

“If One Should Come Your Way, Shoot It Down”: The Alaska Territorial Guard and the Japanese Balloon Bomb Attack of World War II

Ross Coen

It was late in the afternoon, almost dusk, on December 23, 1944, when Charlie Fitka looked up and saw what appeared to be a large balloon a half mile in the sky and a half mile away from where he stood. It was warm for December, about 34 degrees, but a steady rain and breeze from the east made it seem much colder. Fitka, a trapper from the small village of Marshall in western Alaska, was fourteen miles down the Yukon River near a fish camp the locals called Tukchuk. Once a village in its own right, Tukchuk was on its way to being abandoned. A sequence of epidemics over the years had taken the lives of nearly all the inhabitants. The rest were moving away. Most in the area avoided it. The place was said to have a “bad feeling.”

Fitka now stared at the balloon and guessed it to be very large and white in color. There did not appear to be any particular object hanging underneath, but in the fading twilight he couldn't be sure. He watched the balloon for a few minutes—it was definitely descending—until it drifted out of sight in a faraway grove of cottonwood trees. Fitka hunted in that area often, and over the next two weeks he kept an eye out for the downed balloon. Finally on January 5, 1945, while returning home on a trail that ran along the north bank of the river, he discovered large swaths of white fabric hanging from the upper branches of a tall tree. Quarter-inch manila ropes led down to some kind of apparatus—the balloon had a carriage after all—that lay suspended just off the ground in a tangle of willows. A clear plastic box set inside an iron-post frame was bolted to a metal ring about a foot across, which in turn was set atop another four-spoke metal ring twice as large. Two paper bags filled with sand (one had torn open and spilled some of its contents) hung from the rim of this bottom-most ring. Wires and cables stuck out everywhere. Fitka had the presence of mind to note the smooth cover of snow showed no footprints or tracks leading either to or away from the area.

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The next day he reported the find to Deputy U.S. Marshal Al Bahls who, it turns out, was already aware of the incident. Two men had earlier reported seeing a large balloon flying low over Ohogamiut, a small camp upriver from Marshall. Bahls guessed the men had been celebrating the Christmas season and dismissed the sighting as a probable hallucination. Now Fitka stood in his office with two swatches of fabric he had cut from the balloon's envelope. Both looked to be factory tags of some kind. Although the writing was smeared and illegible, it looked Japanese.¹

Both Fitka and Bahls were members of the Alaska Territorial Guard (ATG), a reconnaissance and defense force organized in 1942 against a possible Japanese invasion of mainland Alaska. Most of its six thousand members were Alaska Natives in rural villages across the territory. Bahls, who held the rank of captain and commanded the Marshall detachment, dutifully reported the incident to the Alaskan Department of the U.S. Army at Fort Richardson. Within days Captain George Corey of Army Intelligence and FBI Agent John Hayes landed a small plane on a frozen lake a mile from the balloon's landing site. They went the rest of the way by dogsled. They were there to conduct an investigation and take possession of the device. Everything, the men told the villagers, was to remain confidential.²

What the Army and the FBI knew—but the people of Marshall yet did not—was that over the previous eight weeks a number of these mysterious balloons had turned up across the western United States. The first was fished out of the sea by a Navy supply boat off San Pedro, California, in early November 1944. Two weeks later, one landed in the ocean off Kailua, Hawaii. In December, balloons were spotted in Thermopolis, Wyoming; Kalispell, Montana; and Estacada, Oregon. Several more followed in the first week of January, and by the time of the Marshall incident the War Department knew the country was under attack from a new type of weapon, ingenious in design but simple in its operation. The balloons were Japanese offensive weapons called *fusen bakudan* ("fire balloons" or "balloon bombs"). Measuring over thirty feet in diameter, the balloons were filled with hydrogen, launched in Japan and carried to North America by the strong westerly winds unnamed then but known today as the jet stream. Each balloon carried four incendiary bombs and one thirty-pound high-explosive bomb, all designed to drop in a timed sequence once the vehicle had completed its transoceanic voyage and was somewhere over the U.S. They were free balloons in every sense of the word—uncontrollable once released, their flight path determined only by the ever-fluctuating meteorological conditions in which they traveled—and of the almost three hundred

observed and/or recovered in North America in the course of the war, some four dozen rode the sub-stratospheric winds to Alaska.³

Although the Alaska balloons were no different from those that landed across the western states (as well as a few dozen in Canada and at least one in Mexico), the response to their landings most certainly was. An information blackout and press censorship policy imposed by the War Department meant that few Americans knew of the balloons and the danger they posed. Thus a typical response to a balloon landing in rural Kansas, for example, might involve the local sheriff and a group of curious farmers unknowingly tugging the balloon from a fence. It was not uncommon for incidents to go unreported to authorities for weeks or even months. One rancher sliced apart the envelope and used it to cover bales of hay. In Alaska, however, nearly every able-bodied man (and more than a few women) in the western villages had enlisted in the ATG. Information, even on a confidential basis, could be disseminated quickly along the unified chain of command. Downed balloons were guarded and reported quickly. For several weeks in the spring of 1945, ATG members tracked the balloons by airplane, dogsled, and on foot, performing a valuable service for which they would later receive commendations. Fort Richardson in Anchorage, the Eleventh Air Force in the Aleutians, and the Alaskan Department as a whole all played a role in the balloon response and contributed to the overall defense of the country. The story of the Japanese balloon bomb attacks of World War II is a narrative that extends from Tokyo to Washington, D.C.—with a small but not insignificant stop in Alaska.

