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Latest Silurian and Early Devonian radiolarian assemblages from tuffaceous rocks in the Tomochi area of the Kurosegawa Terrane, central Kyushu, Southwest Japan

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Moderately well-preserved radiolarian assemblages of latest Silurian and Early Devonian age were recovered from the Tomochi area in the Kurosegawa Terrane, central Kyushu, Southwest Japan. These radiolarian assemblages provide information in developing the Silurian and Devonian radiolarian biostratigraphy and taxonomy. Silurian and Devonian strata in this area consist of lower felsic tuffaceous rocks (Horagatake Formation) and overlying clastic rocks (Yamaide Formation) (SAITO *et al*. 2005). The former unit is composed of felsic tuff, tuffaceous sandstone, and tuffaceous mudstone and yields abundant radiolarians. From the latter unit, a Late Devonian plant *Leptophloeum* has been reported by SAITO *et al*. (2003).

Three distinctive radiolarian assemblages have been identified in felsic tuff and tuffaceous mudstone. The oldest assemblage recovered from the northeastern flank of Mt. Horagatake contains *Pseudospongoprunum sagittatum* WAKAMATSU, SUGIYAMA & FURUTANI, *Oriundogutta* (?) *kingi* NOBLE, *Ceratoikiscum armiger* FURUTANI, and large inaniguttid species such as *Zadrappolus yoshikiensis* FURUTANI (KURIHARA 2009). This assemblage correlates with the zonal fauna of the Upper Silurian (possible Pridolian) *Devoniglansus unicus* – *Pseudospongoprunum* (?) *tauversi* Interval Zone of NOBLE (1994). Thin felsic tuff interbedded with tuffaceous sandstone in the northern flank of Mt. Horagatake contains abundant *Pactarentinia holdsworthi* FURUTANI along with *Tlecerina exilis* FURUTANI and *Glanta yokokurayamaensis* UMEDA. It can be correlated with the Emsian *Glanta fragilis* Zone of UMEDA (1998). The youngest assemblage occurs above strata containing *P. sagittatum* and contains *Palaeoscenidium ishigai* WAKAMATSU, SUGIYAMA & FURUTANI, *Deflantrica solidum* WAKAMATSU, SUGIYAMA & FURUTANI, *P. holdsworthi*, *Tlecerina horrida* FURUTANI, and *Protoholoeciscus hindea* AITCHISON. This assemblage is Emsian in age, based on the correlation with the *Protoholoeciscus hindea* Zone of UMEDA (1998).

From this preliminary examination, it is clear that radiolarian assemblages in the Tomochi area have high biostratigraphic potential, and further biostratigraphic work is needed to refine the age calibration and to recognize distinctive biohorizons.

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Artikel/Article: Latest Silurian and Early Devonian radiolarian assemblages from tuffaceous rocks in the Tomochi area of the Kurosegawa Terrane, central Kyushu, Southwest Japan. 65