

# 第一届亚洲古生物学大会

—暨中国古生物学会成立 90 周年纪念

## The 1st Asian Palaeontological Congress

*- with celebrations on the 90th Anniversary of  
the Palaeontological Society of China*



# ABSTRACTS

November 17-19, 2019

Beijing, China



- [116] A Nearly Complete Skeleton of a Hadrosaurine Dinosaur (Dinosauria: Hadrosauridae) from the Marine Deposits of the Late Cretaceous Hakobuchi Formation, Yezo Group, Japan..... 95  
Yoshitsugu KOBAYASHI, Tomohiro NISHIMURA, Ryuji TAKASAKI, Kentaro CHIBA, Anthony R. FIORILLO, Kohei TANAKA, Tsogtbaatar CHINZORIG, Tamaki SATO, Kazuhiko SAKURAI
- [117] A new sauropod remains from Kyushu Island, western Japan..... 96  
Toru SEKIYA, Kazunori MIYATA, Hiromi KUROSU, Koji HIROSE, Hiroaki UGAI
- [118] Colonial Nesting Ground from Late Cretaceous Mongolia Reveals Nest Attendance Behavior in a Non-Avian Theropod..... 97  
Kohei TANAKA, Yoshitsugu KOBAYASHI, Darla K. ZELENIITSKY, François THERRIEN, Yuong-Nam LEE, Rinchen BARSBOLD, Katsuhiko KUBOTA, Hang-Jae LEE, Tsogtbaatar CHINZORIG, Damdinsuren IDERSAIKHAN
- [119] Establishment of Upper Cretaceous Bio- and Carbon Isotope Stratigraphy in the Northwest Pacific Ocean and Radiometric Ages around Several Stage Boundaries..... 98  
Hiroshi NISHI, Reishi TAKASHIMA, Toshiro YAMANAKA, Yuji ORIHASHI, Yasuyuki TSUJINO, Keiichi HAYASHI, Ken SAWADA, Hideto NAKAMURA, Takuto ANDO
- [120] Evolution and Geographic Distribution of Chemosynthetic Bivalves in Japan ..... 99  
Kazutaka AMANO, Robert G. JENKINS, Yusuke MIYAJIMA, Steffen KIEL
- [121] Lower Cretaceous Lebanese Amber: An Exceptional Window to the Past ..... 100  
Sibelle MAKSOUD, Dany AZAR
- [122] The Early Cretaceous Swamp Plant Communities of Transbaikalia..... 101  
Eugenia BUGDAEVA, Natalya YADRISHCHENSKAYA, Valentina MARKEVICH
- [123] The Diet of Therizinosaur Dinosaurs ..... 102  
Hailu YOU
- [124] Aquatic Angiosperms from the Upper Cretaceous Yong'ancun Formation in Jiayin, Heilongjiang, Northeast China ..... 103  
Fei LIANG, Ge SUN, Bingcai LIU, Shuchong BAI
- [125] A New Lambeosaurine Hadrosaurid Braincase Discovered from Upper Cretaceous Yuliangzi Formation of Jiayin, Heilongjiang, Northeast China..... 104  
Wenhao WU, Nan DONG, Yalei YIN, Pascal GODEFROIT
- [126] Carbon Sequestration of Post OAE2 Record in Cretaceous Paleolake Sediments from the Songliao Basin, North China: Indication of Long Duration of Greenhouse Climate..... 105  
Yuxin HE, Changfeng ZHU, Yongge SUN, Tian XIA, Jianping CHEN
- [127] Marine Vertebrates of Japanese Upper Cretaceous: A Review..... 106  
Tamaki SATO
- [128] Recent Discoveries on Cretaceous Floristic Changes in Japan ..... 107  
Harufumi NISHIDA, Toshihiro YAMADA, Yusuke TAKEBE, Julien LEGRAND
- [129] Seawater Incursion History of Cretaceous Songliao Paleo-lake Revealed by Specific Molecular Fossil ..... 108  
Jianfang HU, Ping'an PENG, Meiyu LIU, Xiaoning TONG, Dangpeng XI, Huaiaren CAO



(mainly insects) were described and named from the Lebanese amber, other inclusions are still waiting their identification. The recent discoveries of new and very diverse outcrops of fossiliferous amber in Lebanon help to increase the possibility to realize the challenge of improving considerably our knowledge of the past.

Efforts are done to categorize this natural treasure on the list of Heritage of Humanity. The different Lebanese outcrops are not yet officially protected against vandalism. Their destruction or pillaging would be a great loss to the Human Heritage, and to the scientific knowledge.

**KEYWORDS:** Lebanon, fossil insects, Lower Barremian, palaeoenvironment, palaeobiodiversity.

#### ACKNOWLEDGMENTS

This work is a contribution to the activity of the laboratory "Advanced Micropalaeontology, Biodiversity and Evolution Researches" (AMBER) led by DA at the Lebanese University. DA wants to thank the Chinese Academy of Sciences for the financial support under the President's International Fellowship Initiative (PIFI).

#### REFERENCES

1. Granier, B., Toland, C., Gèze, R., Azar, D. & Maksoud. Some steps toward a new story for the Jurassic - Cretaceous transition in Mount Lebanon. *Carnets de Géologie*, 2016, 16(8): 247–269.
2. Maksoud, S., Azar, D., Granier, B. & Gèze, R. New data on the age of the Lower Cretaceous amber outcrops of Lebanon. *Palaeoword*, 2017, 26(2): 331–338.
3. Grimaldi, D.A. Amber: Window to the Past, Abrams, H.N. (Ed.), 2003.
4. Ross, A.J. Amber: The Natural Time Capsule. Natural History Museum, London, 1998.
5. Ross, A.J. Amber: The Natural Time Capsule. Natural History Museum, Earth Science Publications, London, 2010.