The Japanese Imperial Army's Ninth Technical Research Institute, more commonly called the Noborito Institute, occupied an expansive compound on a bluff above the Tama River in southwest Tokyo. Founded in 1927 by Captain (later Lieutenant General) Ryo Shinoda, Noborito began as a small research division dedicated to covert warfare. Shinoda and his staff at first mined spy novels and movies for ideas about counterintelligence operations. They tinkered with secret inks, miniature cameras, counterfeit foreign currencies, telephone wiretapping devices, and other tools of the espionage trade. Eventually the laboratory moved on to more lethal applications, including poisons and biological agents that could be used to destroy crops and livestock. By the outbreak of World War II, the division had grown to two dozen buildings and nearly one thousand employees.⁴

In summer 1942 the Imperial General Headquarters directed Noborito to begin developing various means to bomb the United States. The order came in direct response to the Doolittle Raid that April, which resulted in the bombing of several Japanese cities

and caused humiliated military officials to demand swift retaliation. No long-range aircraft were capable of crossing the ocean (even on one-way suicide missions). Smaller bomb-laden planes could be launched from the decks of submarines, a concept tested that September when Warrant Officer Nobuo Fujita took off in a Yokosuka E14Y floatplane from submarine I-25 that had surfaced off the Oregon coast. Fujita dropped two large incendiary bombs in the Siskiyou National Forest in the hopes of igniting a forest fire. His plane was spotted from a Forest Service lookout tower, however, and response crews easily contained the small fires the bombs had set. The Japanese Navy, then embroiled in the escalating war in the Pacific and with no submarines to spare (especially for such low-impact missions), cancelled the program following this initial sortie.⁵

Under the direction of Major General Sueki Kusaba, engineers at Noborito next designed a free balloon that could be mass produced and, by virtue of sheer quantity, was capable of delivering large amounts of ordnance. The balloon envelope was made of *washi*, a lightweight but durable Japanese paper itself made from the fibrous bark of a tree in the mulberry family. Large paper panels were glued and stitched together by the nimble fingers of Japanese schoolgirls working in opera houses and sumo wrestling halls all over Tokyo. Factory supervisors instructed the girls to keep their fingernails trimmed and to never wear hairpins so as to minimize the risk of a tear or puncture in the balloon.⁶

The Japanese had extensive knowledge of the westerly winds of the upper atmosphere. As early as the 1920s, a pioneering physicist named Wasaburo Ooishi discovered the seasonal variability of the winds and mapped their currents above Tokyo.⁷ Noborito knew a balloon that reached an altitude of between 25,000 and 40,000 feet would enter the strongest wind currents and be carried to the U.S. in three to six days. Because the hydrogen gas would expand under the daytime sun and potentially rupture the envelope, each balloon featured a pressure-relief valve to vent excess gas. The subzero nighttime temperatures would induce the opposite effect. The gas would contract and the balloon would descend quickly, dropping out of the high-altitude wind currents if not into the ocean altogether. Engineers solved this problem with an altitude-control mechanism comprised of altimeters, slow-burning fuses, black powder charges, and thirty-two sandbags that served as ballast weights. Whenever the balloon dropped below the preset minimum of 25,000 feet, the altimeters would close an electrical circuit that fired one of the powder charges and resulted in the dropping of a single sandbag. The resultant loss of weight would cause the balloon to ascend and reenter the stream of high



The altitude control mechanism (left) and two sandbags recovered from the Japanese balloon that landed near the lower Yukon River community of Marshall on December 23, 1944. Note the empty sandbag attached to the control mechanism. Photographs courtesy of the National Archives and Records Administration, College Park, Maryland. (Box 42, RG 499)



velocity winds. Engineers calculated the balloon would reach North America when the mechanism had undergone roughly thirty cycles of ballast release. At that point its cargo of bombs would be dropped one by one. Two demolition charges, one on the envelope and the other on the carriage, would then obliterate the device itself.

The random nature of the balloon's flight made preselecting targets impossible, but the Imperial Army hoped the incendiary bombs, which contained several pounds of thermite and burned at extremely high temperatures, would ignite forest fires the Americans would be forced to fight by diverting resources that otherwise might be used in the war effort. The Japanese further intended these to be weapons of terror. That *fusen bakudan* would silently penetrate American airspace and drop bombs at random and without warning would surely lower morale and even induce

panic among the populace. The launching began with a handful of balloons in November 1944, and ramped up to a few dozen the following month. One of that number was released from the beaches of Honshu sometime around the 20th of December, flew across the Pacific in a more or less westerly direction until at some point it turned to the north, drifted over the Aleutians, Bristol Bay, Nelson Island, and the grassy tundra of western Alaska, and finally came to rest in a thickly forested area on the Yukon River just beyond the gaze of Charlie Fitka.

The Marshall balloon, as it came to be called, was placed in a crate and shipped to the Technical Air Intelligence Center in Anacostia just outside Washington, D.C. Another balloon that landed the same week near Holy Cross—again first observed by a Native man out checking his traplines—was also sent for further study. Technicians at Anacostia eagerly awaited both packages. Of the half dozen specimens already in their possession, including a near complete device recently recovered in Sebastopol, California, the Marshall and Holy Cross balloons were the first to still contain sandbags.

