

# TECTONICS AND METALLOGENY OF THE CIRCUM-NORTH PACIFIC AND EASTERN ASIA

*Leonid Parfenov Memorial Conference*

**First Circular**

**June 11 - June 16, 2007**

**Khabarovsk, Far East Russia**



Far Eastern Branch of  
Russian Academy of  
Sciences (FEB RAS)



Siberian Branch of  
Russian Academy of  
Sciences (SB RAS)



Russian  
Interdepartmental  
Tectonic Committee  
(RITC)



Academy of  
Sciences of Sakha  
Republic (Yakutia)



Yu.A.Kosygin Institute of  
Tectonics and Geophysics,  
FEB RAS



Institute of Geology of  
Diamond and Precious  
Metals, SB RAS



Russian Geographical  
Society, Amur Branch



# **Tectonics and Metallogeny of the Circum-North Pacific and Eastern Asia**

## *Leonid Parfenov Memorial Conference*

URL: [http://itig.as.khb.ru/conf/parfenov-2007/parf\\_en\\_00\\_conf\\_2007.html](http://itig.as.khb.ru/conf/parfenov-2007/parf_en_00_conf_2007.html)

### **CONFERENCE GOAL**

The Circum-North Pacific and Northeast Asia are commonly regarded as a frontier area in the World for the discovery of metalliferous lode deposits. During the late 1800's and early 1900's, the area was subject to recurring rushes or stampedes to sites of newly discovered deposits. Subsequently in the region during the second half of 20th century, extensive geologic, mineral, and fuel exploration studies were accomplished. These activities created abundant new information on tectonic processes and metallogenic evolution for the understanding of earth evolution around the entire Pacific Ocean margin.

The Circum-North Pacific and Northeast Asia regions contain the margins of four major geologic plates - the North Asian and North American continental plates, and the Pacific and Arctic Ocean plates. Plate motion, accretion, and collision are presently forming grandiose volcanic and seismic belts along the plate margins, and also operated in similar ways in the past. Metallogenic analysis of various major types of mineral deposits, with many useful minerals, reveals that the deposits formed through geologic time, from the late Archean to the Present, and are related to successive tectonic events. Nevertheless, our understanding of the tectonic history that has formed the present-day configuration of the continents, shelves, plate boundaries, deep structures, and metallogeny in these two large regions is far from being comprehensive.

A major way for increasing understanding of the tectonic and metallogenic processes has been the development of the international collaborative scientific studies. During the last two decades, a large international team from around the Circum-North Pacific and in Northeast Asia performed this type of study. For this study, Leonid M. Parfenov (1937-2002) was one of the pioneers and the Russian leader of the teams for both projects. Our Conference is devoted to the memory of this excellent geologist and very fine person who would have been 70 in 2007. For these major international collaborations, Leonid was the leading force for the tectonic and metallogenic interpretation of Northeast Russia that comprises a major part of Circum North-Pacific.

The major goal of the Memorial Conference is to bring together key geoscientists who are investigating the tectonic and metallogenic evolution of the Circum-North Pacific and Northeast Asia. The major research topics for the conference are regional geology and geodynamics, deep structure, metallogeny, isotopic geochemistry, petrogenesis, regional geochemistry, regional geophysics, paleomagnetic and paleobiogeographical data, and Geographic Information Systems (GIS) syntheses. You are invited to come to the conference in Khabarovsk in June 2007 to share your understanding of the Circum-North Pacific and Northeast Asia, and to discuss and define new research goals for the future!

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## The Contributions of Leonid M. Parfenov to the Tectonics of Eastern Russia

*By Andrei Prokopiev, Kaz Fujita, and David Stone*

Leonid M. Parfenov (1937-2002) was the leading force behind the interpretation of northeast Russia in the context of plate tectonics. Originally interested in Precambrian geology, he conducted his early field work in Southern Siberia in the 1960s. He was exposed to plate tectonics at Liverpool University in 1970 and published the first mobilistic reconstructions of the Precambrian in Russia in 1973.

