### Surficial Geology

**Greenbush Quadrangle, Maine**

**Purpose:**

Surficial mapping of the Greenbush Quadrangle was conducted by the Maine Geological Survey to understand the prehistoric landscape and to identify potential locations for archaeological and environmental studies.

**Methods:**

- **Radiocarbon Dating:** Ages are in thousands of years before present (BP).
- **Glacial Stylolage:** Symbols show trend of glacial ice-flow inferred from striations on the surface of the glacial deposits.

**Findings:**

- **Esker Gravels:** Esker head gravels are located in the NE quadrant of the quadrangle. The dates suggest that the dune was last active 7,000 years ago.
- **Presumpscot Formation:** Marine muds were still slowly accumulating across the Greenbush Quadrangle about 15,300 years ago.
- **Alton Bog:** Thaw-out of the Pequotan glacial period can be inferred from the dates (Borns and others, 2004), place the margin already 65 km further south of the quadrangle. No evidence of a landscape change is found in these tunnels.

**Surficial Geology History:**

- **Between ~12,000 and ~9,000 years ago,** flow in the Penobscot River and its tributaries was characterized by a high sedimentation rate and the deposition of large quantities of sediment. This period is known as the Pleistocene Epoch.
- **~9,000 years ago,** the climate became drier (Webb et al. 1993), and the rebound of the land shifted the margin of the glacial ice further south of the quadrangle. The date suggests that the dune was last active 7,000 years ago.

**References:**


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**Figure 1:** Surficial geology map of the Greenbush Quadrangle, Maine. The dates suggest that the dune was last active 7,000 years ago.

**Figure 2:** Esker head gravels are located in the NE quadrant of the quadrangle. The dates suggest that the dune was last active 7,000 years ago.

**Figure 3:** Alton Bog was thaw-out of the Pequotan glacial period can be inferred from the dates (Borns and others, 2004), place the margin already 65 km further south of the quadrangle. No evidence of a landscape change is found in these tunnels.

**Figure 4:** The climate became drier (Webb et al. 1993), and the rebound of the land shifted the margin of the glacial ice further south of the quadrangle. The date suggests that the dune was last active 7,000 years ago.