Colonel Sidman Poole, a topographic map maker who served as a liaison between the brass of the War Department and the scientists of Military Intelligence, arranged to have the U.S. Geological Survey (USGS) take the lead in the study. “Poole came in with a couple little bags of sand,” USGS micropaleontologist Ken Lohman recalled years later. “Very much hush-hush. People who weren’t classified couldn’t even get into the place. Poole wanted to know where the damned sand came from.”⁸ Both sets of bags were made of the same paper as the balloon envelope and were secured with low-grade twine. The two bags from Marshall contained coarse, salt-and-pepper sand and weighed seven pounds apiece. The Holy Cross bag weighed only two pounds and was partially filled with fine yellow sand.



Tattered remnants of the Japanese balloon that landed near Holy Cross on December 24, 1944. Photograph courtesy of the National Archives and Records Administration, College Park, Maryland. (Box 42, RG 499)

Lohman and his colleagues placed the samples under the microscope and found hundreds of species of diatoms (microscopic algae), including fossils from the Pliocene era, but no coral. It was clearly beach sand—but from an area of cold water incapable of supporting coral growth. By comparing the mineral and organic composition of the sand to known characteristics of Japanese beaches, volcanoes, and sea beds, the analysts narrowed down the search:

Extrusive igneous rocks exposed in the area immediately north and west of Sendai [a city on the Pacific coast northeast of Tokyo] provide an adequate source for the uncommon assemblage of heavy minerals occurring in the sand. The foraminiferal fauna . . . has been reported in the beach sands of this area. One species has never been reported outside this immediate region. The diatom flora found in the sand has been reported . . . around Sendai and many of the species found are known from no other locality.⁹

The team proved confident enough to specifically name two beaches as the probable sources of the sand—the first at Shiogama near Sendai, and the second at Ichinomiya, a small town east of Tokyo. Dozens of sandbags from an equal number of balloons would continue to arrive at the USGS office over the succeeding months, all of which confirmed their earlier conclusions. In mid-April, a sandbag recovered in Bethel required the services not of a micropaleontologist, but a Japanese translator. The bag contained a postcard written by a schoolboy named Yoshiharu Shinada and addressed to his father, Kazuo Shinada, in Ichinomiya, Chiba Prefecture—the very coastal town the USGS believed was a likely source of the sand. Army Intelligence officials were at a loss to explain how and why the postcard ended up inside the bag. The best explanation was that Shinada, probably a soldier working at one of the launch sites, received the card from his son and placed it there as a talisman of sorts. The practice, investigators would discover in time, was not uncommon (despite the Japanese military's rule prohibiting the use of any factory stamps or markings that might identify the balloons' place of origin). Only after the war did American occupying forces visit Ichinomiya and Shiogama and discover the launch sites exactly where the USGS analysts predicted they would be.¹⁰

In February 1945 the War Department recovered paper, sand bags, rope, altimeters, batteries, and other fragments (including unexploded bombs) from a total of fifty-four balloons across the

western states—but only two in Alaska. Variable shifts in the wind currents steered most of the balloons that month to Washington, Oregon, Idaho, Montana, and Wyoming. But on March 13, Major Otto Geist was at the ATG office in Bethel when a Guardsman from Nunapitchuk walked in. “Allen Stone came to Bethel,” Geist wrote in his log book that night, “to report about a large balloon, black (as big as a house!), flying low between Nunachuk and Kasigluk.”¹¹ In his role as quartermaster for the ATG, Geist traveled from village to village across the western half of the territory. Few knew the area better and no one was more in tune with the scuttlebutt on the ground. Geist chartered a plane and flew with Stone and local marshal Ted McRoberts over the area. They saw nothing. Six days later two ATG men from Nunachuk—George Keene and Oscar Beaver—recovered the circular pressure-relief valve that had separated from the bottom of the envelope. Geist sent the part to Fort Richardson and recommended the men be paid fifteen dollars each for their two days of work.

Thus began a month-long odyssey where Geist, dozens of ATG servicemen, and G-2 (Army Intelligence) officials from Fort Richardson criss-crossed the territory investigating one sighting after another. The Alaskan Department (the headquarters of which was based in Seattle) identified the challenges of balloon recovery in Alaska and acknowledged the inestimable role the ATG would have to play:

Landings have been in isolated areas and transportation is at best crude. Planes are used to get as near the balloon landing site as possible; in the winter time dogteams are used, and in the summer the distance from plane to balloon will have to be covered on foot. Since there have been no military installations near the landings, we must depend on natives to help us out.¹²

The winds had clearly turned north once again, as over a six-week period in March and April 1945, no fewer than thirty balloons arrived in Alaska. The number may have exceeded fifty; many were spotted in the air but never recovered, while at other times multiple eyewitness reports may or may not have referred to a single balloon as it drifted over a large area. On March 10, Major Marvin “Muktuk” Marston, commander of the ATG in western Alaska, issued a bulletin to all detachments. “I want every company to be on the alert, to observe and report any strangers who may be in your area”—it was suspected the balloons might also be transporting enemy agents to America—“or any strange object you may encounter.” The War Department’s

strict information policy prevented Marston from being more specific. "When restrictions are off," he wrote, "I will give you the story."¹³

A sequence of telegrams between Marston, Geist, and Sergeant Frank Budaj is representative of the cryptic communication style forced upon the men. "I sent a message to you through the marshal [Ted McRoberts of Bethel]," Budaj wrote to Geist, "so keep checking with him. It may be very important."

