IGCP 648 2018 Field Symposium in south China

From Rodinia to Pangea: Geodynamics, Life and Climate

Place: Yichang, Three Gorges region in South China

Time: 2018, November 1-9

General information

South China has been chosen for the IGCP 648 2018 field symposium because it holds some key information for understanding the evolution of the supercontinent Rodinia, the onset and termination of the Cryogenian Snowball Earth event, the birth of complex life during the Ediacaran time, and the tectonic affinity change of the South China Block from Rodinia to Pangea. These geological records are relatively well preserved and exposed in the three gorges region, between Yichang and Shengnongjia, northwestern Hubei province in south China.

The symposium includes two days of indoor meetings and six days of field trip. The provisional program is:
Nov. 1, 2018 (Thursday), Arrival, Reception.
Nov. 2, 2018 (Friday), Oral and poster presentation.
Nov. 3, 2018 (Saturday), Oral and presentation.
Nov. 4, 2018 (Sunday) – Nov. 9 (Friday), 2018 field trip around Yichang and Shennongjia.
The symposium will be officially closed at 8:00 pm, Nov. 9, 2018, in Yichang.
Nov.10, Departure.

During the field trip, we will visit the following geological sites: (1) the Kongling complex, Archean and Paleoproterozoic metamorphic rocks exposed between Yichang and Shennongjia region which are considered as the old basement of the Yangtze platform; (2) the newly reported Miaowan ophiolite complex (Fig. 1b and 2a) which may be related to the Grenville-aged Sibao orogeny and thus to the assembly of Rodinia; (3) the ~820 Ma bimodal dykes, sills and granitoids near the Three Gorges Dam (Fig. 2b) which are under intensive debate as to whether they were related to a high-paleolatitudinal

superplume or to a peri-Rodinia subduction zone; (4) the Nahua rift basin which preserved the records of the Chang'an/Sturtian and Nantuo/Marinoan glaciations (Fig. 2c); (5) the Ediacaran – Paleozoic carbonate-shale sequence (Fig. 2d, e) that preserves the oldest multicellular animal fossils and many other well-studied fossil assemblages, some bearing very important biogeographic implications.

Yichang city is also famous for tourism. It has an over two-thousand-year long history and four million, multiple ethnicity, citizens, countless spectacular sites of mountain and water views, and varied savory foods. Yangtze gorges Dam, the world's largest power station in terms of installed capacity, is located ~40 km west of the city. The Shennongjia National Nature Reserve, listed as a World Heritage Site since 2016, is located ~200 km west of Yichang. Besides the Meso- Neoproterozoic geological records we will visit, the Shennongjia region boasts very high plant diversity, protected animal species and the mystery of "Wildman".

Costs

Please be advised that all the costs below are estimates and may vary, depending largely on the number of the participants of the symposium. The final registration fees and methods of payment will be posted in the 2nd circular.

The registration fee for the indoor meeting is estimated at $250-300, covering the icebreaker, conference dinner, coffee breaks, programme and abstract volume, and daily meals.

Accommodation in Yichang: $60-80 per double-room per day (including breakfast). We recommend living at the meeting hotel and can help the conference delegates to reserve the rooms.

The registration fee for the fieldtrip is estimated at $1000, covering the field guide, accommodation, meals, transportation, and tickets to geoparks and historical sites between Nov. 4 and Nov. 9, 2018.

Travel to and stay in Yichang

Yichang is easily accessible by air, speed train or vehicle from Beijing, Shanghai, Wuhan and Nanjing. There are over ten hotels ranking three stars or higher in Yichang.

Short course

After the symposium, a smaller research group will be organized to visit regions in the Hunan, Guizhou and Guangxin provinces. The purpose of this additional activity is primarily to train young or foreign geologists who have additional interest in the Neoproterozoic strata in south China. The Neoproterozoic successions in the southern provinces are of slope and basinal sedimentary environments, more complete than those in the Yichang-Shennongjia region. This short course will include five days of field work in the Guzhang area of Hunan Province, Zhaoxin area of Eastern Guizhou Province and Northern Guangxi Province. Cost and other details about the short course will be released after the 1st circular of the symposium. Places are limited, between six to ten participants only, due to the limitations in the number of vehicle seats. Participants of the symposium who want to join the southern province short course may contact prof. Shihong Zhang.

