordovician carbonates of San Juan Formation, but also siliciclastic Silurian to Devonian marine deposits outcropping on the Eastern flank of the La Invernada Range, on the western side of the Central Precordillea, at San Juan Province. One of the main purpose of this project is to map the Devonian deposit of the Los Sombreros Formation. This unite has previously been thought as Middle-Upper Ordovician in age, but study developed in last years demonstrate the it is Devonian in age.

PERCIVAL, IAN (Australia). I had a varied year in 2006, dividing his research between describing Early Ordovician lingulate brachiopods from New South Wales (co-author Mike Engelbretsen of Macquarie University, with a paper now in press), documenting Ordovician conodonts from South China (continuing work with Yong Yi Zhen of the Australian Museum, with two papers published and a further two in press). and studying deep-water Ordovician conodont faunas from the Lachlan Orogen of Eastern Australia. Preliminary results, establishing a biostratigraphic zonation in cherts of the Lachlan Orogen, were given at the First International Conodont Symposium at the University of Leicester in July 2006. A further paper on this topic is planned for presentation at the 10th International Symposium on the Ordovician System meeting in Nanjing this year. Cherts of the Port Macquarie Block, on the New South Wales north coast, which were long thought to be Siluro-Devonian in age, produced Ordovician conodonts in thinsections, providing the basis for another paper now in

PODHALAŃSKA, TERESA (Poland). I am working on Ordovician/Silurian boundary the beds, biostratigraphy, microfacies, Hirnantia fauna, Llandovery graptolites and chemostratigraphy related to eustatic changes in the Late Ordovician and the Early Silurian in Poland. I deal with the interpretation of the oxygen and carbon isotope data from the uppermost Ordovician and the lowermost Silurian. Recently I deal with the litho- and biostratigraphy and facies characteristics in the Ordovician and Silurian of the Pomeranian part of the Trans-European Suture

PÕLDVERE, ANNE (Estonia). I continue as editor of the journal *Estonian Geological Sections*. The drill core sections of Estonia range from the Proterozoic (Palaeoproterozoic–Neoproterozoic) to Palaeozoic (Cambrian–Devonian). Seven issues of the journal have been published until now, each dealing with one drill core (http://www.egk.ee/egk). For each section we give the lithological description of the core. The distribution of macro- and microfossils (mainly

chitinozoans, conodonts, ostracods, acanthodians) is described and illustrated with range charts. The results of stable isotope and volcanic ash bed study are given. The chemical composition and physical properties of the rock are analysed. Photos and descriptions of selected intervals and thin sections, laboratory data, and drawings illustrating the relationship of rock types and sedimentary structures in combination with fossil distribution and stratigraphic scale are added (in the last three issues on CD-ROM). The work is carried out by the geologists of the Institute of Geology at Tallinn University of Technology, Institute of Geology of the University of Tartu and Geological Survey of Estonia. Some colleagues from abroad have participated as well. The 2006 issue deals with the Kerguta (565) drill core in northern Estonia, penetrating the Ordovician and Silurian sedimentary rocks. Contributions were provided by 17 authors: Garmen Bauert, Rein Einasto, Toivo Kallaste, Enli Kiipli, Tarmo Kiipli, Janika Lääts, Tõnu Martma, Jaak Nõlvak, Kiira Orlova, Ivo Paalits, Tõnis Saadre, Alla Shogenova, Kazbulat Shogenov (all from Estonia), Fabio Donadini (Finland), Anita Löfgren and Lisa Sjöstrand (both from Sweden). The eighth issue of the journal is under preparation and will appear in 2007. It will focus on the Tsiistre (565) drill core penetrating the Furongian (Upper Cambrian), Lower and Middle Ordovician and Lower to Upper Devonian sedimentary rocks in southeastern Estonia.

POPOV, LEONID E. (UK). I continue my work on various aspects of the Ordovician brachiopod taxonomy, biogeography and palaeoecology. A main objective of my studies in present is the late Darriwilian brachiopods of Kazakhstan. I am also currently working on the Lower and Middle Ordovician brachiopods of the Alborz Mountains, Kopet-Dag and Central Iran in cooperation with Mansoureh Ghobadi Pour (Gorgan University) and Mehrisaadat Hosseini (Esfahan).

