

ACTER 2016 Annual Field Symposium

Orogenesis during Supercontinent Cycles

Xian, China, 20–29 October 2016

1st Circular

The 2016 ACTER Annual Field Symposium, focusing on orogenesis during supercontinent cycles, will involve a two-day indoor workshop and an eight-day field excursion across the Qinling orogenic belt. The indoor workshop includes presentations and open discussions on topics related to orogenesis, formation and modification of continents during supercontinent cycles, and deep mantle dynamics. The symposium aims to bring together geologists, petrologists, geochemists, geochronologists and geophysicists, including both academic researchers and postgraduate students, to integrate diverse disciplines and methodologies in this exciting research field.

1. Dates: 20 – 29 October 2016

Registration and Icebreaker: 19 October 2016

Indoor workshop: 20-21 October 2016 (1.5 days for workshop and 0.5 day for optional tourism)

Field excursion: 22-29 October 2016

2. Registration fees:

Indoor symposium (including Icebreaker, meals excluding breakfast, and program printouts):

USD 150

Field excursion (including field accommodation, meals, transportation and site-entry tickets):

USD 690 for single-room accommodation;

USD 450 for shared-room accommodation.

Terra-Cotta Warriors tour (including meals, transportation and site-entry ticket): USD 70

Note: Tourism is optional, and it will be in the afternoon of 21 October 2016.

3. Indoor workshop:

Orogenesis during Supercontinent Cycles (program to be advised in the 2nd circular).

4. Field excursion:

4.1. The Qinling Orogenic Belt formed during the Mesozoic continental collision between the North and South China blocks. During this field excursion, we will examine the architecture of this well-known orogen along a traverse starting from the southern margin of the North China Block, crossing the orogenic belt, and finishing at the southern foreland basin over the South China Block. We will study the characteristics of rock packages and tectono-magmatic record of the Qinling orogenic belt, and try to

understand the evolution of the Qinling orogeny. **Maximum number of participants for the field excursion is 30.**

4.2. Major targets of the field excursion include:

- (1) Neoproterozoic-Paleoproterozoic rock packages in the southern margin of the North China Block, including lithological and petrological features, structural characteristics, metamorphism and deformation;
- (2) Mesoproterozoic-Neoproterozoic volcano-sedimentary packages in the southern margin of the North China Block;
- (3) Composition and structural deformation of the Northern Qinling Belt;
- (4) Characteristics, formation and evolution of the Shangdan suture;
- (5) Southern Qinling Paleozoic sedimentary associations, and Indosinian magmatism and structures;
- (6) Yanshanian magmatism, sedimentation and deformation;
- (7) Foreland basin evolution on the southern side of the Qinling Orogen.

4.3. Field schedule (8 days, 22–29 October):

Day 1: Northern Qinling orogenic belt

Route: Xi'an—Zhouzhi—Heihe (*stay overnight in Zhouzhi*)

Content: Examine the early Paleozoic trench/arc/back-arc basin domains in the Northern Qinling Belt, including early Paleozoic ophiolite, pillow lava, intrusions and Precambrian basement.

Day 2: The Shangdan suture

Route: Zhouzhi—Heihe—Foping—Xi'an (*stay overnight in Xi'an*)

Content: Examine the early Paleozoic ophiolite, fore-arc sedimentary wedge, ductile shear zone and gold deposits related to the fore-arc sedimentary wedge.

Day 3: The southern North China margin

Route: Xi'an—Luofu—Luonan (*stay overnight in Luonan*)

Content: Examine (1) Neoproterozoic-Paleoproterozoic rock associations, structural characteristics, metamorphism and deformation of the southern margin of the North China Craton; (2)

Mesoproterozoic-Neoproterozoic volcano-sedimentary association of the southern margin of the North China Craton; (3) Yanshanian magmatism.

Day 4: Northern Qinling

Route: Luonan—Shangluo (*stay overnight in Shangluo*)

Content: Examine some key records of sedimentation, unconformity, and deformation etc. in relation to the tectonic evolution of the North Qinling terrane and an island-arc.

Day 5: The northern part of South Qinling

Route: Shangluo—Shanyang (*stay overnight in Shanyang*)

Content: Devonian sedimentation, Indosinian deformation and rapakivi granitoid intrusions.

Day 6: Southern Qinling

Route: Shanyang—Jinjiling—Ankang (*stay overnight in Ankang*)

Content: Lower Paleozoic to Triassic successions and their deformation in the South Qinling belt.

Day 7: Southern Qinling and northern Yangtze fold-and-thrust belt

Route: Ankang—Ziyang—Wanyuan (*stay overnight in Wanyuan*)

Content: Lower Paleozoic sedimentation and deformation, mafic dykes, and Jurassic red basin in the South Qinling belt. Permian-Jurassic sedimentary succession and foreland fold-and-thrust belt in the northern Yangtze craton.

Day 8: Wanyuan—Xi'an (drive back to Xi'an)

5. How to register:

All academic/research staff and postgraduate students from ACTER member institutions are welcome.

Please register your interest and send the filled registration form to Dr. Shengsi Sun (shsun@nwu.edu.cn) or Dr. Zhao Yang (jdmuyi@sina.com).

Places for the field excursion are limited, so priorities will be given to early registrants, early-career researchers and postgraduate students. Students need to get approvals from both supervisors and ACTER representatives of respective host institutions.

Contact Person for enquiries about this symposium and fieldtrip:

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