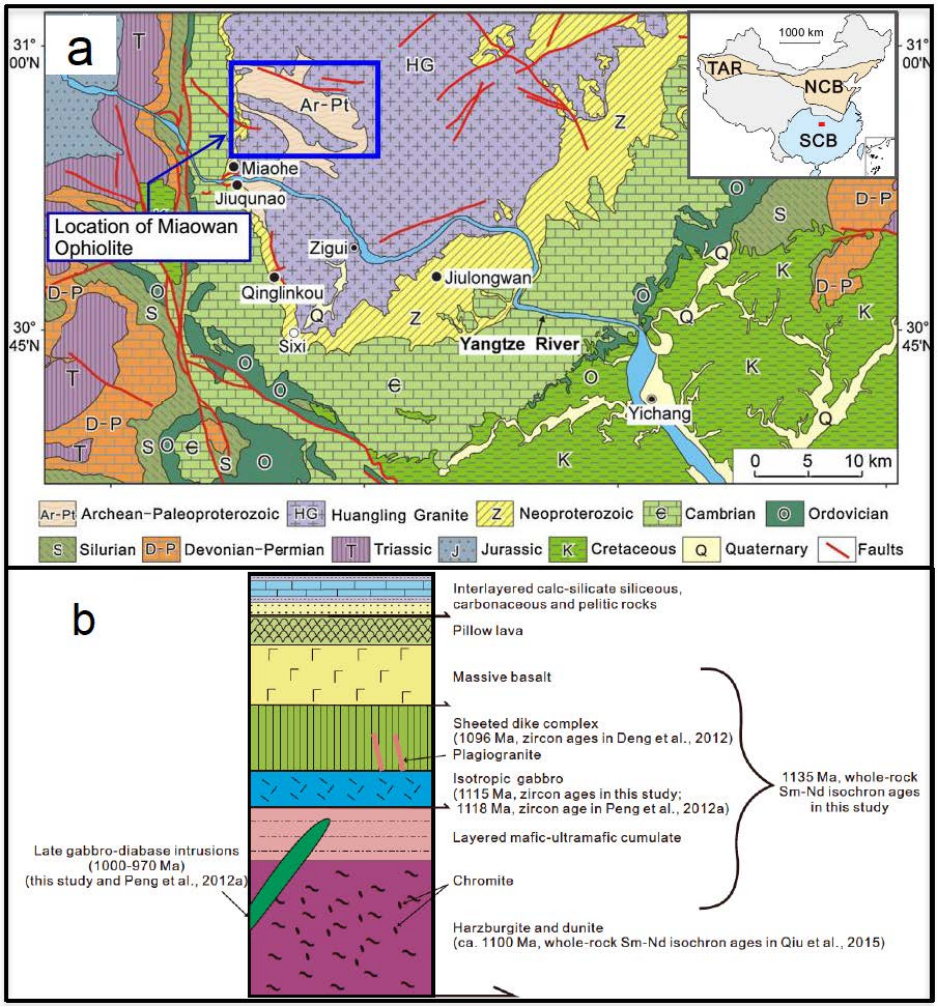

Fig. 1 A: Geological map of the Yangtze Gorges area (after Z. An. et al., 2015, Precambrian Research 271, 243-253). B: Simplified magmatic-stratigraphic column of the Miaowan Ophiolite which was intruded by late gabbro-diabase intrusions (after H. Deng et al., 2017, Precambrian Research 289, 75–94)