In 1971, Leonid joined the Institute of Tectonics and Geophysics (ITiG) of the Far East Science Center in Khabarovsk where he organized and headed the Laboratory of Deep Tectonics. He also chaired the compilation of the Tectonic Map of the Far East USSR, during which time he amassed the broad database that he would use to initiate new interpretations of the geology and tectonics of the eastern Soviet Union.

Starting in 1971, he began to systematically conduct field work and accumulate geologic data on what is now considered the accretionary collage of northeast Russia. With colleague Boris A. Natal'in, he published a series of papers on the tectonic evolution of Eastern Russia starting in 1977, with a doctoral dissertation on "Comparative Tectonics and Evolution History of Mesozooids of Northeast Asia" in 1983.

His work became known in the west with his publication in 1978 in the *Journal of Physics of the Earth* on "Geodynamics of the Northeastern Asia in the Mesozoic and Cenozoic Time and the Nature of Volcanic Belts" in which the volcanic belts of Eastern Russia were interpreted in the context of subduction zones.

From the mid-1980s to his death, he concentrated on understanding the evolution of the fold belts of Eastern Yakutia. Parfenov immediately became a proponent of terrane analysis as it evolved in the early 1980s and was the primary mover in developing the terrane map of Northeast Russia in the late 1990s. In 1990, he developed joint programs with the University of Alaska Fairbanks and Michigan State University, and later with Stanford University and the U.S. Geological Survey, opening Eastern Russia to western scientists.

His life's work was synthesized in a monograph entitled "Tectonics, Geodynamics, and Metallogensis of the Territory of the Sakha Republic (Yakutia)" published in Russian in 2001 and currently being prepared in English translation.

As a result of his efforts we now have a basic understanding of the plate tectonic evolution of Northeast Russia as a region of Phanerozoic rifting, terrane development, and collision.



## SESSIONS AND SYMPOSIA

These events will consist of topics in which Dr Leonid Parfenov excelled, supported, and interested. The events will be scheduled for three and one-half days.

Memorial Session: Our Memories of Dr Leonid Parfenov: Recollections from friends and colleagues (on the bright side).

### *Symposium 1: Convergent Plate Margins: Evolution, Processes and Products.*

Theme sessions:

- 1a. Accretionary tectonism and post-accretional processes
- 1b. Intra-oceanic and continental margin volcanic arcs
- 1c. Sedimentary basins and their evolution
- 1d. Ophiolites, their evolution and tectonic emplacement
- 1e. Collisional tectonism and mountain building
- 1f. Geochronology, tectonothermal evolution and uplift of mountain ranges
- 1g. Geodynamics, plate boundaries and seismotectonics

### *Symposium 2: Tectonic Reconstructions and Regional Tectonics of Eastern Asia and North American Cordilleras*

Theme sessions:

- 2a. Regional tectonics and tectonic assembly of Eastern Asia and North American Cordilleras
- 2b. Structural and kinematic analyses in tectonic reconstructions
- 2c. Paleomagnetism and tectonics
- 2d. Faunal solutions to tectonic and paleogeographic problems
- 2e. Geophysical methods and models in tracing tectonic structures at depth
- 2f. Magmatic events and geodynamics

### *Symposium 3: Tectonics and Metallogenesis*

Theme sessions:

- 3a. Large scale tectonics and regional distribution of metallogenic provinces
- 3b. Geodynamic setting and tectonic control of ore deposits
- 3c. Structure of ore fields
- 3d. Geographic Information Systems for compilation and management of geological data

### *General Discussion and Business Meeting*

Theme sessions will be sequential. Each session will start with plenary talks by key-note speakers (not more than 30 min), following by scientific papers (20 minutes for each, including the time for questions), and by a discussion period. Posters will be displayed around the conference hall. Session conveners will be named in the Second Circular.



