

## 2007 Meeting Report:

### **IGCP 521-481 Joint Meeting and Field Trip 521: Black Sea-Mediterranean Corridor during last 30 ky: Sea level change and human adaptation (2005-2009), and 481: Dating Caspian Sea Level Change (2003-2007)**

**September 8-15, 2007, Gelendzhik, Russia, and September 16,17, Kerch, Ukraine**

The third plenary meeting of the IGCP Project 521 and the fifth plenary of IGCP481 were hosted jointly by the Southern Branch of the P.P. Shirshov Institute of Oceanology in the beautiful hotel Sosnovaya Roscha at Gelendzhik, and by the Beneficent Foundation “Demetra” at the rustic Hotel Nymphy on the shore of the Black Sea at Kerch, in the shadow of the ancient Greek town of Nymphaeum.



*Gelendzhik participants (photo by Yuri Agarkov;  
for names, see end of Report)*



*Nymphy Hotel in Kerch*

The conference provided a forum for the global community of scientists and archaeologists (more than 80 scientists from 13 countries; about 75% from developing countries) and explored the avenues of collaboration to discover the linkages between climate change, sea-level oscillations, coastal evolution, and human adaptation in a variety of settings, ranging from tectonically active (e.g., Caucasian coast, Sea of Marmara) to stable (e.g., Manych Depression) areas, as well as areas of temperate (e.g. north-western coast of the Black Sea) to arid climates (e.g., Caspian-Aral sea coasts). Scientists from four continents were present at the meeting, with Russia, Ukraine and Iran having the most participants. The Abstract Volume for the joint meeting on the Caspian-Black Sea-Mediterranean Corridor (CBSMC) contained 77 extended abstracts (178 pages) written by 167 scientists from 19 countries.

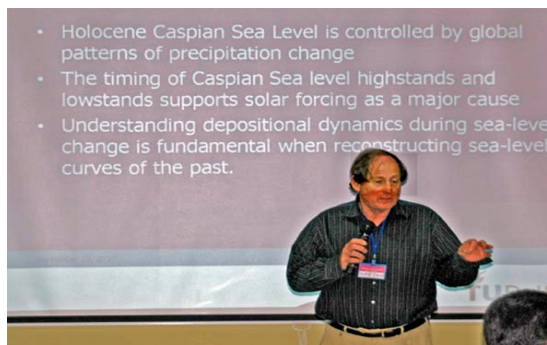
The conference began on September 8 with Registration and welcoming Icebreaker at Hotel “Sosnovaya Roscha” to celebrate the arrival of participants who traveled by bus and ferry from Odessa, and others who came by plane from Anapa north of Gelendzhik. The bus journey was documented in film, and thanks to Ken Wallace, co-leader of WG12, it can be viewed by all at [black.sealevel.ca](http://black.sealevel.ca)

The 3-day technical program (Sept. 9-11) began with an introduction to the IGCP Project 521-481 by Chairman Yucel Yilmaz (Turkey), greetings from the Conference President Alexander Pokryshkin, and reports on the current state of knowledge for IGCP 521 and IGCP 481 by co-leaders Valentina Yanko-Hombach and Salomon Kroonenberg, respectively. The first day of technical sessions was devoted to 11 reports on the Geology, Paleooceanography and Paleogeography, with a keynote address by Andrei Panin (Russia) on the importance of river runoff into the Black and Caspian Seas at the end of OIS-2. This keynote paper was followed by reports by Russians and Ukrainians that led to heated discussions regarding mechanisms to account for local irregularities in Holocene transgressive-regressive cycles found by different workers. The afternoon was devoted to 6 palynology papers, given by scientists from 5 different nations and covering the Black and Caspian Seas, as well as limans and lakes in the Crimea.

