

PALEOGENE RADIOLARIANS OF NORTHERN TURGAY (RUSSIA)

AMON, Edward O., Inst. Geol.&Geochem., UB Russian Acad. Sci., 620151 Ekaterinburg, Russia

The Turgay Trough was an ancient seaway in an area located between the eastern slope of the southern Urals and Mugodzhar mountains on the west; West Siberian Plate in the north; Kazakh shield in the east; and the northeast margin of the Turan plate in the south. During the Cretaceous and Paleogene, the Uralian epihercynian system was being uplifted slowly. Erosional processes were rapidly denuding the landscape. This contrasts with the downwarping that occurred in the Trans-Urals and West Siberian plates, where there was a continuous accumulation of marine sediments. The Turgay Trough was the main seaway between the epicontinental basins of the Tethyan belts and the semi-isolated seas that were located in the West-Siberian area. An area in northern Turgay was the area that the West-Siberian and Tethyan water masses, mixed.

The Turgay Trough greatly influenced the composition of the West Siberian Paleogene marine fauna. The fauna was a semi-isolated and mainly endemic boreal biota. The introduction of the European and Tethyan fauna reflected the highest eustatic oscillations of Atlantic and Tethyan oceans as their warmer water faunas transgressed into West Siberia. The timing of these transgression can be correlated in West Siberia using foraminifera, radiolarian and dinocysts markers that are found in the Peri-Tethyan realm.

Paleogene radiolarians of northern Turgay are in three distinct radiolarian zones (from older to younger): *Petalospyris fiscella* Zone, *Spongostrochus paciferus* Zone and *Heliodiscus lentis* Zone of Ipresian age (Early Eocene) and correspond to foraminiferal *Globorotalia subbotinae* and *Globorotalia aragonensis* Zones; dinocysts *Wetzeliella meckelfeldensis*, *Dracodinium varielongitidium* and *Charlesdowicia coleothrypta* Zones.

This association can be correlated to the Trans Urals, West Siberia, Middle Volga area, North PriCaspian syncline, Don river area (Russian Platform), Gulf of Mexico, California, and tropical and northern Atlantic.

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