

Pinetree Line

These extraordinary photos document a year's deployment on Resolution Island, the site of a Cold War early warning system.

Photos from Robert W. Knowles via Mark A. Knowles





Map by Zaur Eylanbelev



The Air Force's radar site on Canada's Resolution Island in the Labrador Sea stood near the northeastern-most tip of Air Defense Command's Pine-tree Line. In February 1957, an H-21 helicopter transports personnel to and from the site.

Airmen of the 920th Aircraft Control and Warning Squadron on Resolution Island watched for Soviet bombers and were ready to scramble fighters to intercept the intruders. The Pinetree Line, begun in 1951, traced the northern US border, extending up Canada's northeast coastline. Augmented by 1957 with the Mid-Canada Line and high-Arctic Distant Early Warning Line, this network of early warning stations stretched over North America from Greenland to Alaska. **11 and 21** In 1956, then-SSgt. Robert Knowles received orders for Resolution Island. These photos come from his year's assignment there. The series begins at Philadelphia Airport because Knowles left his wife, Mary Jean, and toddlers, Mark and John, with his in-laws in Pennsylvania. **131** Knowles photographed several military aircraft at Goose Bay, Labrador, en route to his new post. C-124 Globemaster IIs airlifted the heavy equipment and supplies needed to build a radar network in the desolate northern expanse. **141** Also at Goose Bay, a KC-97 taxis past a Navy P2V-5 Neptune patrol aircraft and C-47 transport. **151** Winter sunset at Resolution Island, December 1956. **161** A Maritime Central Airways DC-3 sets up for an airdrop at Resolution Island. MCA was among the carriers contracted to support remote early warning sites in the Canadian arctic.





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1 Tasked with resupplying early warning radar sites, the 22nd Helicopter Squadron was based at Goose Bay. Those resupplying Resolution were detached to nearby Frobisher Bay. *2* Knowles at the site PX. A native of Wichita, Kan., he filled several roles on Resolution, including clerk-typist and mailman. *3* Pole Vault communications antennas linked Resolution with other early warning sites. *4* Two of Resolution Island's three early warning search radars overlooking pack ice on the Davis Strait.



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11 Tracked “weasels” push their way through the snow, providing mobility and muscle on the island’s rugged terrain. *12* Sunrise comes to Resolution. *13* Piasecki H-21s were fitted with extra fuel tanks to reach the far-flung site. *14* An H-21’s stabilizer undergoes repair in March 1957. During winter, foul weather often limited helicopter resupply from Frobisher Bay to once or twice a month.

11 "Tippy" plays with an airman bundled in a parka at Resolution's second airstrip—a frozen lake. **12** This C-123 landed on 54 inches of solid ice—the site's Lake Strip—where airmen offloaded it. **13** Provisions settle to earth. Airdrop was often safer than landing, and mail drops were sometimes conducted without even a chute. **14** Resolution's parabolic communications antennas connected it to 13 other radar stations ranged along the Labrador coast. **15** A Douglas C-118 Liftmaster buzzes the airstrip after completing an airdrop. "Thanks for the propwash," Knowles wrote on the border of one of the 35 mm slides in this series showing the parachute delivery. **16** A "Sno-Go" clears drifts from the station's motor pool.



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11 Landing craft like the one at far right ferried fuel, equipment, and provisions from ship to shore during the warmer months. **12** Clearing ice in preparation for a visit by the Navy. **13** Despite its ungainly appearance, the Piasecki H-21 was a rugged helicopter, purpose built for Arctic operations. **14** A float-equipped HTL-6 (USAF Bell 47) helicopter from the Canadian Navy ship HMCS Labrador clatters low. Weather was only one hazard at Resolution. In July 1957, two Royal Canadian Navy H-47s located a missing airman killed by falling from a cliff near the station. Days later, both helicopters crashed in severe turbulence near Frobisher Bay. **15** Radar sites were chosen for their clear shot at the northern horizon. Perched on a 1,200-foot cliff, the Resolution Island station was no exception.





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111 A landing craft grinds ashore at the island's Yellow Beach, briefly free of ice. 121 Knowles, Technical Sergeant Hill, and Staff Sergeant Corwin enjoying summer warmth. By this time, Knowles' tour on Resolution was ending. He went on to complete a 20-year Air Force career, retiring as a chief master sergeant in 1975 at Travis AFB, Calif. 131 Knowles photographed this Danish ship from the deck of a US Navy craft. It was August 1957, and he wrote on this slide, "Homeward bound." 141 A year after he first stopped here, Knowles again transited Goose Bay and photographed this C-124 and C-118. Knowles ran an auto accessories store in Fairfield, Calif., after his Air Force service. He died in 1990. Operations on Resolution Island continued until 1961, when the facility was turned over to the Royal Canadian Air Force. ■