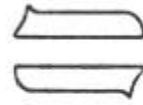




International Union of Geological Sciences
SUBCOMMISSION ON PERMIAN STRATIGRAPHY



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MESSAGE FROM THE CHAIRMAN

The SPS is one of the youngest subcommissions of the International Union of Geological Sciences, having been in existence for less than eight years. The present leadership assumed responsibility at the Paris IGC, 1980.

Achievements prior to the Paris meeting comprised development of an organizational framework, establishment of the SPS Newsletter, and important progress with preparation of correlation charts for both marine and continental successions. Since 1980, membership of the Subcommission has been enlarged substantially to provide comprehensive international representation, the Newsletter has been expanded as an effective, vehicle for communication, and working groups for both the upper and lower boundaries for the Permian System have been established. Both boundary groups have been active, the Carboniferous-Permian group under the chairmanship of Dr. Charles A. Ross, and the Permian-Triassic group under Dr. E.T. Tozer. Advances in the understanding of relationships across the erathem boundary have been particularly impressive. Several Subcommission members from outside China have been able to join Chinese colleagues in examination of the Permian-Triassic boundary beds in South China, and major field conferences in China are planned for 1984 and 1985.

The most pressing current need is for the stimulation that will be afforded by SPS field meetings in prospective stratotype areas. Highest priority should probably be attributed to the Lower Permian of the Southern Urals, the "middle" Permian of the American Southwest, and the Upper Permian of South China.

As noted in my letter of March 7, terms for office holders of the various subcommissions expire at each International Geological Congress. Secretary Nassichuk has received a series of nominations for the new leadership of SPS, and a slate of candidates will be offered for election at the forthcoming Moscow meeting. I have enjoyed serving the subcommission as Chairman and look forward to supporting the new Subcommission Executive in meeting objectives in the years ahead.

Brian F. Glenister

SUBCOMMISSION ACTIVITIES 1980-1984: REPORT TO COMMISSION, APRIL 1984

The Subcommission on Permian Stratigraphy was officially constituted at the time of the International Geological Congress in Sydney, in 1976 but an important organization meeting was held earlier, at the Carboniferous Congress in Moscow, in 1975. At the Moscow meeting, long-term objectives of the Subcommission, including preparation of Permian correlation charts for marine and continental successions in all parts of the globe, and definition of systemic and series boundaries were agreed to. Even though the Subcommission is very young, important progress has been made, particularly since 1980 in meeting those objectives.

Working Groups with full Subcommission representation but reporting directly to the Commission have been actively investigating the lower and upper boundaries of the Permian and it is anticipated that agreement on boundary stratotypes will be reached prior to the meeting of the International Geological Congress in 1988.

An important factor affecting definition of the principal boundaries of the Permian is that, for decades, important potential stratotype sequences for the lowermost Permian in the Soviet Union and for the uppermost Permian in the People's Republic of China have not been readily accessible to Permian specialists from around the world. Access to South China has improved dramatically in recent years and several Subcommission members from outside China have participated in excursions to that region. Chinese scientists are actively involved in Subcommission activities,

particularly those relating to the Permian-Triassic boundary and have initiated plans to hold a meeting on the boundary in China in 1985. New efforts are being made for the Subcommittee to review potential boundary and stage stratotypes for the Lower Permian in the Ural Mountains and it is hoped that the Subcommittee will meet in western North America to visit potential stratotypes for the Lower and 'middle' Permian, Roadian, Wordian and Capitanian stages. All of these field meetings have been encouraged by the Subcommittee executive during the past four years. During that time the Subcommittee has attained a truly international representation in its membership and its Newsletter has become an effective medium for communication between active workers.

Important new advances have been made by Subcommittee members in correlating continental deposits with marine deposits, particularly in central Europe, through biostratigraphy and paleomagnetism. Correlation charts for marine and continental deposits will be reviewed at the time of the IGC in Moscow in 1984.

W.W. Nassichuk

ACTIVITIES 27th INTERNATIONAL GEOLOGICAL CONGRESS

The purpose of this communication is to call your attention to activities planned in connection with the 27th International Geological Congress, scheduled for August 4-14 in Moscow.

The International Symposium on the Permian System, chaired by Soviet colleague V. I. Ustritsky, will constitute one of the major emphases of the Congress. Themes of the symposium are:

Type sections of the System Stages of the Upper Permian Correlation of major biogeographic units.

