# Taiwan Jade and Japan Sea Opening

*Nobuaki Niitsuma[1], Yuan Hsi Lee[2]

1. Institute of Geosciences,Shizuoka University, 2. National Chung-Cheng University, Taiwan

Niitsuma (2010:Geol.Soc.Japan) presented that Early Miocene strata accompanied with folding of metamorphic rocks in Taiwan relating to Japan Sea Opening in 15Ma.

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

Lee (2015:JpGU;Chen et al., 2017 Tectonics) reported that zircon ages of Ophiolites with mafic-ulatramafic 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 Japanjust 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 24Ma(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 & vain in Serpentine sheared by redden metamorphic rocks of Taiwan on the spread axis, indicating Moho to be strongest under Continental Crust.

Keywords: Japan Sea Opening, Jade, Ophiolite, Rift axis along northern margin of Philippine Sea Plate, Outer zone igneous activity of Southwest Japan