Depositional age and tectonostratigraphy of the Ultra-Tamba Terrane in the southeastern part of the Hyogo Prefecture, SW Japan

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The Ultra-Tamba Terrane in the southeastern part of the Hyogo Prefecture was called the Inagawa Group (Ishiga, 1990) or the Yamashita and Nagaoayma formations (Matsuura et al., 1995). Although these were thought to be the Mesozoic formation, Middle to Late Permian radiolarians were yielded from mudstone and felsic tuff of these formations (Kusunoki et al., 1997; Sugamori, 2006a, 2006b). Based on these studies, the Ultra-Tamba Terrane in the study area is tentatively redefined as the Inagawa Complex herein. The author reports new knowledge about depositional age, stratigraphy and geologic structure of the Inagawa Complex.

The Inagawa Complex is subdivided into the Kunisaki and Nagaoyama subcomplexes (tentative name) in tectonically descending order. The Kunisaki Subcomplex is almost correlated with the Kunisaki Formation, and Nagaoyama Subcomplex is with the Yamashita and Nagaoyama formations of Sakaguchi (1961), respectively.

The Kunisaki Subcomplex consists of alternating beds of sandstone and mudstone, mudstone including clasts, chert, felsic tuff and greenstone. The apparent thickness is estimated to be about 800 meters. Greenstone is recognized near the base of this subcomplex. Chert is, usually massive, included in greenstone. Felsic tuff is similar to chert and included clast in mudstone. *Follicucullus charveti* Caridroit and De Wever is extracted from bedded felsic tuff and *Follicucullus porrectus* Rudenko and Fo. cf. charveti are yielded from mudstone. Sugamori (2006b) reported *Albaillella yamakitai* Kuwahara from mudstone. These clastic rocks are correlated with the *Fo. charveti -A. yamakitai* Assemblage Zone of Kuwahara et al., (1998).

On the other hand, The Nagaoyama Subcomplex is composed of alternating beds of sandstone and mudstone, broken beds of sandstone and mudstone, and felsic tuff. The apparent thickness is estimated to be about 1500 meters. Although felsic tuff is usually included in mudstone as clast, a conformable relationship between felsic tuff and laminite is recognized in Todoromi. Kusunoki et al. (1997) reported Middle to Late Permian radiolarians from felsic tuff and Late Permian radiolarians from mudstone of this subcomplex. Sugamori (2006a) also reported Late Permian radiolarians from mudstone. The author obtained *Neoalbaillella* sp. from felsic tuff, and *Fo. porrectus*, *Follicucullus scholastics* Ormiston and Babrock, and *Follicucullus bipartitus* Caridroit and De Wever from another felsic tuff. Felsic tuff of this subcomplex is correlated with the *Fo. charveti -A. yamakitai* Assemblage Zone ~*Neoalbaillella ornithoformis* Assemblage Zone of Kuwahara et al. (1998) at least. Mudstone is thought to be correlated with the lower part of the *Neoalbaillella ornithoformis* Assemblage Zone. The Nagaoyama Subcomplex includes younger clastic rocks than the Kunisaki Subcomplex's one.

The Inagawa Complex forms a synform gently plunging to WNW in the study area. Although major synform (named Yamashita Synform) axis runs around Yamashita, the Kurokawa Synform (tentative name) is recognized around Kurokawa which is to the north of Yamashita. The Kunisaki Subcomplex is exposed in the axical area of the Kurokawa Synform. This indicates that the older unit (Kunisaki Subcomplex) tectonically overlies the younger unit (Nagaoyama Subcomplex). Although this structure is one of the features of an accretionary complex, the Oceanic Plate Stratigraphy is not restored from the Inagawa Complex. It is an important problem that the Inagawa Complex is an accretionary complex or not for solution of the formative process of the Ultra-Tamba Terrane.