Meetings of the Subcommittee on Permian Stratigraphy and the two Boundary Working Groups are also planned. According to the 3rd circular for the Congress the Subcommittee has reserved space for five evenings, August 5-9.

Terms for office holders of the various subcommittees expire at each Congress and Vice-Chairman, Secretary W.W. Nassichuk, Vice-Chairman S.V. Meyen and myself will relinquish our offices in Moscow. W.W. Nassichuk and I constitute the nominating committee, and we invite nominations for Chairman, Vice-Chairman and Secretary, to be forwarded to reach Vice-President, Secretary Nassichuk by April 30. He will determine whether nominees are willing to serve if elected. The slate of candidates will then be offered for election at the Congress. The present office holders of the Permian Subcommittee solicit new leadership, and look forward to the stimulation that this will provide.

Note: Nominations have been received and W.W. Nassichuk is currently contacting nominees to determine willingness to serve.

Brian F. Glenister

ADDITIONAL COMMENTS ON IGC MEETINGS IN MOSCOW

As indicated in the previous article by Chairman Glenister, space has been reserved for Subcommittee and Boundary Working Group activities for five evenings, August 5-9. This will provide three evenings for Subcommittee discussions and single evenings for meetings of the

Carboniferous-Permian, and Permian-Triassic Working Groups. It is hoped that a business meeting can be held on August 5 at which time a slate of officers for the next term 1984-1988 can be elected and an agenda for the remaining scheduled meetings can be finalized.

Establishment of an agenda has been complicated because many members have indicated that they will be unable to attend the Moscow meetings. Further, the list of Soviet scientists who will be attending the Congress has not been finalized.

I recently met with Vice-Chairman Dr. S.V. Meyen in Moscow and we agreed that a principal focus of the informal Subcommittee meeting should be correlation charts and potential stage and series boundary stratotypes. Accordingly, we encourage all Members and Corresponding Members who plan to attend the IGC to bring along correlation charts to hang on a wall to form the basis for discussion. Charts can be roughly prepared but they should be legible. We invite charts from as many places in the world as possible and invite a broad participation.

We do not have much time left until we meet in Moscow. All Members and Corresponding Members are urged to advise Dr. Glenister, Dr. Meyen or myself immediately if they plan to attend the Congress and to advise us of specific items that you would like included on the agenda of Subcommittee meetings.

W.W. Nassichuk

SUBCOMMISSION SADDENED BY DEATH OF MINATO

Dear Dr. Glenister,

I regret to inform you that Professor Masao Minato, titular member of your commission, passed away on April 16. He was killed by snow blocks fallen onto him from the roof of his private library. He was 68 years old.

Prof. Minato is survived by -Mrs. Chiyo Minato, now at S-9, W-13, Chuo-ku, Sapporo.

Yours sincerely,

Makoto Kato

CONTINENTAL PERMIAN GEOLOGY OF CENTRAL EUROPE

In central Europe an essential part of the Permian is represented by Continental deposits (for long known as Rotliegendes) which formed as molasse of the Variscan orogene in numerous basins of limited extension. Lithostratigraphies of individual basins are well established but there are much problems with stratigraphic interbasin correlation.

Type sections of selected Permo-Carboniferous basin are compiled in a synopsis of Paleozoic and Cenozoic molasses+) which has been published recently by a multilateral working group of the academies of sciences of socialist countries (chairman G. Schwab, Berlin). The materials include Permian basins of the Territories of Poland, Czechoslovakia, German Democratic Republic and Bulgaria as well as Tjan Shan Mts. in Soviet Union (Alai Ridge and Fergana Depression). Main purpose of the type-sections drawn up under unic graphic representation and commented by a summary of today knowledge is to enable a comparative analysis of basin development.

The problems of biostratigraphic correlations are generally increasing with the progressive predominance of red beds in the upper parts of the continental Permian. Therefore, in our country we

started a paleomagnetic approach to correlation problems. A magnetostratigraphic standard profile is now in elaboration. The Illawarra Reversal is situated in the lowermost Upper Rotliegendes (Havel Formation) for the Central European Depression (Menning 1981), in the uppermost beds of the Thuringian Forest Rotliegend section (Eisenach formation) and below the Eisleben formation of Halle district (Lützner and Menning 1980).

The main regional result is the evidence of significant gaps in different stratigraphic and paleogeographic position. Moreover, the standard profile permits to establish main lines of intercontinental correlation connecting the Illawarra Reversal in the above cited levels of central Europe with Lower Tatarian (Pre-Urals), Capitanian (USA) and near the base of Australian Illawarra Coal Measures Lützner and Menning 1981). In accordance with palynological results the continental Permian of Central Europe extends to rather high levels of the Upper Permian in USA and the Pre-Urals.

