

Sedimentological and micropaleontological research of chert breccias of the Kamiyoshida Formation in the Northern Chichibu Belt

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Strata of the Northern Chichibu Belt in the northwestern part of the Kanto Mountains are divided into four formations; the Kashiwagi, Manba, Kamiyoshida, and Sumaizuku formations in tectonostratigraphically ascending order. The beds of these formations usually dip gently, and the geological structure is characterized by anticline and syncline with east-west-trending fold axes. The Kamiyoshida Formation consists mainly of chert and alternating beds of sandstone and mudstone, mixed rock including blocks of greenstone, siliceous tuff, siliceous mudstone, limestone, chert breccia, and conglomerate.

Chert breccias are mainly distributed in the Mt. Jomine vicinity, southern Tsutsusaka-toge area, and northern Kamiyoshida area. Clasts are composed mainly of chert associated with subordinate siliceous mudstone, siliceous tuff, limestone, sandstone, mudstone, and tuff. Chert breccias usually consist of granule to pebble sized clasts and contain a small amount of cobble to boulder sized ones. They generally show clast-supported fabric. The matrix is muddy or sandy. Chert breccias are interbedded with mudstone, sandstone and alternating beds of siliceous mudstone and siliceous tuff. Some chert clasts contain radiolarian fossils.

The depositional environment of the chert breccias is discussed from the distribution pattern and from sedimentological and micropaleontological points of view.