Over the next two days, 36 technical papers were delivered, covering a wide spectrum of other interdisciplinary topics:

- Geology, palaeoceanography and palaeogeography
- Active tectonics
- Mathematical and Geological modeling
- Paleontology and biostratigraphy
- Archaeology, history and ethnology
- Geo-information systems and data elaboration

Keynote addresses were delivered by Salomon Kroonenberg (Delft University of Technology, The Netherlands), who spoke on Caspian Sea level change and its link with the Black Sea; Yucel Yilmaz (Kadir Has University, Istanbul) explained the tectonic and morphological development of the eastern Black Sea-Caspian region; Graeme Sarson (Newcastle University, UK) presented a very thought-provoking model on human migration and the spread of agriculture from multiple centers in the Neolithic; Ron Martin (University of Delaware, USA) spoke on multiple marine excursions as related to freshwater discharge events; Pavel Dulakanov (Newcastle University, UK) on human migration and settlement in the northern Black Sea and Caspian areas; and Ken Wallace (Sealevel Communications, Canada) presented an online template for interactive data entry for IGCP 521 collaboration, that was subsequently also adopted the database resource for IGCP 481. Nine posters were presented on subjects ranging from the impact of pollution on the morphology of Black Sea ostracods and foraminifera to water level changes in the Caspian Sea. The poster presentations were viewed and discussed by an informal round table group of about 20 scientists.



In keeping with the tradition of IGCP meetings, fieldtrips followed the technical sessions. This year, there was a record number of 3 days in southern Russia and 2 days in the eastern Crimea. The first day included visits to the Old Euxinian/Krinitian (early Pleistocene) terrace in the Vulcan-Pashada interfluvium, to the megalithic dolmens (Bronze Age, 4,000-3,500 yrs BCE ) near Pshada village (below left), and an afternoon of cruising along the Caucasian Black Sea coast in the “Salamandra”, where stunningly beautiful sections of late Cretaceous-Paleogene flysch sequences are exposed and we had perhaps the last view of the lower Pleistocene Chaudian terrace reference section at Idukonopas Cape (below right), where a resort is under construction for the Russian President. In addition, we all got a chance to swim in the Black Sea by diving off the boat. This first day field trip was led Russian geologists Yakub Ismailov and Nikolai Esin, and an archaeologist from Pshada.



*Megalithic tomb near Pshada*



*Bedrock mélangé & Chaudian terrace south of Gelendzhik*

The second day of field trips took us to the archaeological museums at Anapa and Taman where we viewed the excavation of the ancient Greek city of Gorgippia (below left) and the Hermonassa-Tmutarkan historical-archaeological site, close to the impressive 17<sup>th</sup> century monument dedicated to the first Taman Cossacks. We journeyed over the Taman Peninsula, crossing the Kuban River paleochannel and past Volna village (where coastal erosion presently exceeds 1m/year) to the Tuzla Spit where we could view the marine Karangatian (OIS Stage 5a) sediments dated ca. 80,000 yr BP (below right). Here Yakub Ismailov, Andrei Chepalyga and Valentina Yanko-Hombach gave us detailed explanations of the paleoecology: sea level was 8 m higher than now and the shelf water salinity was about 30 part per mil compared to the modern value of about 18.



*Ruins at Gorgippia, 6<sup>th</sup> Century BCE Pontic Greek colony*



*Karangatian coastal marine sediments at Tuzla Spit*

The third day of field trips took us first to the unique region of mud volcanoes near the town of Temryuk (left below) in the Kerch-Taman region where there are more than 50 mud volcanoes, including continental and marine, active and inactive types. We then visited the mid 6<sup>th</sup> BCE archaeological site at Phanagorea (below right) that once occupied 65 ha during a time when sea level may have been 4-5 m lower than now, and survived until the 10<sup>th</sup> century CE. During its classical period in the 4<sup>th</sup> century BCE, there were large public buildings, marble statues and evidence of trade of foods and religious materials from the Mediterranean. The long fieldtrip day ended with a midnight ferry crossing from Russia to the Ukraine and an early morning supper at the Hotel Nympey in Kerch.