Menning, M.: Fortschritte des Palaomagnetismus im Perm Mittel-europas. - Zeitschr. geol. Wiss. 9, 1247-1252. Berlin 1981.

Lützner, H.; Menning, M.: Erste Ergebnisse zur Magnetostratigraphie des Rotliegendes der Saale-Senke. - In Vozar, J.; Vozarova, A.: Permian of the West Carpathians, Bratislava 1980, 41-51.

Lützner, H.; Menning, M.: Magnetostratigraphische Untersuchungen im Rotliegendes des Thüringer Waldes. - Preprints and guidebook of the meeting Fortschritte der Paläontologie und Stratigraphie des Rotliegendes, organized by Gesellschaft für Geologische Wissenschaften der DDR in Erfurt, 13.-15.4.1983.

+) Tectonic regime of molasse epochs. Comparative analysis of Paleozoic and Cenozoic molasses in Central and South-east Europe and some regions of U.S.S.R. - Veröffentlich. Zentralinstitut für Physik der Erde, Nr. 66, 395 p., Potsdam 1982. The volume is obtainable from Zentralinstitut für Physik der Erde, DDR-1199 Berlin, Rudower Chaussee.

H. Lützner

MINERAL DEPOSITS IN PERMIAN BEDS OF SOLVENIA (YUGOSLAVIA)

The Solvenian mineral deposits occur dominantly in Permian and Triassic sedimentary rocks. Taking into account the deposits in Permian beds, the uranium deposits Zirovski vrh, the copper deposit Skofje and the zinc-lead deposit Puharje should be mentioned.

The uranium deposit Zirovski vrh is localized in the lower part of the Val Gardena sequence, where the colour of elastic rocks is predominantly gray. The ore-bearing zone, nearly 1125 m thick includes more than 100 lenticular and elongated orebodies, following paleochannels. Pichblende, coffinite and numerous sulfides are found especially in elastic rocks containing anthracitized and silicified plant remnants. Sulfide sulfur is ^{32}S enriched, and ^{34}S values are spread over a very broad range, namely from $+2,52\text{‰}$ to $-36,8\text{‰}$.

In the upper part of the Val Gardena elastic sedimentary rocks, where the red coloured varieties predominate, numerous outcrops with primary or secondary copper minerals extend in a nearly 90 km long belt. The copper deposit Skofje should be mentioned. Lenticular, more or less concordant orebodies include chalcopyrite, bornite, chalcocite and pyrite in dark gray, gray as well as in green elastic rocks. ^{34}S oscillates from $-8,790\text{‰}$ to $-37,93\text{‰}$.

In the continental Val Gardena elastic rocks two types of deposits occur consequently, both belonging to the group of "red bed" deposits. Bleaching of primary red sediments, ore fabrics, association of mineralization with carbonaceous material, mineralogical characteristics and sulfide sulfur isotope composition indicated a diagenetic origin of uranium and copper minerals.

The Upper Permian carbonate rocks include in Puharje a zinc-lead ore. Mineralized dolomite has the same petrologic characteristics as the barren ones. The mineral paragenesis is very simple. Beside sphalerite and galena only pyrite is present in a noteworthy quantity. Main ore minerals contain only few trace elements even these usually in small quantities. Sulfide sulfur is distinctly ^{34}S enriched: ^{834}S varies from $+13,0\text{‰}$ to $+8,30\text{‰}$. Carbonate rocks have been possibly mineralized already during diagenesis.

From: M. Drovenik, "Mineral Deposits in Permian and Triassic Beds of Slovenia (Yugoslavia)". Proceed. 4th ISMIDA, p. 88-96, 1983, (in print).

M. Drovenik

IMPORTANCE OF TECTONICS, PALEO GEOGRAPHY TO PERMIAN PALEONTOLOGY

Dear Dr. Nassichuk,

Referring to the Newsletter 7, page 8 (field activity in Iran), I would like to draw the attention of my paleontologist colleagues to the fact that during the Permian and Triassic time, a single large widespread sea did not exist in the northern margin of the Tethys basin (on the continental shelf) where the actual Iranian plateau is located. At that time, the area comprised a number of fault blocks parallel to the existing Zagros Main Fault, which represents the closure of the Tethys in Cretaceous (see Iranian-Japanese Research Group, 1981). These fault blocks formed a system of horsts and grabens. In some of these grabens a thick sequence of Permian, Triassic, or both have been deposited, while on the neighboring horsts, with a short distance of few kilometers, there may be no trace of any Permian or Triassic rocks. The incomplete Permo-Triassic sections have also been found in several localities, conceivably, under these conditions, stratigraphic columns of each block is different from the others.