Geist then wired Marston in Nome, "Seventy miles from Bethel found another specimen but practically destroyed by fire. If desirable I can go and bring same to Bethel before new snow fall. Please advise."

Marston's reply: "Go and get it." But moments later, after he had consulted with Fort Richardson, the ATG commander wrote back, "Hold up action until further instructions. We may want to see it in place. Do not disturb." Geist received two G-2 men in Bethel and directed them to the location of what in his daily log he called "Specimen B." Although the uncoded telegrams sent within Alaska contained this type of obscure language, Fort Richardson was able to communicate directly in secret code with the War Department in Washington, D.C., and the Western Defense Command in San Francisco, keeping both commands apprised of the ongoing investigations.¹⁴

The Alaskan Department eventually developed a secret code for radio communications:

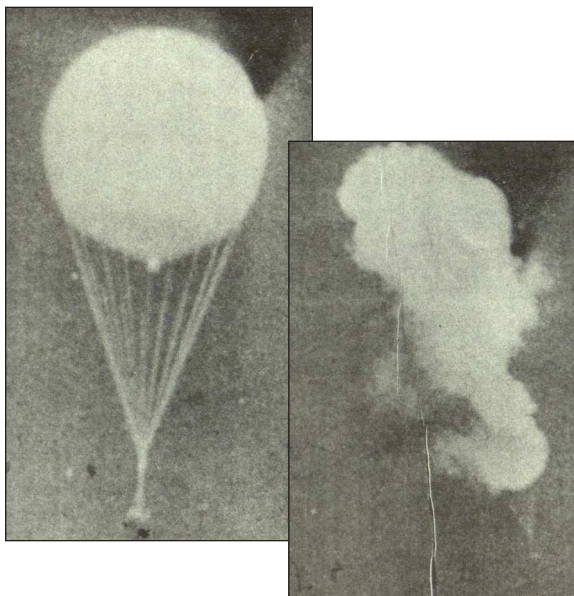
<u>Report Phrase</u>	<u>Code Word</u>
Balloon sighted	White
Balloon grounded	Yellow
Balloon drifting toward	Orange
Balloon parts located at	Gold
Investigate balloon incident at	Scarlet
Rumor of balloon grounded	Pink
Request technical experts	Red
Search the area	Green
Balloon shot down at	Brown
Explosions heard at	Black
Altitude of balloon about ____ feet	Purple

Altitude was to be expressed on a scale of 1:1,000, thus "Balloon at 10,000 feet drifting toward Nome" would be encoded as "Purple 10, Orange Nome." The code—prominently stamped "CONFIDENTIAL"—was distributed to ATG commanders, Bureau of Indian Affairs offices, Alaska Fire Control Service offices, Forest Service employees, marshals, and radio operators

around the territory. A few churches even received the code, as they housed the village radio. The wide distribution list for such sensitive information was justified on the grounds that nearly everyone in western Alaska already knew about the balloons, and without the code they might transmit radio reports in clear voice. The Alaskan Department elected not to supply the code to fishing vessels in the Gulf of Alaska, however.¹⁵

The Army Air Force Weather Division in San Francisco began compiling meteorological data for the Pacific in an attempt to trace possible flight trajectories from the confirmed landing locations in the U.S. back to Japan. It also hoped to predict where any balloons currently airborne might come down. The north by northeast shift in the high altitude winds continued as April began, and the weather office warned the Alaskan Department that more balloons could be on the way. On April 13, approximately two dozen balloons grouped together in accidental formation were detected by the Eleventh Air Force above Massacre Bay on Attu Island. Pilots of P-38s and F6F Hellcat fighters shot nine of them down. At the request of the War Department, the Attu station provided detailed information on the type and number of ammunition expended in destroying each balloon. The Eleventh Air Force also noted it intercepted numerous radio transmissions (some balloons contained meteorological instruments and radiosondes designed to send data back to Japan, which presented a unique and easily identifiable sound signature) and that its radar made contact with the balloons at a range of up to 85 miles—a startling piece of information as extensive testing by the Naval Research Laboratory two months before found the balloons were too small and contained too little reflective metal to be reliably detected by radar at any distance. The Attu incident supplied valuable real-world data for the War Department, then formulating defense plans involving dedicated radar stations and fighter squadrons to be dispatched quickly to shoot down airborne balloons.¹⁶

Some two dozen officers from every military branch and detachments across Alaska gathered at Fort Richardson on April 16-17 for an intelligence briefing and conference on balloon defense procedures. Lieutenant Colonel Robert A. Matter opened the meeting with a brief history of incidents to date, then identified “biological or chemical warfare” as the most serious threat posed by the balloon offensive. “We are charged with making a plan,” he stated, “which can be put into effect immediately, in the event the Japanese use the balloons for biological warfare.”¹⁷ Matter had attended a conference at the Western Defense Command in January, where officials developed preliminary procedures for



Gun camera photographs of a Japanese balloon in flight and then burning after being shot by an Eleventh Air Force fighter plane near Attu Island on April 13, 1945. Photographs courtesy of the National Archives and Records Administration, College Park, Maryland. (File 141, Box 783, RG 499)

specimen collection, analysis, and containment/decontamination. He now brought the same mission to Alaska.

