Taiwan Jade and Japan Sea Opening

*新妻 信明¹、李 元希²
*Nobuaki Niitsuma¹, Yuan Hsi Lee²

1. 静岡大学理学部地球科学教室、2. 台湾国立中正大学興環境系
1. Institute of Geosciences, Shizuoka University, 2. National Chung-Cheng University, Taiwan


Mafic-ultramafic rocks expose along the anticlinal axes of the metamorphic belts in Backbone Range of Taiwan. The mafic-ultramafic rocks are important sources of jade in Taiwan.

Lee (2015: JpGU; Chen et al., 2017 Tectonics) reported that zircon ages of Ophiolites with mafic-ultramafic rocks in Taiwan are concentrated to 15 Ma, which should relate with termination of spreading in South China Sea and Shikoku & Parece Vela Basin just before Japan Sea Opening, and large scale igneous activities in the Outer Zone of Southwest Japan just after Japan Sea Opening. The large scale igneous activities in the Outer Zone of Southwest Japan was explained as rotated Southwest Japan for Japan Sea Opening was placed over hot Shikoku Basin just after the spreading (Takahashi, 1986). There is a difficulty on the granites in Yakushima & Koshikijima west from present Kyushu-Palau Ridge. Kyushu could be faced on the maximum westward bent margin of Shikoku Basin before subduction of Philippine Sea Plate, however, the spreading age of 24 Ma (An7) too old to induce the igneous activity.

Both of the opening of South China Sea and sinistral bend of axis & transform faults in Shikoku Basin represent southward tensional stress which might spread along northern margin of Philippine Sea Plate including West Philippine Basin and solve the difficulty of Yakushima & Koshikijima.

Gabbros occur as drops crystallized from Mantle and breccia & vein in Serpentine sheared by redden metamorphic rocks of Taiwan on the spread axis, indicating Moho to be strongest under Continental Crust.

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