REPETSKI, JOHN E. (USA). My Ordovician research continues, mainly involving conodont biostratigraphy, systematics, CAI, and biogeography, with additional work on Upper Cambrian conodonts and other Cambrian-Ordovician phosphatic microfossils (larval arthropods; embryos). Geographically, most of my current work is in the US Appalachians and Midwest, but other work continues with faunas from western US, Mexico, Alaska, and elsewhere. Of note, with colleagues, we have just completed a new set of Ordovician and Devonian CAI and Devonian %Ro maps for the central Appalachian region, as part of a large, multi-chapter USGS Professional Paper, which, unfortunately, will probably take a year or so to finally see publication.

Ross, June and Ross, Charles (USA). 2002-2005 are continuing to study the details of Late Ordovician Cincinnatian faunas and strata in the central states area of the U.S.A. Recently we have been concentrating on reinterpreting the central Kentucky late Ordovician

depositional history and its relation to deposition around the Cincinnati Arch and in the Sebree Trough to the west and northwest in adjacent southeastern Indiana. We find that a major unconformity within the classic Richmond Stage separates the Liberty, Waynesville, and Arnheim formations and their equivalents in Kentucky, the Bull Fork and Grant Lake formations, from the overlying Whitewater Formation of southeastern Indiana, and the Drakes Formation of west-central Kentucky, and the Preachersville Formation of east-central Kentucky and along the eastern part of the Cincinnati arch. The upper Richmondian succession is divisible into several depositional sequences as noted by regressive sediments transgressive and widespread unconformities. The lowest of these upper Richmondian depositional sequence comprises all but the upper 2 or 3 m of the Rowland Member of the Drakes formation. The uppermost beds of the Rowland and the lower half of the Bardstown Member form the succeeding depositional sequence. The upper half of the Bardstown Member forms the next depositional sequence and, in west-central Kentucky, is overlain by the Saluda Member, which here is only a thin transgressive edge of the middle tongue of the Whitewater Formation. The Whitewater Formation thickens to the west and northwest into the Sebree trough by marked thickening of the Saluda Member and by adding beds at its base but mostly at its top (Elkhorn and Hitz beds). Notably, during and after the mid-Richmondian unconformity, bryozoan faunas lose much of their previous characteristic species diversity and include several species of large. thickly robust forms which are interpreted as cooler water forms.

ROZHNOV, SERGEI V. (Russia). I am actively working on the Ordovician diversification of echinoderms in the Baltica basin. Detailed morphology of three Early and Middle Ordovician crinoids from the St-Petersburg region under study. In coauthorship with the post-graduate student A. Bryantzeva the main morphotypes of the crinoids holdfasts from the Early and Middle Ordovician of Baltica are described currently. I also focus on the biogeography of the Ordovician echinoderms and ecology of the Ordovician radiation.

RUBINSTEIN, CLAUDIA (Argentina). I'm actively working on Lower Palaeozoic marine and terrestrial palynomorphs from western Argentina (biostratigraphy, biodiversification, paleobiogeography & paleoenvironments). In the frame of a scientific cooperation project between France and Argentina (ECOS-SECYT), I am currently working on Ordovician palynomorphs of the Gondwana margin, including biofacies, paleogeography and paleoclimate, together with T. Servais, F. Paris and M. Vecoli.

SALTZMAN, MATTHEW R. (USA). I continue to work on the link between volcanic weathering and

Ordovician climate using Sr and C isotopes with PhD student Seth Young and Co-PI Ken Foland and Jeff Linder also at Ohio State. We also are collaborating with Lee Kump at Penn State on a model for how weathering of island arc volcanics such as the Taconics could have affected the global Sr cycle, and have verified that the magnitude and timing of the Sr drop we observe is reasonable. Seth Young is also collaborating with Dimitri Kaljo on running Organic C isotopes from Estonian cores that have previously been analyzed for Carbonate carbon isotopes and biostratigraphy. I continue to work with Stig Bergstrom as well (see Stig's entry for recent paper in Geological Magazine), including a publication Stig has authored on the significance of C-isotope data from the New York-Ontario region, which is based in part on work undertaken by our former MS student Nate Barta.

