

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES (IUGS)

SUBCOMMISSION ON TRIASSIC STRATIGRAPHY ANNUAL REPORT 2002

1. TITLE OF CONSTITUENT BODY

International Subcommission on Triassic Stratigraphy .

2.-3. OVERALL OBJECTIVES, AND FIT WITHIN IUGS SCIENCE POLICY

4. ORGANISATION (BROAD DESCRIPTION)

5. EXTENT OF NATIONAL/REGIONAL/GLOBAL SUPPORT (EXTRA-IUGS)

Support of the Chairman's Institute (GSC Vancouver), and of the Earth Science Sector of Natural Resources Canada. Support through IGCP 467.

6. INTERFACE WITH OTHER INTERNATIONAL PROJECTS

IGCP Project 458: Triassic/ Jurassic Boundary Events. Joint meeting and field excursion planned for May 2003 at the Geological Association of Canada annual meeting in Vancouver, BC, Canada.

IGCP Project 467: Triassic time and trans-Panthalassan correlations. New project funded by IUGS/UNESCO. This is complementary to STS activities and has similar goals.

Nanpanjiang Basin project: A China-USA-Canada collaboration on an integrated biostratigraphy and chronostratigraphy of Triassic sections in Guizhou and Guangxi Provinces, South China.

Monbusho project: A Japan-New Zealand collaboration of 13 Universities studying Southern High Latitude Radiolarian Faunas.

Secada working group: 15 scientists in 5 countries studying the mid Triassic core from the Secada boring in Bolzano/Bozen, Italy.

7 & 9. CHIEF ACCOMPLISHMENTS AND PRODUCTS IN 2002

GSSP Task Group chairs are all in place and have established formal working groups.

With agreement on the base Permian GSSP, work on the P-T boundary has now focussed on auxiliary non-marine sections. Candidate sections are identified in China and South America.

A new candidate for base Olenekian at Chaohu in China has been intensively sampled and results are promising. Good macro- and micro- paleontological successions are under study by Yuri Zacharov and by a student of J. Tong who will visit Canada to complete the study of the conodonts under M. Orchard. A carbon isotope anomaly is newly recorded, whilst magnetostratigraphic and radiometric dating studies are underway. The Chaohu section is set to become the prime GSSP candidate for the I-O boundary.

A field workshop took place in Veszprém, Hungary with the emphasis on Middle Triassic boundaries. Based on the earlier 2000 field meeting and new data presented on the conodonts and magnetostratigraphy, the GSSP for the base Anisian was informally agreed to be fixed at the base of "bed 7" at Desli Cairn, in Dobrogea, Romania. This corresponds to the appearance of a defining conodont, a significant change in the ammonoid fauna, and the peak of a negative C isotope anomaly. Recent results from this interval in the Nanpanjiang Basin in South China support the synchronicity of these events and also provide a radiometric age for the boundary. The formal proposal is promised for publication in *Albertiana* #28 and should go to vote by the Subcommission next summer.

Also at the Veszprém meeting, a candidate section for the base Ladinian was visited at Felsoors. Thereafter, a series of informative papers were presented and the group established a firm schedule for a final decision on the hotly debated GSSP. Competing proposals are required by the Task Group Chair by the end of 2003 and thereafter will be published in *Albertiana* #28. Based on these, a majority opinion

will be sought during a meeting planned for September 2003, and in a subsequent formal vote. The decision is expected by the end of 2003.

A multidisciplinary field workshop on base key basal Carnian sections (amongst others) was held in Nevada during October 2002. New data should help resolve issues arising from studies at the candidate section of Stuoures, Italy and from Spiti.. These three areas represent a shortlist of sections from which a GSSP will likely be chosen.

New data is being processed from Black Bear Ridge, Western Canada that will be crucial in base Norian deliberations. Complementary data from candidate sections in Sicily and Slovakia is published or in press. A symposium on Upper Triassic boundaries is slated for May 2003 and will include a field trip to see the Canadian section, and a similar workshop slated for the IGC in 2004 will be preceded by a similar trip to European sites, particularly in Sicily.

The task force on base Rhaetian is newly convened and prospective candidate sections identified in Canada, Austria, ?Turkey.

The Nonmarine task force is nearing completion of a monograph to be published by Elsevier (Developments in Palaeontology) on nonmarine Triassic chronology and correlation.

Albertiana 26 (xx pp) was published in MONTH and will finally be available on the web during November 2002. This valuable resource identifies all STS members, their contact numbers, and their research activities. The largest issue (#27) of the STS newsletter Albertiana to date will be published in November 2002.

