

A DINOSAURIAN ICHNOFOSSIL ASSEMBLAGE FROM THE NANUSHUK FORMATION, NATIONAL PETROLEUM RESERVE – ALASKA

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Dinosaur tracks and trackways were first reported from the Alaska's North Slope in the 1970s and 1980s, but have not been systematically studied. Recent field investigations by workers at the University of Alaska Museum have documented a rich and diverse assemblage of tetrapod tracks and trackways from the Nanushuk Formation, in the National Petroleum Reserve-Alaska. The tracks, primarily attributable to dinosaurs, have been found at 31 sites exposed along a 180-kilometer leg of the Colville River, between the confluence of the Colville and Etivluk rivers and Niniuk Bluff. All of the tracks occur in the middle Cretaceous Nanushuk Formation (Albian-Cenomanian), which consists of shallow marine shale and sandstone and fluvial-deltaic conglomerate, sandstone and siltstone interbedded with shale and coal. Dinosaur trace fossils within the unit are relatively common and are preserved as both true tracks and natural casts. Rare examples preserving impressions of the integument have also been found. To date, the most common tracks within the Nanushuk Formation are referable to the ichnotaxon *Tetrapodosaurus*, which are believed to be the footprints of herbivorous ankylosaurs. Although not as abundant numerically, a greater ichnotaxonomic diversity of medium to large-sized carnivorous theropods is recognized, including *Columbosauripus*, *Gypsichnites*, two species of *Irenesauripus*, and *Ornithomimipus*. Also noteworthy is the occurrence of a probable turtle trackway and footprints of a possible champsosaur. Skeletal remains of dinosaurs and other vertebrates are extremely rare in the Nanushuk Formation; thus, the vertebrate ichnofossil record provides the primary data source regarding dinosaur diversity and distribution in Alaska during the mid-Cretaceous. The Nanushuk ichnofossil record compliments the better-known paleobotanical evidence from this unit and together provides an informative window into an extinct, high latitude paleocommunity.