SANSOM, IVAN (USA). Currently working on a wide range of vertebrate projects through the Ordovician, with ongoing studies into the habitat, diversity and dispersal of ostracoderms in both Laurentia and Gondwana being conducted with a large number of including Guillermo collaborators. Albanesi (Cordoba), David Elliott (Flagstaff) Giles Miller (NHM), Bob Nicoll (ANU), Alex Ritchie (Australian Museum), Neil Davies and Paul Smith (both Birmingham). Field studies in the last twelve months have included the Arabian Peninsula and the Amadeus Basin, central Australia, and a number of publications from these studies are in review or preparation.

SERVAIS, THOMAS (France). I continue to work on the Ordovician biodiversification of the phytoplankton and the interpretation of the marine trophic chain. 2006 was a hectic year, with participations to many meetings and several additional intercontinental business trips (not in business class, however). Since January 2006, I am head of the department (UMR 8014 CNRS), and also president of the French Palynologists (APLF) and vice-president of the French Palaeontologists (APF), and I continue being leader of **IGCP** (with 250 503 scientists involved). Some time was left for research: work on the Chinese diversification of the acritarchs continued with Li Jun and Yan Kui (Nanjing), including Chinese diversity curves. A new French-Argentinian research project started (in collaboration with Claudia Rubinstein. Mendoza), with a special focus on Cambrian/Ordovician and Ordovician/Silurian boundaries, and on the Tremadocian/Floian boundary. Work with Axel Munnecke (Erlangen) also continues, and is focused on the calcareous plankton ("calcispheres"). In 2007, work with Lena Raevskaya at St. Petersburg will continue and a new project with Estonian colleagues (Olle Hints, Jaak Nolvak) will start.

SMITH, PAUL (UK). Work continues on the development of the Cambrian-Ordovician development of the Iapetus margin in NE Laurentia,

particularly Scotland and Greenland (with Rob Raine and Jan Audun Rasmussen), and on Ordovician vertebrate biogeography, including conodonts.

TAYLOR, JOHN F. (USA). Work continues on several projects dealing primarily with the composition and biostratigraphic utility of trilobite faunas in Lower Ordovician carbonate facies deposited on the southern margin of Laurentia. Faunas collected from inner platform facies in the northern Rocky Mountains (Montana and Wyoming) and southwestern USA (Texas and New Mexico) are improving the accuracy and precision of correlation possible within the Skullrockian and Stairsian Stages throughout Laurentian North America. Integration of the macrofossil data with similarly precise conodont range data (provided by R.L. Ethington, J.F. Miller, and J.E. Repetski) and Carbon isotopic profiles (assembled by R.L. Ripperdan) has produced a greatly refined temporal framework. Close scrutiny (with collaborating sedimentologist P.M. Myrow) of the lithofacies within that framework has resulted in recognition of several important paleoceanographic events that affected the entire southern Laurentian margin in the Early Ordovician. At least two submergence events have pronounced documented: the Stonehenge Transgression in the early Skullrockian and the Jose Submergence Event in the late Stairsian. J.D. Loch and I are currently working up the trilobites associated with the latter trasngression, as well as the faunas recovered from the Skullrockian-Stairsian stadial boundary interval, which appears to have been associated with a minor regression. I am investigating the expression of these and other Early Ordovician events in the Beekmantown Group in the central Appalachians with many of the same colleagues, as well as D.K. Brezinski of the Maryland Geological Survey. I am also working with A.C. Runkel of the Minnesota Geological Survey on the uppermost Cambrian and basal Ordovician faunas and facies in the northern mid-continent (Minnesota and Wisconsin).

TORO, BLANCA (Argentina). I continue my research activity focused on taxonomic, biostratigraphic and paleogeographic aspects of the Ordovician and Silurian graptolites from northwestern Argentina and the southern Precordillera. Collaborative work with colleagues from the State University of New York at Buffalo continue on related topics too. Middle and Late Ordovician graptolite collections from the Argentine Precordillera have been studied in cooperation with colleagues from Argentina and USA. In addition, I am reviewing extensive collections from different localities of the northwest Argentine basins with Jörg Maletz. Emphasis has been placed on: 1) new graptolite forms and their evolutionary and paleogeographical relationships 2) adjusting the stratigraphic range of the deflexed forms 3) the re-evaluation of the biostratigraphic graptolite scheme previously proposed for the Floian

strata from the Eastern Cordillera, Argentina. This revision led to generate a multidisciplinary project to accurate the re-distribution of other diagnostic fossil groups like trilobites, acritarchs and quitinozoans. This project is underway with the involvement of Argentinean colleagues from Cricyt, Mendoza and Cordoba University.

