

## A way presenting diversity of geologic entities –Radiolarian Age Diversity Index (RADIX)

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How can we recognize or describe diversities in geological sciences? Diversity may include the number of rock types, mineral species, and species in fossil records. We propose an index presenting age diversity of geologic entities in a certain area. This is referred as Radiolarian Age Diversity Index (RADIX).

RADIX is shown as a fraction. The denominator is 12, the number of the Periods from the Cambrian to the Quaternary. The numerator is presented by the total number of Periods evidenced by radiolarian fossils. The numerator may include the number of Periods which will be proved in the future. This can make the motivation to find out new radiolarian fossils higher.

The entire area of Itoigawa City in Niigata Prefecture, central Japan is assigned to the UNESCO Global Geopark in 2009. The geopark is said to be characterized by highly diverse nature in geology. Silurian, Permian, Triassic, and Jurassic radiolarians have already been reported from the Itoigawa UNESCO Global Geopark. Devonian, Carboniferous, Neogene, and Quaternary are categorized as “expected periods” because radiolarian fossils of these ages are expected to be reported from marine sediments in the Itoigawa area. Therefore, current RADIX and expected RADIX of Itoigawa City are 4/12 and 8/12, respectively.

Keywords: diversity, geological age, radiolaria, Itoigawa UNESCO Global Geopark