

後期パンアフリカの周 Gondwana 変動：原ヒマラヤ造山帯から考える

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Late Pan-African peri-Gondwana orogens: Extending the Porto-Himalayan Belt

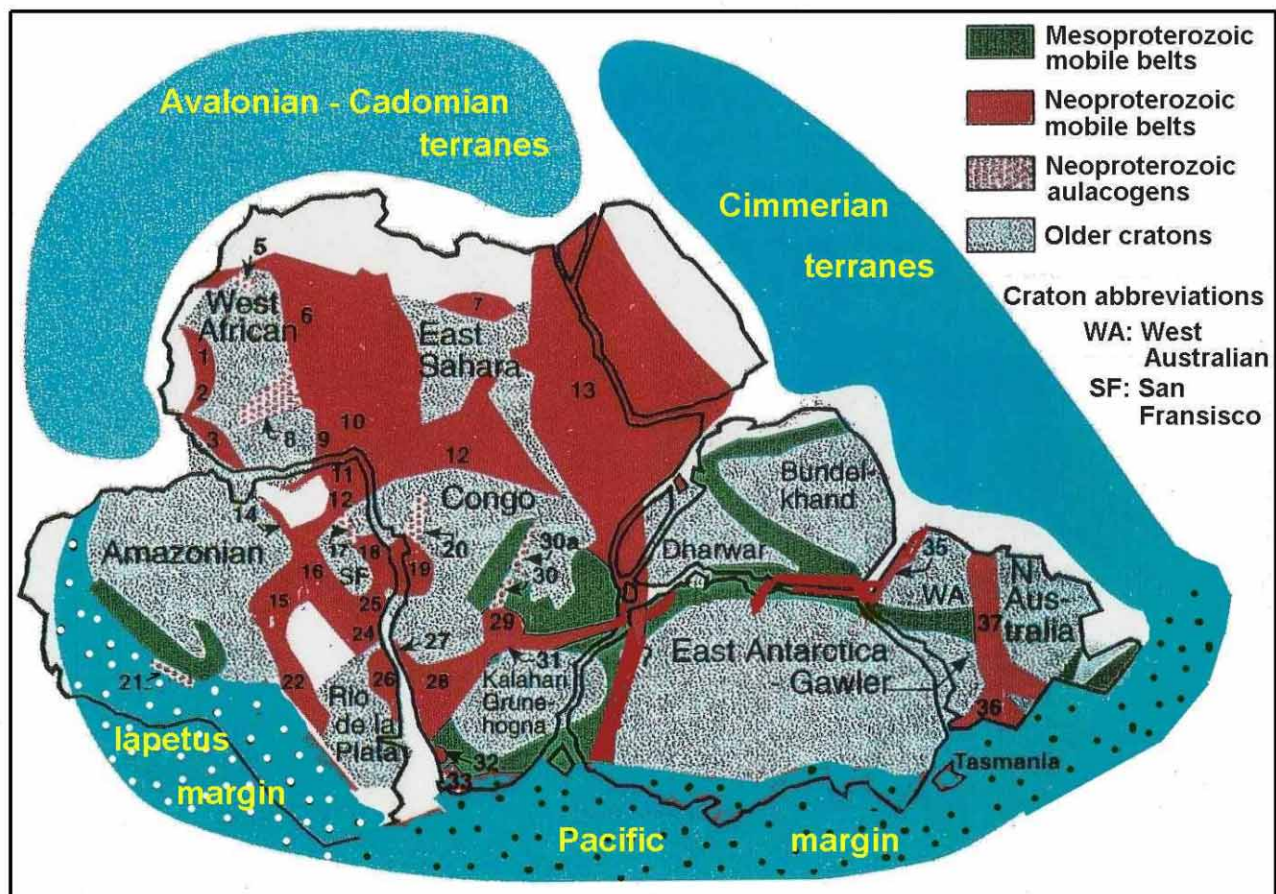
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During the early Paleozoic the Proto-Himalayan Belt fringing the northern margin of East Gondwana suffered extensive diastrophism represented by sedimentary hiatus and unconformity, metamorphism and granitic activity which as a whole has been regarded by some authors to have formed a distinct late Pan-African orogeny (e.g., Valdia, 1995; Gehrels et al., 2003; Cawood, 2007; Yoshida et al., 2011).

The Belt is also characterized by magmatism during the late Neoproterozoic to very early Paleozoic, suggesting that the arc/subduction activity should have also taken place in association with the orogeny.

The Ross-Delamerian Orogen in the southern margin of East Gondwana also suffered the early Paleozoic orogeny and demonstrates similar sedimentological, metamorphic and magmatic events of the similar time span. Characteristics of peri-Gondwana orogens including the Proto-Himalayan and Ross-Delamerian orogens are noticed in comparison to intra-Gondwana orogens such as the East African Orogen. The tectonic difference between the two can be the reflection of principal tectonic settings in that the peri-Gondwana orogens represent the post-assembly accretion tectonics in contrast to the intra-Gondwana orogens of the collision tectonics as suggested by Unrug (1996) and Cawood et al. (2007).



(Modified after Unrug, 1996)

Fig. 1. Gondwanaland with intra-Gondwanan orogens surrounded by peri-Gondwana terranes (Modified after Unrug, 1996)

東 Gondwana の北縁に位置した原ヒマラヤ帯では、初期古生代に広い範囲にわたって不整合、変成作用と花崗岩活動が認められ、後期パンアフリカ造山事件があると指適されてきた

(Valdia, 1995; Gehrels ら, 2003; Cawood ら, 2007; Yoshida ら, 2011 など)。後期ネオ原生代から最初期古生代に及ぶ島弧・サブダクション系を構成する火成活動も一部の地域で認められ、上記造山運動の一部を構成するものと見られてきた。一方、東 Gondwana の南縁には初期古生代のロス・デラメリアン造山帯が分布しており、ここでも原ヒマラヤ帯とよく似た造山事件がほぼ同じ時期に起こっている。

これらの周 Gondwana 造山帯は、東アフリカ造山帯などの内 Gondwana 造山帯と比較してどのような特徴があるであろうか。初～中期パンアフリカ期には Gondwana 陸片が次々と衝突融合して大 Gondwana が形成し、陸片間のサブダクション帯は Gondwana 縁辺にジャンプし、後期パンアフリカ期の活動縁辺造山帯を形成したのである。類似の見方はすでに Unrug (1996) や Cawood ら (2007) によっても示唆されている。大 Gondwana の西～北西縁辺のパンピナスやアバロニア・カドミア帯も含めて、Gondwana 縁辺の変動帯の特徴を考えたい。

References

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