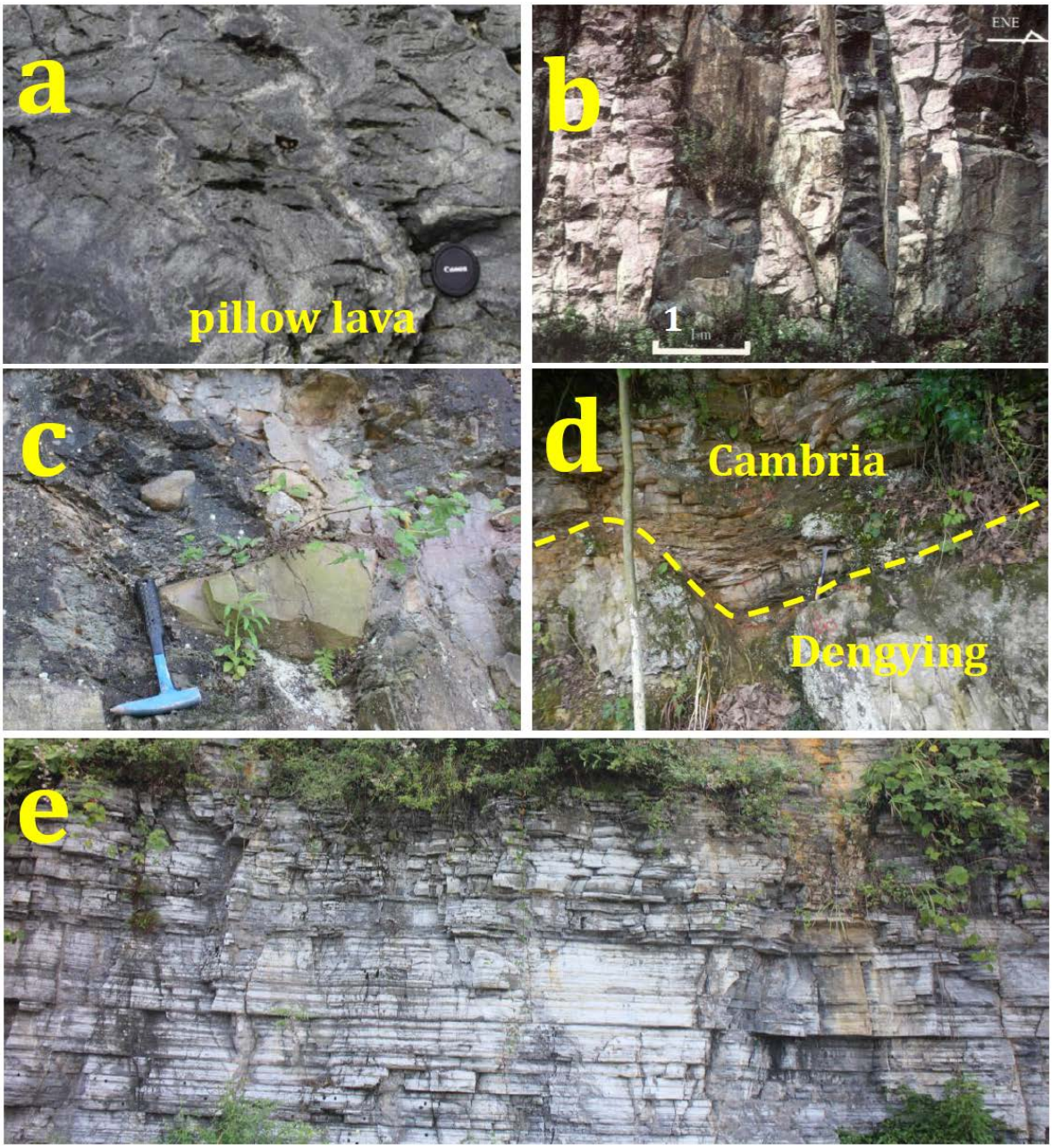

Fig. 2 Field photographs showing (a) pillow lava of the Miaowan Ophiolite (H. Deng et al., 2017, Precambrian Research 289, 75–94), (b) Xiaofeng Dikes and the Huangling Granite (Li Z. X. et al., 2004, EPSL 220, 409-421), (c) the Nantuo tillite, (d) contact between Precambrian (the Dengying Fm) and Cambrian strata, (e) dolomite sequence of the Doushantuo Fm, bearing striking geochemical anomalies that were widely used to interpret the evolution of atmosphere and ocean during the Ediacaran time.

Fig. 3 Three Gorges Dam viewed from a geological site of Doushantuo Formation

Fig. 4 Tea plantation in Shennongjia (picture from Wikipedia)