In the Alborz Mountain Range similar condition prevails. Two major longitudinal, deep, crust crossing faults with over 5000 metres vertical displacement divide the Alborz Range in three east-west trending belts. In the southern belt vermicular limestone of late Lower Triassic is deposited on Carboniferous limestone (about 5 km SE of Tehran) and a tectonized sequence of lateritic rocks is exposed at the contact. In the central belt, the famous Nesen section is exposed which consists of thick Guadalupian limestone and Nesen Formation of early Upper Permian overlain by Lower Triassic vermicular limestone. In the northern belt, a much more complete section of Upper Permian and lower Triassic is exposed (Stepanov, et al., 1969).

It is of utmost importance for paleontologists to know exactly that the samples they receive belong to which area, and what are the tectonic and stratigraphic significance of that area. The judgement concluded by paleontologists about the stratigraphy of the Permian and Triassic of Iran based on rock samples from a few localities without reference to paleogeography of that time may be misleading.

In addition, the biotope in each of these basins is most probably different from the others from the Tethys open sea and deep water. This fact causes an important complication in stratigraphic correlation based on fossils.

The situation in Turkey, Caucasus, Afghanistan and Pakistan is similar to that of Iran. Any reliable judgement and conclusion concerning stratigraphy of those regions should be based on the Permo-Triassic tectonic and paleogeography of those regions.

I strongly believe and propose that the Subcommittee on Permian Stratigraphy should encourage the scientists and organizations involved to direct their effort more towards understanding of the tectonic and paleogeography of the Permian and Triassic in their regions, and in the light of such an understanding they should be able to discover the most complete Permo-Triassic sequences, in order to verify and modify our actual paleontologic knowledge. It is after this verification that the Subcommittee may be able to establish a standard stratigraphic scale for Permian.

H. Taraz

PERMIAN SYSTEM OF THE HIMALAYAS

1. From collection of fusulinids from the Early to Middle Permian rocks of Shyok area of Karakoram has been made. This collection is being worked out jointly by Dr. V.A. Gupta (India) and Dr. Tomo Ozawa (Japan). The results are likely to be published shortly.
2. One of the students (Mr. Nezammodin Narzarian) working under the supervision of Dr. V.J. Gupta has been awarded Ph.D. degree of the Panjab University on the thesis entitled "Palaeontology and Stratigraphy of the Permian rocks in parts of Kashmir, India and Abadeh Region of Central Iran", Mr. Nazarian has described 42 species falling under 22 genera of the phyla brachiopoda, mollusca, bryozoa, echinodermata and foraminifers.
3. A review on the Early Permian fossils from the Bijni Tectonic unit, Garhwal Himalaya and their Palaeobiogeographic Implications" by V.J. Gupta has been published in Bull. Indian Geol. Assoc. Vol. 15, No. 2, pp. 89-97, Dec., 1982.
4. Microfossils, referable to foraminifera, ? bryozoa and ? algae have been found in the greyish siliceous to cherty limestone of the E Member of Krol Formation exposed in the lower slopes of Bhandera K. Dhar near village Kulri in District Sirmur, Himachal Pradesh, India. The microfauna is suggestive of ? Permian age for the fossiliferous part of the Krol Formation. A short paper entitled "A preliminary note on the find of microfossils from the Krol Formation, (Member E) Nigali, Dhar Syncline, District Sirmur, Himachal Pradesh, India, by Gurdev Singh, A.D. Ahluwalia, V.A. Gupta has been published in Bull. Ind. Geol. Assoc. Vol. 15, No. 2, pp. 173-177, Dec., 1982.

V. Gupta

CARBONIFEROUS-PERMIAN BOUNDARY WORKING GROUP

A meeting was held at the time of the Carboniferous Congress in September in Madrid to acquaint Carboniferous specialists with the various stratigraphic possibilities that have been discussed for the boundary between the Carboniferous and Permian. A number of faunal alternatives for boundary definition were discussed but no final decision was reached. It is hoped that the Working Group **will** be able to meet at the IGC in Moscow on one of the evenings that space has been reserved for Subcommittee activities in the interval between August 5-9.

C.A. Ross