Health officials with Army Intelligence believed any bacteriological agents present would be contained in the sand bags or the clear plastic box that sat atop the carriage and contained a small wet-cell battery and antifreeze solution. The list of possible agents, infections, and diseases was long: melioidosis, Japanese B encephalitis, Rift Valley fever, Aoki's disease (acute tularemia), anthrax, typhus, dysentery, psittacosis, variola, and many others. Livestock diseases (e.g., foot-and-mouth disease, virus pleural pneumonia) also received mention. The discovery of three dead mice under a balloon envelope in Turner, Montana (the paper showed small holes where the mice had evidently nibbled through it) was just one of many reports collected by the War Department that spring and subjected to a thorough investigation. In Alaska, personnel recovering the Holy Cross balloon in mid-January found a block of blue ice believed to have leaked from an unknown instrument on the damaged carriage. This too was sent back for laboratory analysis. "All the material which has been received in Washington to date has been negative," Lieutenant Colonel Harold T. Little, a surgeon with the Alaskan Department, told the Fort Richardson attendees. "But this may be part of the plan, and about the time we are convinced that biological warfare is not being practiced, the Japanese will put a little payload in the sand."¹⁸

The draft plan recommended by Little and adopted by the conference participants covered three phases of balloon recovery: custody, handling, and transport of specimens; laboratory testing and analysis; and information control. Personnel, especially ATG members who were most likely to be the first responders to balloon landings, were to guard the site until a two-man team (bomb disposal officer and bacteriologist) arrived to take possession of the device. Long underwear made of wool was to be worn by all responders, as the material provided the best filtration capacity of any fabric (silk and herringbone twill, fortunately not common in rural Alaska, were the least effective). The bacteriologist would place all potentially contaminated specimens into containers, which would then be sealed with paraffin, packed with dry ice, and shipped by air to Fort Richardson for forwarding on to Washington, D.C. The landing site was then to be decontaminated with a solution of either 20 percent bleach or 10 percent sodium hydroxide. All laboratory testing, according to the plan, was to be performed by expert technicians in Washington. With an emphasis on speedy diagnosis, however, the War Department authorized Fort Richardson to conduct preliminary analyses. Approved techniques included microscopic examination and inoculation of guinea pigs, white mice, and chickens with samples recovered from the balloons. Regarding information control, Lt. Col. Little stamped the plan "SECRET" (one step up from "CONFIDENTIAL") and warned against unauthorized release, which he noted might lead to "unrest or panic among the civilian populace."¹⁹ The conference closed with a short report by Major Marston on the seventy ATG divisions under his command. He issued a positive assessment of their ability to implement the plan's first response directive.

At the conclusion of the conference, Marston finally obtained approval to give his men detailed information of the ongoing attack. "Several enemy balloons have been sighted and a couple recovered in the Yukon and Kuskokwim River area," he wrote in an April 17 memorandum to every commanding officer of the ATG. Marston issued specific instructions:

If one should come your way, shoot it down; or, if it is found on the ground, post a guard and let no one go near it. Remember, it is contact with the enemy and anything might happen. All personnel in your organizations should be instructed to report dates and locations of balloon sightings and landings to you at the earliest possible time. . . . In case of fire in your area, put the fire out; also notify the nearest army post of its location and extent. This is a con-

fidential matter and if it is published it will aid the enemy.²⁰

The Tundra Army, as Marston liked to call it, had been doing these things all along anyway. The memo established two zones within the ATG for the purposes of information dissemination and incident reporting. Units located north of Unalakleet would report to Nome, while Unalakleet itself and all villages to the south were to report to Fort Richardson.

One of the more incredible balloon reports reached Marston via Archie Ferguson of Kotzebue. "You had better get up there," Marston recalled him saying. "Your men have all gone crazy." According to an account Marston kept confidential during the war but published in his memoir years later, Ferguson told him about a woman in Selawik who saw a balloon in the middle of the night from which "Little Men came down a ladder to the earth." The local ATG detachment searched the area, but found nothing. "It can easily be imagined," Marston wrote, "that she saw those long ropes and the gondola, and Little Men coming down from that balloon—after all, the Japanese are little men, and we were constantly expecting an attack." Although he vouched for the credibility of the witness, Marston also surmised the report may have reflected local folklore concerning small human-like creatures with claws who hung from the branches of willow trees and menaced wayward travelers.²¹ In any case, Army Intelligence strongly discounted the possibility that Japanese soldiers had infiltrated the country via *fusen bakudan*. The structural dynamics of each balloon—its lifting capacity, strength of its shroud lines, dimensions of the carriage, etc.—all suggested the device was incapable of carrying a human passenger for any distance. Furthermore, the likelihood of a man surviving a multi-day, transoceanic flight at altitudes upwards of 40,000 feet, where the temperature during the day is 30 degrees Celsius and at night drops to minus 50 degrees Celsius, was slim to say the least.

