

Arms Lake RNA

Chitanana Dunes System

Size: 10,590 acres

Elevation: 680–900 feet

Area Description

The Arms Lake Research Natural Area (RNA) occupies the crest and gradual, south-sloping exposure of a small watershed on the Chitanana Dunes system. This dune system is characterized by a fishbone-like pattern of incised sub-drainages along both flanks. The area is dotted with lakes, ponds, and dry lakebed remnants. The RNA supports dune-type plant communities and an unvegetated sand delta in center.

Features of Significant Research Value (Animal, Plant and Geologic)

Animal: Northern pike, least cisco, burbot, western sandpiper, dunlin, sanderling, meadow jumping mouse, American golden plover (light- to medium-density waterfowl habitat)

Plant: Black spruce-*Cladonia* woodland forest; paper birch forest; open aspen forest (steep south-facing bluffs); juniper-sagebrush open low shrub (warmest/driest exposures)

Geologic: Sand dune complex with parabolic dunes (SW aspect); transverse dunes (SE of the slump lake); relict dune slip faces; relict dune slacks

Additional Features

A thin cap of silt or silt loam covers the sand, creating conditions favorable for the formation of permafrost. One pond south of Arms Lake is actively expanding by thermokarst collapse with tilted, collapsing trees.

The dunes likely formed due to a wind-shaped sediment trap on the lower Tanana River that accumulated water-sorted exposed sediment carried by strong winds from outwash meltwater of Pleistocene ice sheets.



Source: Glenn P. Juday, 1983, Chitanana Dunes Proposed Research Natural Areas: Redlands Lake and Arms Lake. Report prepared for the Bureau of Land Management in Alaska

Central Yukon RMP - Research Natural Areas

RMP Subunits Boundary
Research Natural Areas
Bureau of Land Management
National Wildlife Refuge System
Native Patent or IC
Native Selected
State Patent or TA
State Selected
Military
Private Lands

N

0 0.5 1
Miles

