



Late Jurassic – Early Cretaceous convergent margins of Northeastern Asia with Northwestern Pacific and Proto-Arctic oceans

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Continental margin of Northeastern Asia includes many island arc terranes that differ in age and tectonic position. Two convergent margins are reconstructed for Late Jurassic – Early Cretaceous time: Uda-Murgal and Alazeya – Oloy island arc systems.

A long tectonic zone composed of Upper Jurassic to Lower Cretaceous volcanic and sedimentary rocks is recognized along the Asian continent margin from the Mongol-Okhotsk thrust-fold belt on the south to the Chukotka Peninsula on the north. This belt represents the Uda-Murgal arc, which was developed along the convergent margin between Northeastern Asia and Northwestern Meso-Pacific. Several segments are identified in this arc based upon the volcanic and sedimentary rock assemblages, their respective compositions and basement structures. The southern and central parts of the Uda-Murgal island arc system were a continental margin belt with heterogeneous basement represented by metamorphic rocks of the Siberian craton, the Verkhoyansk terrigenous complex of Siberian passive margin and the Koni-Taigonos late Paleozoic to early Mesozoic island arc with accreted oceanic terranes. At the present day latitude of the Pekulney and Chukotka segments there was an ensimatic island arc with relicts of the South Anyui oceanic basin in backarc basin.

Alazeya-Oloy island arc systems consists of Paleozoic and Mesozoic complexes that belong to the convergent margin between Northeastern Asia and Proto-Arctic Ocean. It separated structures of the North American and Siberian continents. The Siberian margin was active whereas the North American margin was passive. The Late Jurassic was characterized by termination of a spreading in the Proto-Arctic Ocean and transformation of the latter into the closing South Anyui turbidite basin. In the beginning the oceanic lithosphere and then the Chukotka microcontinent

had been subducted beneath the Alazeya-Oloy volcanic belt