Recoveries continued as spring wound on and the weather improved. On April 27, an ATG unit stationed at Platinum found and chipped from the snow a balloon carriage that had obviously been on the ground for some time. That same week troops retrieved a badly smashed device near the Noatak River north of Shungnak. The first bomb in Alaska (not counting reports of explosions, including one on the Kinak River on March 18 for which no bomb fragments were ever found) was recovered eleven miles southwest of Bethel on April 29. The 4.46-kilogram incendiary bomb was of standard design—a welded steel tube, fifteen inches long and four inches across, packed with thermite and

armed with an impact fuse. The device was disarmed and sent to the Chemical Warfare Board at Edgewood Arsenal in Maryland.²²

The only fatal incident involving *fusen bakudan* occurred on a Saturday morning in early May in the sleepy logging town of Bly, Oregon. Five children on a fishing trip came across a downed balloon and were killed when one of them touched the device and its bomb detonated. Also killed was the group's chaperone, a twenty-six-year old woman pregnant with her first child. The incident convinced the War Department to relax its censorship policy and allow limited information release to the public. In Alaska, Lieutenant Colonel W. L. Coleman authorized a "word of mouth" campaign for the purpose of informing and protecting the general public. City officials, school superintendents, churches, salmon canneries, and civic organizations such as the Lions, Kiwanis, and Rotary clubs were to be informed of the balloons and the threat they posed. "Material . . . may be released to representatives of these organizations," Coleman wrote, but it "will not, repeat not, be made available for radio broadcasts, posted on bulletin boards or published." Civilians were further instructed to report all balloon sightings (but not attempt recoveries themselves) and to refrain from discussing the balloons in public places: "Every effort must be made to prevent the enemy from obtaining information as to the effectiveness of the balloons." A bulletin to Major Marston instructed him to employ ATG personnel in disseminating information in rural areas.²³

Only one incident occurred in Alaska in May. A single sandbag weighing two pounds, four ounces was found on Adak Island, no doubt once part of a balloon passing overhead and dropped in the prescribed manner. Two more recoveries followed in June, including a grounded device near Anchorage that contained three sandbags and three unexploded bombs. It would be the last recovered in Alaska during the war.²⁴ No one knew it at the time, but the Japanese had ended the *fusen bakudan* offensive in early April—before the Fort Richardson conference, the color code for secret radio communications, the word-of-mouth information campaign, and Marston's "shoot it down" directive. The three-pronged response plan devised at Fort Richardson never achieved full implementation. The territory had only one qualified bacteriologist, thus nearly every balloon recovery was performed by regular guardsmen operating without the gas masks and bleach disinfectant called for in the plan. The War Department had nationwide response plans then under development that similarly remained only on paper, such as a proposed network of radar stations along the Pacific Northwest coast. Its highest priority defense procedure—the nationwide plan against bacteriological



Major Marvin "Muktuk" Marston and his dog Panda on St. Lawrence Island during World War II. Photograph reproduced from Marston's *Men of the Tundra: Alaska Eskimos at War* (New York: October House, 1969) with permission of the Marston family.

attacks, code-named "Lightning" — was not finalized until July 20, some three months after the last balloon had been launched. By the time the U.S. had its defense strategy in place, the skies were empty and the only balloons left were those already on the ground. And although that number still posed a risk to public safety (the last balloon would not be recovered until late July in Nevada), if the belated defense measures successfully prevented civilian casualties in Alaska or anywhere else, that fact seems not to have been recorded.

Following the end of the war, a team of American scientists led by physicist and MIT president Karl T. Compton investigated the state of Japan's weapons research and were told by officials the balloon program was terminated the previous April for two reasons. First, Japan was so resource poor by that stage of the war it simply could not continue manufacturing balloons. Not only was paper in short supply, the Army also lacked the means to produce hydrogen in sufficient quantities. In particular, the bombing of the Showa Denko factory by American B-29s in March 1945 had crippled Japan's chemical production efforts. The second factor leading to the cessation of launches was that the Japanese could obtain almost no information about whether the balloons were even reaching the U.S. let alone igniting wildfires or causing any damage. Apart from a few newspaper articles following

the discovery of the very first balloons in December 1944, the War Department's information blackout successfully kept Major General Kusaba, head of the balloon program, completely in the dark. U.S. officials were shocked to learn the Japanese had launched approximately 9,000 balloons during the campaign, as only three hundred were confirmed as reaching North America. Japanese personnel also informed Compton they had no intention of ever using the balloons to transport chemical or biological agents, a claim substantiated by the Americans' postwar investigation which found no evidence of such a program.²⁵

The war over and information restrictions lifted in practice if not policy, Major Marston began noting with pride the role of the ATG in the balloon bomb defense. He named it as one of the Tundra Army's singular accomplishments, along with the repair of dozens of backcountry cabins, the blazing of hundreds of miles of new trails, construction of eighteen armories, and the search and rescue of a pilot forced to parachute from his disabled aircraft near the village of Ruby—all services performed without regular pay. In an October 1945 status report, Marston wrote, "The Tundra Army did an excellent service in observing, shooting down, and recovering Japanese balloons carrying demolition bombs and fire incendiary bombs." This service, the major noted in what amounted to a passionate appeal to the Alaskan Department to keep the ATG active, was but one part of a larger duty that had lasting positive effects for Alaska Natives.

