

LATE MIOCENE DIATOM FLORA FROM DEEP HOLE CENTRAL-1 (THE BERING SEA)

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Data obtained on fossil diatoms from deep Hole Central-1 first drilled on the Chukhi shelf of the Bering Sea within the East Anadyr Depression is presented. The 14-m-thick stratigraphic interval (609.5-623.5 meters below the sea floor) contains more than 70 diatom taxa in core samples collected from tuffaceous-diatomite sequence.

In general, the diatom flora is composed by boreal and subarctic species typical of high to middle latitudes. Except for two samples, it is dominated by marine taxa, in the first place, *Odontella aurita*, *Paralia sulcata*, and *Ikebea tenuis*. Determining a precise age for diatom flora is difficult owing to the absence of some biostratigraphically significant and age-diagnostic marker marine planktic taxa, first of all, from genera *Denticulopsis* and *Neodenticula* characteristic of the North Pacific Cenozoic diatom zones. The most biochronologically important found taxa are *Pyxidicula zabelinae*, *Ikebea tenuis*, and *Cosmiodiscus insignis*. Their co-occurrence indicates the late Miocene age with an age range of about 7.9 to 5.5 Ma, i.e. from the upper part of the Neogene *Thalassionema schraderi* Zone to the top of subzone "a" of *Neodenticula kamtschatica* Zone.

Overall, diatom assemblages from the Hole Central-1 are persistently dominated and subdominated by marine neritic-planktic and sublittoral taxa (including *Paralia sulcata*, *Odontella aurita*, *Chaetoceros* spores, *Actinoptychus senarius*, *Actinocyclus octonarius*, and *Stephanopyxis* spp.) that are accompanied by benthic and nonmarine forms. The presence of the Neogene cool-water species *Pyxidicula zabelinae*, *Cosmiodiscus insignis* and *Porosira punctata* typical of coastal environments of the Bering Sea and northwest Pacific is documented. Oceanic and open-sea planktic elements are very rare or essentially absent. Flora lacks typically warm-water species, but diatoms associated with sea ice are also not found. Such features of taxonomic composition and structure imply deposition in productive, relatively cold and shallow water of marine shelf. Two documented stratigraphic levels which possess rare diatoms practically lacking marine forms and dominated by nonmarine taxa may indicate either the episodes of environments caused by considerable shoaling of shelf zone and sedimentation under the influence of the river flow. On the other hand, possible erosion of sediments at that time also cannot be excluded.

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