The STS co-sponsored the international meeting in Hungary with IGCP 467. An 85 page abstract and field guide volume was published.

8. CHIEF PROBLEMS ENCOUNTERED IN 2002

The Shallow Tethys scheduled for August 2003 was postponed leaving the planned STS meeting orphaned. Nevertheless the STS executive and Hungarian colleagues decided to proceed with an independent meeting although the dates had to be reset and the field trip options (which were to include Desli Cairn in Romania and Bagolino in Italy) reduced.

Funding problems identified last year continued. Albertiana production costs increased as did the pressure for financial subsidy.

10. SUMMARY OF EXPENDITURES IN 2002 (THRU MARCH 2002)

Field workshop in Veszprum, Hungary:	\$ 825
Field workshop in Nevada, USA:	\$ 534.94
<i>Albertiana</i> production cost subsidy:	\$2000
Balance - seed money for (GAC) meeting, May 2003	\$ 640
TOTAL	\$ 3999.94

11-14. WORK PLAN, CRITICAL MILESTONES AND ANTICIPATED RESULTS TO BE ACHIEVED FOR NEXT YEAR:

Joint meeting with IGCP projects 458 and 467 at the GAC annual meeting in Vancouver, Canada, May 25th-28th, 2003. Thematic session on "Extinction events, faunal turnovers, and natural boundaries within and around the Late Triassic."

Post-GAC conference fieldtrip and workshop to Williston Lake northeast British Columbia, 29th May-2nd June, to view base Carnian, base Norian, base Rhaetian, and base Hettangian localities. This will include a visit to one candidate section on a short list of potential boundary GSSP candidates for Carnian-Norian boundary GSSP (Black Bear Ridge).

Publication of proposals on the Olenekian-Anisian and Anisian-Ladinian boundary GSSP candidates in *Albertiana* #28, Spring 2003.

Co-sponsoring of meeting in Italy on “Triassic geochronology and cyclostratigraphy – a field symposium”, September 11th -15th 2003. This will focus on Secada core research and Middle Triassic time scales.

Formal votes on O-A, and A-L boundary GSSPs in Fall/Winter 2003.

Special Session/ Field Workshop on the Lower-Middle Triassic of the U.S.A. - meeting with the Geological Society of America, Seattle, 2-5 November.

The *Albertiana* web-site is continuing to expand to include more past issues as well as other useful information.

15-16. BUDGET AND ICS COMPONENT FOR 2003

(a) General office expenses	100US\$
(b) Subsidy to <i>Albertiana</i> #28, ?#29	2,000US\$
(c) Contribution towards cost of web-site	400US\$
(d) Contributions to GSSP Task Groups	1,000US\$
(e) Support for meetings	2,000US\$

TOTAL 2003 BUDGET REQUEST 5,500US\$ (thru Mar, 2004)

Potential funding sources outside IUGS

IGCP Project 467, “*Triassic time and trans-Panthalassan correlation*”.

The department of Geosciences at the University of Utrecht will continue to subsidize the production of *Albertiana* and will host the STS web-site.

Support to the Chair from the Earth Science Sector of Natural Resources Canada through a ‘Pathways’ project on “*Triassic time and correlation*”, and general support for equipment including computers, email access and telephones.

As in previous years, financial support will be sought by individual members from their grant-awarding bodies for specific projects such as research projects and meetings.

17. CHIEF ACCOMPLISHMENTS OVER LAST FIVE YEARS (1998-2002)

See last years report, add items from section 7-9 in present report.

- All boundary task groups convened.
- International meeting on Middle Triassic boundaries in Veszprum, Hungary.
- Agreement on choice of GSSP for base of Anisian.
- Agreed schedule for choice of base Ladinian.
- Agreed schedule of meetings and decisions for next several years.

18. OBJECTIVES AND WORK PLAN FOR NEXT 5 YEARS (2003-2007)

Meeting/field workshop schedule with themes and anticipated results.

Vancouver, Canada – May 25th -June 2nd, 2003. Upper Triassic GSSP datums.

Secada, Italy - September 11th -15th, 2003. Middle Triassic GSSP decisions.

Florence, Italy – August 20th –28th, 2004 et seq. Upper Triassic GSSP decisions.

Anhui-Guizhou, China – 2005. Base Olenekian GSSP workshop, decision.

New Mexico, USA – 2007. Triassic GSSP wrap-up.

19. SUBMITTED BY:

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Chairman, STS

5th November 2002

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APPENDICES

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