The act of swearing them in and giving them guns built up their loyalty and made them proud to be "Uncle Sam man," as they put it. The act of making them soldiers caused them to realize their citizenship more than anything the U.S. Government has done in the past. . . . If the Army elects to take the material (guns, helmets, parkas, shoulder patches) away from the Eskimo, it will undo a lot of the good work done in causing the Eskimo to be proud of his citizenship.²⁶

Despite Marston's plea, the Army disbanded the ATG in 1947—yet its legacy as a powerful agent of change remained intact. The Guard provided a formal organizational structure that, for the first time, brought together members of every ethnic group in Alaska: Aleut, Inupiaq, Yupik, Athabaskan, Tlingit, Haida, and others. Native organizations, such as the Alaska Native Brotherhood, had existed for years, yet the ATG was the first with both a sizeable territory-wide membership and a mission that required its daily participation. Marston often called the ATG an army of 20,000, a

number that included not just the soldiers but the women in the villages who prepared the food and mended clothes, and old men and children who carried meat home from the hunt and cared for the dogs. Every ATG detachment built its own armory or *kashim* (traditional meeting place) that became the center of local activity as well as a training ground for Native leaders. The later political, economic, and social gains of Alaska Natives, in particular the land claims movement of the 1960s and the development of regional and village corporations under the Alaska Native Claims Settlement Act of 1971, can in part be traced back to the ATG and the culture of civic responsibility and self-determination it produced. John Schaeffer, Jr. of Kotzebue, whose father served in the ATG under Marston and who himself was Adjutant General of the Alaska National Guard from 1986 to 1990, believed the Natives' WWII military experience helped to restore the cultural identity that decades of contact with missionaries and paternalistic federal bureaucrats had previously eroded. "Almost all leaders in western and northern Alaska came out of the Guard, a whole generation of leadership," stated Schaeffer.²⁷

Fusen bakudan, the world's first intercontinental ballistic missile, demonstrated that any part of North America could be attacked by weapons launched from across the oceans. The villages of Arctic and western Alaska, previously among the most isolated on the continent, now found themselves positioned on the frontlines of enemy attack. Defending the territory required communication, coordination, travel, and reconnaissance activities best performed by men and women familiar with the land. That the balloons proved a tactical failure in terms of Japan's strategic objectives in no way diminished the ATG's efforts, undertaken in the moment when the true nature of the attack remained unknown and the threat was believed to be extreme. Although barely a footnote in the sweeping history of the Second World War, the Japanese balloon bomb offensive figured prominently in the narrative of the Alaska Territorial Guard, an all-volunteer force that existed less than five years but established an enduring legacy.

Notes

1. Robert A. Matter to Deputy Commander, Alaskan Department, January 16, 1945, Box 38, Japanese Balloons 1945, Records of U.S. Army Defense Commands, World War II, Record Group 499 (hereafter cited as RG 499), National Archives and Records Administration, College Park, Maryland (hereafter cited as NARA); Frank Keim e-mail to author, December 21, 2009. Keim was a schoolteacher in Marshall in the 1980s and 90s, and heard firsthand accounts of these events from Charlie Fitka and others.

2. Robert A. Matter to Deputy Commander, January 16, 1945. For a comprehensive account of the formation of the ATG and the circumstances that led to its eventual disbanding, see Charles Hendricks, "The Eskimos and the Defense of Alaska," *Pacific Historical Review* 54 (August 1985), 271-95.
3. A technical description of the balloons and complete list of incidents, including date, location, and recovered equipment, are available in Robert C. Mikesch, *Japan's World War II Balloon Bomb Attacks on North America* (Washington: Smithsonian Institution Press, 1973), 40-54, 58-61, 69-77.
4. Stephen C. Mercado, "The Japanese Army's Noborito Research Institute," *International Journal of Intelligence and Counterintelligence* 17 (2004), 287-9.
5. Nicholas D. Kristof, "Nobuo Fujita, 85, Is Dead; Only Foe to Bomb America," *New York Times*, October 3, 1997, D19.
6. Mikesch, *Japan's World War II Balloon Bomb Attacks*, 10-16.
7. John M. Lewis, "Ooishi's Observation: Viewed in the Context of Jet Stream Discovery," *Bulletin of the American Meteorological Society* 84 (March 2003), 357-69. Despite being published in both Japanese and Esperanto, the invented universal language, Ooishi's research findings went largely ignored by the western scientific community until after World War II.
8. John McPhee, "Balloons of War," *New Yorker*, January 29, 1996, 55.
9. Charles B. Hunt to Sidman Poole, April 28, 1945, Box 40, Japanese Balloons 1945, RG 499, NARA. Foraminiferal fauna is an order of marine protozoa (single-celled organisms) with perforated shells. Diatom flora is microscopic algae. Both are commonly found in beach sand.
10. P. E. Peabody, "Japanese Balloon Report," May 19, 1945, Series 2, Box 8, Army Service Forces, Intelligence Division, Topical File, 1942-45, Reports and Studies, re: Japanese Balloons, Records of Headquarters Army Service Forces, 1939-1946, Record Group 160 (hereafter cited as RG 160), NARA. The impressive work of the USGS analysts resulted in an apocryphal story that American B-29 bombers attacked the sites and ended the balloon offensive. McPhee (see note 8 above) quotes Lohman many years after the war: "Jimmy Doolittle went over and bombed [the] hell out of the place." Although B-29s did indeed destroy at least two of the factories that produced the hydrogen canisters used to inflate the balloons, these anecdotal reports of attacks on the launch sites themselves have not been confirmed. On May 25, 1945, a reconnaissance aircraft took aerial photos of the Sendai region that appeared to show five partially inflated balloons and a launch station on the beach. If the Air Force intended to bomb this location, it appears the war ended before the operation could be carried out. This researcher has found no documentary evidence that this or any of the other launch sites were destroyed. See P. E. Peabody, "Japanese Balloon Report," June 2, 1945, Series 2, Box 8, RG 160, NARA.
11. Log Book 1945, Series 16, Box 6, Folder 119, ATG Papers, Otto Geist Collection, Alaska and Polar Regions, Rasmuson Library, University of Alaska Fairbanks [hereafter cited as Geist Collection].
12. "Condensed Minutes of Alaskan Department Balloon Defense Meeting at Fort Richardson, Alaska, 16-17 April 1945," 2, Series 16, Box 17, Folder 265, Geist Collection.
13. M. R. Marston to ATG Commanders, March 10, 1945, Series 16, Box 15, Folder 248, Geist Collection.
14. Frank Budaj to Geist [undated telegram], Series 16, Box 18, Folder 287 and Geist to Marston [undated telegram] and Marston to Geist [two undated telegrams], Series 16, Box 15, Folder 244, Geist Collection; Log Book 1945; "WDC G-2 Section, Balloon Sightings and Related Incidents in Alaska & Unalaska," Box 40, Japanese Balloons 1945, RG 499, NARA.