[122]

### The Early Cretaceous Swamp Plant Communities of Transbaikalia

Eugenia BUGDAEVA<sup>1,\*</sup>, Natalya YADRISHCHENSKAYA<sup>2</sup>, Valentina MARKEVICH<sup>1</sup>

<sup>1</sup>Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Primorye Region, Russia

<sup>2</sup>Joint-stock Company "Siberian Production Geological Organization", Chita, Transbaikalian Region, Russia

\*Corresponding author email: bugdaeva@biosoil.ru

We have studied the Lower Cretaceous coal-bearing deposits of the Tugnuy, Tarbagatai, Bada, Chita-Ingoda, Chikoy, Bukachacha and Turga-Kharanor basins of Transbaikalia and sampled the coals from thick productive and thin coal seams. After chemical maceration of coals, the dispersed cuticles were revealed, their taxonomic position was determined, and coal-forming plants were identified. The spores and pollen obtained from both clastic layers and coals made it possible to determine the vegetation of the basin.

The palynospectra of the Olon-Sibir coal mine (Tugnuy Basin) are dominated by spores having affinity with Cyatheaceae and pollen having affinity with Pinaceae. Next in importance are close to Osmundaceae and *Ginkgocycadophytus*. In coals the cuticle *Pseudotorellia* was found. Coal accumulation occurred in swampy lakes of a wide river floodplain. Ferns, *Pseudotorellia* and pine trees formed swamp vegetation.

Numerous cuticles of *Pseudotorellia* sp., *Ginkgo* cf. *insolita* Samylnina, *G.* cf. *coriacea* Florin, *Pityophyllum* sp. 1. and rare *Anomozamites* sp., *Czekanowskiales* sp. indet., *Pagiophyllum* sp. were found in the coal seams of the Tarbagatai Basin. The territory of this basin was occupied by lake surrounded by a ginkgo-coniferous forest



with an understory of club-mosses, ferns, and cycadophytes. At higher places, araucariaceous and cheirolepidiaceus conifers grew. Phytoplankton and green algae existed in the lake water.

The coals of the Khalyarta coal mine in the Bada Basin are composed of the remains of plants *Arctopitys* sp. A, *Tarphyderma* sp. nov.

The coals from the Chernovskoye and Tataurovo coal mines were studied in the Chita-Ingoda Basin. The following coal-forming plants were revealed: Bennettiales sp. indet., *Czekanowskia vachrameevii* Kiritchkova et Samylina, *Phoenicopsis parva* Vassilevskaja, *Phoenicopsis* sp., *Sphenobaiera* sp., *Ginkgo* sp., *Pseudotorellia palustris* Shi, Herrera, Herendeen, Leslie, Ichinnorov, Takahashi et Crane, *Ps. resinosa* Shi, Herrera, Herendeen, Leslie, Ichinnorov, Takahashi et Crane, *Pseudotorellia* sp., *Elatides* cf. *zhoui* Shi, Leslie, Herendeen, Ichinnorov, Takahashi, Knopf et Crane, *Pagiophyllum* sp.

The cuticles of *Pseudotorellia* sp. were received from the coals of the Zashulan and Krasnochikoysky coal mines of the Chikoy Basin. The palynospectra are dominated by those having affinity with Cyatheaceae and Dicksoniaceae, Pinaceae, as well as *Ginkgocycadophytus* and lower plants. It was a stagnant lake on this territory; its swampy banks were overgrown with ferns, ginkgophytes and conifers.

From the coals of the Bukachacha Basin these plants were revealed: *Pseudotorellia transbaikalia* Bugdaeva, *Elatides asiatica* (Yokoyama) Krassilov, *Pagiophyllum* sp., *Pityophyllum* sp.1, cf. *Farndalea* cf. *fragilis* Bose. The palynospectra are dominated by those close to Cyatheaceae, Araucariaceae, Pinaceae, as well as *Ginkgocycadophytus*.

The main coal producers of the Kharanor coal mine of the Turga-Kharanor Basin are bennettite *Nilssoniopteris* aff. *prynadae* Samylina, ginkgophyte *Pseudotorellia kharanorica* Bugdaeva, conifers *Elatides* sp. A, *E. cf. zhoui*, *Holkopitys* sp. A, *Pagiophyllum* sp., ginkgoalean *Ginkgo manchurica* (Yabe et Oishi) Meng et Chen, plants having affinity with Taxaceae (*Tomharrisia* sp.A), and also with Pinaceae, constituted a slope vegetation.

Thus, the basis of the Early Cretaceous swamp plant communities of Transbaikalia were ginkgophytes, conifers and ferns, to a lesser extent czekanowskialeans and bennettites. The well-studied Aptian-Albian flora of the central Mongolia (Tevshiiin Govi and Tugrug localities) also is dominated by conifers and ginkgophytes (Herrera et al., 2017). These plants inhabited permanently flooded systems (e.g., forest-moor swamps).

**KEYWORDS:** Coal-forming plants, swamp plant communities, Early Cretaceous, Transbaikalia.

## ACKNOWLEDGMENTS

This research was supported by Russian Foundation for Basic Research (No: 17-04-01582). The authors deeply appreciate the support.

## REFERENCES

1. Herrera F., Shi G., Ichinnorov N., Takahashi M., Bugdaeva E.V., Herendeen P.S., Crane P.R. The presumed ginkgophyte *Umaltolepis* has seed-bearing structures resembling those of Peltaspermales and Umkomasiales. PNAS, 2017, 114(12): E2385–E2391.

[123]

## The Diet of Therizinosaur Dinosaurs

Hailu YOU<sup>1,2</sup>

<sup>1</sup>Key Laboratory of Vertebrate Evolution and Human Origins, Institute of Vertebrate Paleontology and