

## 秦岭复理石的古地理与板块运动

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### (摘要)

秦岭发育一条近东西走向的复理石带,其沉积时限约为古生代末至中生代初。下述证据表明,这些复理石是扬子板块北侧活动大陆边缘的产物:(1)该复理石带位于华北板块与扬子板块的缝合线以南;(2)岩相及古生物特征表明,与复理石整合接触的下伏地层为扬子型;(3)由北向南的古水流资料表明,复理石带北侧曾存在提供碎屑的物源区,那里现存的一系列活化基底块体可能即为古老岛陆的残余;(4)复理石中夹有若干层火山碎屑岩,暗示了那些岛陆与向南的板块俯冲有关。需要强调的是,秦岭现今构造倒向是向南逆冲及推覆的结果。这一现象可用板块俯冲方向倒转(Plate flip)解释,即,中三叠世以前,扬子板块以北的古特提洋壳向南俯冲,形成活动大陆边缘,中三叠世以后,洋壳消减殆尽,大洋彼岸的华北板块与扬子板块对撞,并逆冲至后者之上,形成秦岭。

## PALEOGEOGRAPHY OF QINLING FLYSCH AND RELATION TO PLATE TECTONICS

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### Abstract

A flysch belt of E-W trend sedimented from late Paleozoic to early Mesozoic, outcrops in the Qinling Mountains. The following evidences support that the flysch deposited on active margin north of the Yangtze Plate: 1) the flysch belt is now located south to the suture zone of Yangtze and North China Plates; 2) the strata conformably underlying the flysch are all characterized by lithofacies and fossils of the Yangtze type; 3) paleocurrent data (from N to S) show that there was an ancient source area for detritus in the north of the flysch belt, which is represented now by remnant blocks of mobilized basement; 4) pyroclastics in the flysch mean that the source area might be a series of islands related to southward plate subduction. It should be noted that north inclined structures now in Qinling resulted from southward overthrust. A reasonable explanation for the phenomenon is plate flip: before  $T_2$ , oceanic crust of the paleotethys north to the Yangtze Plate subducted southward, resulting in an active continental margin; after  $T_2$ , while the paleotethys was entirely consumed, the North China Plate behind the oceanic crust overthrust onto the Yangtze Plate, resulting in the building up of nowadays Qinling.