Chemosystematics of the Genus Murraya (Rutaceae): on Murraya paniculata var. zollingeri emdemic to Timor Islands.

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The genus Murraya contains about 10 species and four varieties according to Swingle, and is classified into the Tribe Clausenae along with the genus Clausena and Glycosmis. Though Swingle did not proceed to further investigation in details on the genus Murraya, Tanaka divided this genus into two sects Bergera and Murraya from morphological viewpoints. Later Tanaka's view was supported from chemosystematic viewpoints with alkaloids and coumarins as markers for the dichotomy of the genus. Plants belonging to Sect Bergera are characterized by the presence of carbazoles and absence of prenylcoumarins, while those belonging to Sect Murraya are found to contain only prenylcoumarins but no carbazoles. However, the latter contain characteristic prenylindoles that are biosynthetically related to carbazoles. Among those belonging to Sect Murraya, M. paniculata is the most widely spread species, which occurs in tropics and subtropics of Asia including the Ryukyus, the southernmost islands of Japan. Recently, M. exotica was reinstated based on the morphology of leaflets and fruits. According to this view, the one occurring in Japan seems to be M. exotica. We have long been undertaking the chemistry of rutaceous plants and have amassed chemical information on M. paniculata and allied species. As long as it is concerned with chemical constituents obtained so far, M. paniculata and M. exotica are distinguished by the types of prenylcoumarins contained: M. paniculata contains 5,7-dimethoxy-8-prenylcoumarins, while M. exotica contains 7-methoxy-8-prenylcoumarins. There are three varieties of M. paniculata recognized, var. omphalocarpa that is reported to be endemic to Botel Tobago of Taiwan has already been reduced to a synonym of M. paniculata. We obtained the other variety of M. paniculata, var. zollingeri endemic to Timor Islands, Indonesia, for chemosystematic study. In this symposium we clarify chemical information of this variety and discuss its chemosystematic status.