VECOLI, MARCO (France). My main Ordovicianrelated research projects are as follows: 1) Acritarch dynamics and biostratigraphy across the Ordovician-Silurian boundary. This includes a restudy and reevaluation of several Ordovician-Silurian boundary sections in the subsurface of North Africa (paper in press to be published soon in Review of Palaeobotany and Palynology), and a field trip to Anticosti Island, Québec, Canada, with extensive and high-resolution sampling of two section at the eastern and western ends of the island (subject of a PhD Thesis of which I am supervisor together with Thomas Servais). Some results were presented at the European Geosciences Union General Assembly in Vienna (2-7 April 2006), at the IGCP 503 Annual Meeting in Glasgow (30 August - 1 September 2006), and at the Earth Sciences Meeting 2006 (RST 06) in Dijon (4-9 December 2006). 2) Middle and Upper Ordovician cryptospores from North Africa in relation with the study of early land plant evolution. 3) High-resolution, integrated acritarch and chitinozoan biozonation in the Northern Sahara Platform (Algeria, Libya, Tunisia, Mauritania) and adjoining regions (Iran, Saudi Arabia, Syria). 4) Acritarch dating of the phyllitic basement of the Eastern Alps in Italy (collaboration with the University of Padova, Italy: paper submitted). 5) Collaboration with Claudia Rubinstein and colleagues at Mendoza (Argentina) on a joint project aiming at the comparative study of Ordovician acritarch dynamics and biostratigraphy along the margin of Gondwana: this project is funded by the program ECOS from the education ministry of France, led by Claudia Rubinstein and Thomas Servais.

VIIRA, VIIVE (Estonia). I am actively working on Ordovicain Conodonts.

YOUNG, GRAHAM (Canada). I am continuing to work on Paleozoic paleoecology, and on the diversity of Ordovician corals and other cnidarians. A research collaboration with Bob Elias, Dave Rudkin, Godfrey Nowlan and others assesses paleoenvironments and biotas adjacent to Early Paleozoic islands in the Churchill area, northern Manitoba. A manuscript in revision, with Dave, Godfrey, Ed Dobrzanski, and Sean Robson, provides the first report of two recently discovered Late Ordovician lagerstätten from central and northern Manitoba. These biotas include medusae, xiphosurids, eurypterids, and other fossils. I am currently carrying out detailed studies of some of the medusae.

ZHAN, RENBIN (China). I am currently working on the Great Ordovician biodiversification (particularly

the Ordovician Radiation) based on the data collected in South China. Working on the material from various parts of the Upper Yangtze Platform for more than six years, we have got some new ideas about the taxonomical and paleoecological patterns of the Ordovician Radiation (see our series publications in recent years). We are now particularly interested in the materials from the marginal platform and the Jiangnan Slope. For doing this, we have several research projects from the Chinese Academy of Sciences (CAS), the Ministry of Science and Technology of China (MST), and the National Natural Science Foundation of China (NSFC). International collaborations on the controlling factors of the Ordovician Radiation are also conducting with experts from North America and Europe.

ZHANG, YUANDONG (China). I am currently working on: (1) the Ordovician Bio-radiation—the response of graptolites in South China and its comparison with other major regions (supported by a NSFC grant). This work has started since 6 years ago, and my recent concentration is on the biogeographic distribution of the early and mid Ordovician graptolites in South China, and the phylogenetic oforigination major clades. (2) palaeoenvironmental background of Ordovician biotic radiation based on evidence from South China (cooperating with Axel Munnecke of Germany, this is a NSFC-sponsored major project). (3) The precise divisions and correlations of the Ordovician rocks in China (a proposing project to be sponsored by the SinoPec). (4) The preparation of the pre-conference field trip to the Zhejiang-Jiangxi-Anhui border area (JCY area) for the Nanjing Conference 2007.

ZHEN, YONG YI (Australia). I am working on the Ordovician conodonts from New South Wales, Tasmania, New Zealand, and South China.

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