### **CONFERENCE SCHEDULE (*subject to revision*):**

June 8–June 11, 2007	Pre-Conference Excursions
June 11, 2007	Registration and Ice Breaker
June 12–June 13, 2007	Technical Sessions (talks and posters) and Conference dinner
June 14, 2007	Mid-Conference Excursions and BBQ
June 15–June 16, 2007	Technical Sessions (talks and posters), General Discussion and Farewell Party
June 17–June 22, 2007	Post-conference excursions

### **FIELD EXCURSIONS**

The final arrangement of field excursion will depend upon the number of participants. The payment for each field excursion will be indicated in the Second Circular

#### **Pre-Conference Excursions**

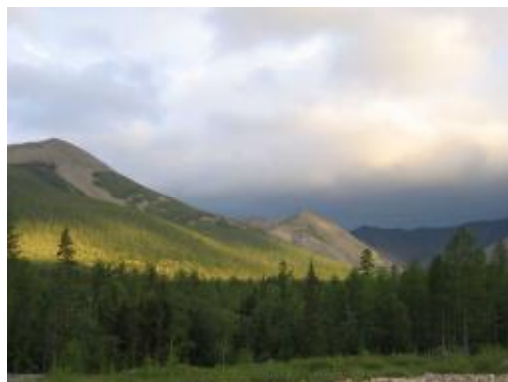
- June 8–June 11, 2007 - Late Jurassic accretionary wedge, olisthostromes, and polymetallic ore deposits of the Sikhote-Alin Area, Primorie (bus, 20-25 participants)
- June 8/9–June 11, 2007 - Cretaceous dinosaur graveyard, outskirts of Blagoveshensk, Amur Area (train and/or plane, 20-25 participants)
- June 8/9–June 11, 2007 - Cretaceous Okhotsk-Chukotka volcanic belt near Magadan (plane, 15-20 participants)

#### **Mid-Conference Excursion**

- June 14, 2007 - Jurassic and Early Cretaceous accretionary complexes around Khabarovsk (fast ferry and bus, 30-35 participants)

#### **Post-Conference Excursions**

- June 17–June 21/22, 2007 - Early and Mid Cretaceous accretionary complexes and Quaternary volcanics of the Lower Amur Region (fast ferry and bus, 30-35 participants).
- June 17–June 22, 2007 - Recent volcanism of Kamchatka (plane and helicopter, 15-20 participants)
- June 17–June 22, 2007 - Gold deposits of Southern Yakutia (plane and bus, 15-20 participants)
- June 17–June 22, 2007 - Platinum deposits of Kondyor, Northern Khabarovsk Territory (plane or helicopter, 15-20 participants). (The arrangement of this excursion is still under discussion)





## ORGANIZING COMMITTEE

### Chairman:

**Alexander I. Khanchuk** - Academician, Russian Academy of Sciences, Deputy Chairman of FEB RAS, Director of Far East Geological Institute, FEB RAS, RF

### Co-Chairmen:

**Victor I. Ishaev** – Governor of Khabarovsk Kray, Corresponding member of RAS, Chief of Amur Branch of Russian Geographical Society, RF

**Nikolay L. Dobretsov** - Academician, Vice-President of Russian Academy of Sciences, Chairman of SB RAS, RF

**Michael I. Kuz'min** - Academician, Russian Academy of Sciences, Chairman of Irkutsk Scientific Center SB RAS, Director of Institute of Geochemistry, SB RAS, RF

**Warren J. Nokleberg** - NE Eurasia Regional Coordinator of Global Mineral Resource Assessment Project, US Geological Survey, USA

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Sergey V. **Zyabrev**, PhD

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## ABSTRACTS AND PUBLICATIONS

The abstract template will be included in the Second Circular

Conference publications will include:

- Conference Program and Abstract Volume
- Field excursion Guidebook
- *Conference Proceedings (current plans)*
  1. Journal of Asian Earth Sciences or The Island Arc, special issue (to be mulled over and arranged with Chief Editors)
  2. Journal of Pacific Geology (Tihookeanskaya Geologiya), special issue - in Russian and English

## REGISTRATION

If you like to take part in the Conference and/or receive the Second Circular, please fill in the Pre-registration form and e-mail it to one of the following addresses:

[conference@itig.as.khb.ru](mailto:conference@itig.as.khb.ru) (English)

[conference\\_ru@itig.as.khb.ru](mailto:conference_ru@itig.as.khb.ru) (Russian)