*Active mud calderas*



*Old mud brick and younger rock walls, at the Phanagorea terrace excavation*

The last two days of field trips were spent in the vicinity of Kerch, visiting the Museum of Antiquities (one of the oldest in the Ukraine) and its amazing collection of Scythian and Grecian gold artifacts, the Tsarsky kurgan (below left), excavations of Late Bronze Age fishing and wine-making facilities at Tiritaka/Diya, and the excavations of the ancient Greek town of Nymphaeum that may have been overwhelmed during the youngest (Nymphaean) marine transgression. The final day was spent exploring the Karangatian (MIS 5e) neostratotype near Eltigen on the Kerch Strait (below right), under the guidance of Andrei Chepalyga and Valentina Yanko-Hombach. There we were also able to view to early Late Miocene Sarmartian lagoonal clays. The field trip ended with a wonderful banquet provided by the Hotel Nympey and a football contest between the Ukraine, Canada, Turkey and Iran in the attractive garden of the hotel.



*Entrance to the Tsar's grave mound at Kerch  
(photo by M. Filpova-Marinova)*



*Karangatian neostratotype sediments at Eltigen*

Overall, the conference and field trip were an outstanding success and the conference organizers, Valentina Yanko-Hombach (Avalon Institute of Applied Science, Canada), Alexander Pokryshkin (Director, Southern Branch of the P.P. Shirshov Institute of Oceanology, Russian Academy Sciences), secretary Tamara Yanina (Lomonosov State University, Moscow), the Demetra Beneficent Foundation (Ukraine) and Salomon Kroonenberg (Delft University of Technology, The Netherlands) deserve much credit for putting together an excellent meeting, under the very difficult logistics of navigating between Russia and Ukraine, and dealing with various political and financial complications.

For more information on IGCP Project 521, please contact Prof. Valentina Yanko-Hombach (valyan@avalon-institute.org) or visit <http://www.avaloninstitute.org/IGCP/> for IGCP Project 481, see [www.caspase.citg.tudelft.nl/project.html](http://www.caspase.citg.tudelft.nl/project.html).

For information on the forthcoming (2008) IGCP 521 plenary to be held in Varna (Bulgaria) and Constantia (Romania), you may contact the organizer Prof. Mariana Filipova-Marinova at [marianafilipova@yahoo.com](mailto:marianafilipova@yahoo.com).

*Petra Mudie, Geological Survey Canada Atlantic (pmudie@ns.sympatico.ca)*

GROUP PHOTOGRAPH: Back Row, Left to Right:

Aleksander Svitoch; Michail Lichagyn; Ekaterina Badyukova; Tamara Yanina; Adrian Teaca; Galina Korotkevich; Yakub Izmailov; Evgeny Konikov; Andrei Chepalyga; Ronald Martin; Zadra Azadbakht; Suzanne Leroy; Klaus Arpe; Petra Mudie; Ken Wallace; Goran Georgievski; Alexander Kislov; Jalal Karimi; François Feugier; Hayrettin Koral; Igor Balabanov

Middle Row, Left to Right:

Nicolae Esin; Lyudmila Esina; V. Maletin; Tatiana Popova; Asli Aytac; Ronnie Gallagher; Nelly Sergeeva; Tatiana Begun; Natalia Gerasimenko; Tatiana Sapelko; Galina Pedan; Ivar Murdmaa; Anastasia Markova; Valentina Shkatova; Sophia Safarova; Alexander Pokryshkin; Pavel Dolukhanov; Valentina Yanko-Hombach; Salomon Kroonenberg; Homayoun Khroshravan; Olha Marunchak; Vladimir Alekseev; Daniel Kelterbaum; Nina Alekseeva; Mohammad Rasty; Negar Moharrami Gargari; Elmira Alieva; Graeme Sarson; Irina Panina; Dadash Huseinov.

Bottom Row, Left to Right:

Nikita Lavrentiev; Aleksei Khvorosh; Andrei Panin; Oleg Levchenko; Karim Shaban Pour; Dmitry Subbetto; Khikmatulla Arslanov.