Jurassic Dinos & Tordrillo/Denali Plutons in the Alaska Aleutian Batholith

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South central Alaska surrounds its inhabitants and visitors with countless mountains in multiple ranges. If the rocks could talk, what would they say of yesterday? The name Alaska derives from variations of the Aleut name, Alakh-khak. As the Russians translated it on the bill of sale to the United States in 1867, it is the place where the sea pushes against the land. Alaska's geologic story begins far from its present location. The landscapes and shorelines we see today are comprised of exotic terranes, rifted and shifted over epochs of time and space. Accretion of the super-terranes containing the Alaska-Aleutian Range arc and batholith has pushed and scraped other accreted terranes on the mainland to composite a puzzling jigsaw Rubik's riddle. Like passengers on a ship, nearby terranes appear to be closely related though scattered. Others remain aloof but share familial roots. The Kuskokwim Range, for example, communicates geologic signatures that relate magmatic overprints from Cretaceous to Paleocene times after assemblages formed and magma intruded the Alaska-Aleutian Range, Yukon Territory and British Columbia and SE Alaska. Geologists, like genealogists, observe evidence that this widespread family of magmatic intrusions belonged to a common ancestral arc resulting from a shallow dip and dive of the Kula Plate under North America. It spread waves of crested ranges. Relocated from southern positions, the host rocks reveal older ages than the younger plutonic intrusions. Parts of the Alaska-Aleutian Range batholiths of the Peninsular terrane, Talkeetna superterrane and Wrangellia and Alexander terranes contain Jurassic plutons. The similar age of these magmatic belts suggest they were all part of a single magmatic arc during the Age of the Dinosaurs and after, as Pangea rifted and shifted. Talkeetna superterrane, within 10 degrees of the equator about 220 million years ago, rapidly moved north, perhaps riding the Kula and Faralon plates, as the seaward side of San Andreas Fault is parting from California toward the Pacific today. When Talkeetna superterrane collided with other accretions, it became a backstop for Chugach, Prince William and Yakutat terranes (now following the earlier model of Talkeetna). Combined with counter clockwise rotation, Talkeetna and Yakutat both may have contributed to uplift of Alaska-Aleutian Range, Chugach Range, Wrangle St. Elias. More recent Cretaceous and Tertiary magmatism overlays render it difficult to date plutonic belts. Yakutat collision may have generated the split that reactivated the NW margin to calc-alkaline magmatism in the Alaska Aleutian Range batholith at 56-61 Ma. About six million years ago the Pacific Plate increased speed and changed direction, contributing to counter clockwise rotation. There is speculation that subsequent to subduction of the Farallon and Kula plates and later the Yakutat collision, the Alaska-Aleutian Range uplifted at 6 Ma. Recent samples from the Tordrillo Range indicate rapid cooling simultaneously in the Tordrillos and Denali after this uplift. These rock samples taken and thermo tested from the Tordrillo Range (part of Alaska Range in which Hayes Glacier is located, which marks the termination point for modern Aleutian Arc, and different than the ancestral Aleutian Arc) helped to identify and clarify dating of rapid cooling of plutons in the Alaska Aleutian batholiths. Much controversy continues over geologic interpretation and many new discoveries remain un-common knowledge. Yet we hear faint echoes of the rocks' talks translated by geologists.