

Tectonic Escape in Taiwan and Sichuan-Yunnan

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Collision-related strike-slip motion is a general process in continental evolution. Tectonic escape is lateral motion toward readily subductable area during arc or continental collision. The lateral motion is dominantly attained by movement on strike-slip faults. We briefly describe a number of examples of tectonic escape from Taiwan and Sichuan-Yunnan.

In Taiwan, The Miaoli area is particularly interesting for its internal design and outward mobility. A bundle of north-northeast-striking fault splays out northeastwardly in the immediate east of the Hsincheng-Futoukeng Fault. Obviously they are branches of this principal dislocation line and combine to form a simple confined virgation. Such a movement pattern reveals that the Hsincheng-Futoukeng Fault and its branches slip left-laterally besides thrusting westwards. Nevertheless, not all the faults in the Miaoli area are sinistral. The Shihtan-Tuntzechiao Fault, which marks the south and east boundaries of this area, is of exceptional interest because of its right-lateral motion in a terrain strongly left-lateral sheared. Inasmuch as the Miaoli area is situated between this dextral fault and the sinistral Hsincheng-Futoukeng Fault, it must be transported northeastwards bodily.

In China, The Sichuan-Yunnan area is outward mobility, too. The Xianshuihe-Xiaojiang Fault and its branches slip left-laterally. The Red River Fault is right-lateral motion in a terrain strongly left-lateral sheared. Inasmuch as the Sichuan-Yunnan area is situated between this dextral Red River Fault and the sinistral Xianshuihe-Xiaojiang Fault, it must be transported southeastwards bodily. Evidently the Miaoli area and Sichuan-Yunnan area are tectonic-escape block, Anatolian-style, however small they are.