## PRE-REGISTRATION FORM

First Name \_\_\_\_\_

Last Name \_\_\_\_\_

Title: \_\_\_\_\_

Institution: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

e-mail: \_\_\_\_\_

Provisional title of my talk/poster \_\_\_\_\_

Accompanying person(s) \_\_\_\_\_

I consider to participate in the following field excursion(s) \_\_\_\_\_

## REGISTRATION FEE and METHODS OF PAYMENT

Registration fee of US\$150 for participants, US\$100 for accompanying persons, and US\$50 for students allow attending technical sessions and social events associated with the Conference, and receiving the Abstract and Program volume and Field Excursion Guide Book. The methods of payment will be indicated in the Second Circular

## DEADLINES

**Deadline for Submission of Provisional Titles of Talk/Posters - November 30, 2006**

**Deadline for Submission of Abstracts and reservation of Field Excursions - January 31, 2007**

## CONFERENCE CORRESPONDENCE

Should you have any query, please feel free to contact our secretaries

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## GENERAL INFORMATION

### *Conference Languages.*

English and Russian. We encourage the Russian fraternity to present talks in English. Those participants who are not comfortable with this are kindly advised to arrange for interpretation through their bi-lingual colleagues (own preliminary agreement required) or consider participation in a poster session. All posters are to be prepared in English.

### *Climate.*

The conference period is characterized by moderate to high (20-30 C = 68-86 F) temperatures with moderate precipitation. Current conditions are available through these links

<http://weather.cnn.com/weather/forecast.jsp?locCode=KHAY>

<http://weather.msn.com/local.aspx?wealocations=wc:RSXX0044>

### *Travel.*

Khabarovsk International Airport (code KHV) <http://www.sovereign-publications.com/dalavia.htm>. The airport is the base of Dalavia Airlines and is located 12 km from the downtown Khabarovsk. The airport provides connections to Moscow, St. Petersburg, Novosibirsk, Yakutsk, Magadan, Petropavlovsk-Kamchatka, Seoul, Niigata, Beijing and other destinations via Russian domestic and international airlines. The airport is linked to the city with public transport (very cheap) and taxis (reasonably cheap).

### *Visa*

Most foreign participants will be required to obtain a visa to enter Russia, which might take quite a while. Please check it up with the Consulate General of Russia to your country. A formal letter of invitation is a likely prerequisite for visa application, and if this is the case, such a letter will be sent upon your request soon after you let us know.

*Khabarovsk City* is located at Amur River Bank. It was established as a Russian Cossack's stronghold in 1858, and is a cultural and administrative centre of the Far East Region, and a place of visiting attractions.

Guides to the City and Region: [http://www.adm.khv.ru/invest2.nsf/pages/khvwelcome\\_en.htm](http://www.adm.khv.ru/invest2.nsf/pages/khvwelcome_en.htm)

<http://www.geocities.com/tokyo/2673/photos.htm>

### *Accommodations.*

Hotels are available at various rates and degree of comfort within a 10-20 min walk distance from the conference site. Accommodations should be reserved through the Organizing Committee. Those who like to reserve accommodations independently can use the following Web sites:

<http://deals.hotels.com/hotel.asp?city=khabarovsk&country=russian%20federation>

<http://www.hotel.com.au/cities/Khabarovsk-Russia-hotel.asp>

[http://travels.priceline.com/hotel/city-Khabarovsk\\_Khabarovskiy\\_Russia-5000289660.html](http://travels.priceline.com/hotel/city-Khabarovsk_Khabarovskiy_Russia-5000289660.html)

Or the popular global travel sites can be used:

<http://www.expedia.com/daily/hotels/default.asp?rfr=-1067>

<http://www.tripadvisor.com/>

<http://travel.travelocity.com/hotel/HotelCobrand.do>

### *Accompanying persons*

The accompanying person program will include visits to the Art Galleries, Historical Museum, gift shops, Drama Theatre, Circus, and concert halls. English-, Japanese-, Korean-, and Chinese-speaking interpreters will be available upon request at your own expense.

### *Insurance liability*

Participants should note that emergency medical costs are not covered by the registration fee.

Participants of some field excursions are advised to be inoculated with vaccine against the tick-borne encephalitis

