

1953 Taku Glacier Ice Field Research Project

Taku Glacier is near Juneau, Alaska. 10th Air Rescue provided support to American Geographical Society for their Juneau Ice Field Research Project.

1. The Operational Context (Early 1953)

- **The Mission:** The Office of Naval Research contracted the American Geographical Society to run JIRP. To support them, the U.S. Air Force deployed the **10th Air Rescue Squadron (ARS)** out of Elmendorf Air Force Base.
- **The Objectives:** The Air Force used these missions for twin purposes: dropping off crucial supplies (like food, fuel, and deep-glacier boring pipes) to remote camps and training pilots in treacherous alpine and glacier environments.
- **The Aircraft Choice:** While ski-wheel C-47s did some of the heavy lifting, the Air Force introduced the newly designed **Grumman SA-16A Albatross**. These heavy amphibians were equipped with retractable landing gear and trialed over 60 landings on the snowpack to test their viability as deep-snow rescue vehicles.

2. The Incident on Taku Glacier

- **The Landing:** In 1953, an SA-16A attempted a routine logistical landing on the upper firn (compressed snow) zone of the Taku Glacier.
- **The Mechanical Failure/Trap:** Unlike standard ski-planes that glide over the top layer, the heavy footprint of the amphibian hull combined with an unexpected patch of soft, uncrusted seasonal snow caused the aircraft to sink. The undercarriage bogged down heavily into the glacial muck.
- **The "Stuck" Status:** The crew was uninjured, but the intense vacuum suction of the wet glacial snow, combined with sub-freezing temperatures that began to freeze the slush around the fuselage and landing gear, completely immobilized the 16-ton aircraft. It was safely down but physically un-flyable.

3. Recovery and Abandonment Sequence

- **Initial Extraction Attempts:** Over several days, the 10th ARS and JIRP researchers attempted to dig out the heavy hull. However, the sheer weight of the Albatross made it impossible to lift or slide out using basic field tools.
- **Stripping the Aircraft:** Once it became clear the aircraft could not safely generate enough speed to break the snow's suction and take off from the high-altitude icefield, the decision was made to salvage it. Air Force teams stripped the highly classified avionics, survival gear, and accessible components. [\[1\]](#)
- **The Final Abandonment:** The heavy, hollowed-out aluminum fuselage and wings were ultimately abandoned on the upper icefield.

The Aftermath and Glacial Conveyor Belt

Over the subsequent decades, the exact historical timeline of the physical aircraft shifts from aviation history to geology:

- **The Burial:** Heavy winter snowfalls quickly buried the remaining carcass, compressing it into the glacier's interior ice layers.
- **The Conveyor Belt:** The Taku Glacier is exceptionally deep—nearly a mile thick—and is one of the few glaciers in the region that spent decades advancing rather than retreating. The ice layer holding the 1953 Albatross has been continuously creeping downhill toward the Taku River valley.

The stripped wreckage of the 1953 SA-16A Albatross is completely buried deep inside the interior ice of the Taku Glacier. It is slowly moving down the mountain like a conveyor belt.

Unlike plane crashes on solid ground, a glacier is a moving river of ice. Its exact current state is defined by specific glaciological movements:

1. Crushed and Entombed in the Accumulation Zone

- **Depth:** Over seven decades of heavy Alaskan snowfalls have packed down on top of the original 1953 landing site. The hollowed-out aluminum fuselage was long ago crushed by thousands of tons of immense pressure, turning it into compressed debris.
- **Location:** It is currently traveling within the deeper layers of the ice field, completely invisible from the surface and inaccessible to any hikers or search teams.

2. Moving Toward the Terminus

- **The Glacial Conveyor:** The Taku Glacier moves at an average velocity of roughly less than a meter to several hundred meters per year depending on the exact zone. Because the aircraft was abandoned in the upper "firn" (accumulation) zone, it entered the ice stream high up the mountain.
- **The Path:** The ice holding the wreckage has been continuously sliding down the 36-mile-long (58 km) glacial trench northeast of Juneau

3. Will it Ever Emerge?

- **Future Melt off:** For an object to "melt out" of a glacier, it must travel down to the ablation zone (where more ice melts in the summer than accumulates in the winter).
- **The Taku Exception:** While most glaciers on Earth are rapidly melting and retreating—which is how the famous 1952 C-124 Globemaster wreckage emerged on Alaska's Colony Glacier—the Taku Glacier spent most of the last century advancing and thickening.
- **Current Status:** Glaciologists from the U.S. Geological Survey note that the Taku has recently begun to transition into a retreat phase. However, because the plane was left so high up, it will likely take **decades or even centuries** of slow ice flow before the crushed metal pieces finally reach the terminus near the Taku River basin.

The Research Station at Camp 10 was the locus for a variety of field activities. Center stage was the glaciology of the Taku, involving the ablation: accumulation ratio, surface movement, and snow studies with reference to the 1951- 1952 hydrological budget. Closely coordinated was the collection of daily meteorological data. Geobotanical studies established surface level variations along trimlines of Taku Glacier in an effort to reconstruct and account for the ice front's twentieth century advance. Further collections were made toward completion of the nunatak flora.

The network of palaeoecological sites in southeastern Alaska was extended along the Gulf of Alaska coast to Prince William Sound and the Kenai Peninsula. Aerial support continued to be effectively handled by ski-wheel C-47 of the 10th Air Rescue Squadron. Widely scattered, Camps 5A, 8A, 8B, 9B, 14, 15, and 16 were supplied by parachute. An SA-16 Grumman Albatross amphibian, capable of performing takeoff and landing from the Taku snow on its hull, flew a number of missions. On occasion, personnel arrived or departed aboard the aircraft.

Early in June, parties attempting to reach the upper Taku by following the route via Lemon Creek Glacier and the Southwest Branch had been turned back twice because of snowstorms and unfavorable surface conditions.

First weeks in Juneau were spent purchasing food, gasoline, and various items of equipment. There was need to make certain to have on hand back-up parts to cover breakdown and emergencies.

Parapacks containing rations for 42 man-days were assembled for aerial delivery to the camp network. Sleds for hauling, improvised by using corrugated aluminum siding, proved to be not only light but also durable and relatively inexpensive to fabricate.

Travel by Weasel was resorted to with great advantage, thereby shortening time to reach destinations and offering longer periods for observation and research at remote camps. Of the two Weasels paradropped the previous year, only one could be located by probing and was dug out from beneath 4.6 m of snow. It was used to reach destinations on Taku Glacier between the terminal area at an altitude of 610 m and the height of drainage at 1830 m, a distance of about 21 km.



Figure 6.1. Unloading supplies from SA-16 Albatross triphibian on Taku Glacier.







Normally a no-no, but this is a survival situation aboard the Taky Galcier stuck SA-16 1059, 10th ARSq. AK. 1953





Apparently had spend some time on the Taku
Glacier (AK-illfated SA-16 1059)
and was just picked up.