15. Marston to Commanding Officers, April 17, 1945, Series 16, Box 17, Folder 265, and "Condensed Minutes," 26-28, Geist Collection.

16. Charles A. Carlson, "Meteorological Study in Connection with Japanese Balloons," May 20, 1945, Box 37, Japanese Balloons 1945, RG 499, NARA; William H. Hammond, "A Study of Japanese Free Balloons and Related Incidents, Western Defense Command Intelligence Study No. 1" 38-42, Series 2 and Technical Air Intelligence Center, "Japanese Balloon and Attached Devices, Report #41," May 1945, 86-93, Series 2, Box 6, and P. E. Peabody, "Japanese Balloon Report," April 28, 1945, Series 2, Samuel R. Peterson to Commanding General, Eleventh Army Air Force, April 30, 1945, and Everett M. Fazioli to Commanding General, Alaskan Department, May 3, 1945, Series 2, Box 8, RG 160, NARA.

17. "Condensed Minutes," 3, Geist Collection.

18. "Condensed Minutes," 5-9, Geist Collection; Robert S. Fleming to H. I. Cole, April 13, 1945, Series 2, Box 8, RG 160, NARA.

19. "Condensed Minutes," 3, 8-12, Geist Collection..

20. Marston to Commanding Officers, April 17, 1945, Geist Collection.

21. Muktuk Marston, *Men of the Tundra: Alaska Eskimos at War* (New York: October House, 1969), 159-61.

22. Robert A. Matter, "Annex No. 6 to G-2 Periodic Report No. 156," May 19, 1945, Series 2, Box 8, RG 160, NARA.

23. Robert A. Matter to Marvin R. Marston, May 29, 1945 and W. L. Coleman to Commanding General, Eleventh Air Force, May, 26, 1945, Series 16, Box 17, Folder 265, Geist Collection. A comprehensive account of the Bly incident is available in Lee Juillerat, "Mitchell Monument: A Place Remembered," *Journal of the Shaw Historical Library* 17 (2003), 109-16.

24. In late 1954, nine years after the end of the war, Wien Alaska pilot Don Hulshizer spotted a white object on the ground near the Sheenjek River north of Fort Yukon. Personnel from Ladd Field in Fairbanks recovered the remnants of a Japanese balloon, including an unexploded incendiary bomb. See "Bush Pilot Sights Japanese Balloon North of Ft. Yukon," *Fairbanks Daily News-Miner*, January 3, 1955, 1-2.

25. R. W. Home and Morris F. Low, "Postwar Scientific Intelligence Missions to Japan," *Isis* 84:3 (September 1993), 528-32; Mikesch, *Japan's World War II Balloon Bomb Attacks*, 38.

26. Marvin R. Marston, "Report on the Tundra Army (ATG)," October 11, 1945, 1-3, Series 16, Box 18, Folder 294, Geist Collection. Although Marston staunchly advocated Alaska Native rights and unflinchingly regarded them as equals, it must be noted his rhetoric frequently sentimentalized Natives and contained stereotypes common of the day. For example, he was given to refer to Natives as "dusky-skinned" and "simple kindly folk," terms that appear insensitive and condescending today. Chris Wooley and Mike Martz write of cultural relativism and the ATG, "In the 1940s, even the most enlightened non-Natives generally considered Eskimos to be noble, unassuming, and happy conquerors of the forest and tundra—complete masters of the natural world but unable to comprehend or cope on their own with events in the 'modern' world. With the luxury of a historical perspective, and using an anthropological approach, we can see through these stereotypes and appreciate the men and women of the ATG within the context of their unique cultures." See Wooley and Martz, "The Tundra Army: Patriots of Arctic Alaska," in *Alaska at War, 1941-1945: The Forgotten War Remembered: Papers from the Alaska at War Symposium, Anchorage, Alaska, November 11-13, 1993*, ed. Fern Chandonnet (Anchorage: Alaska at War Committee, 1995), 155.

27. Wooley and Martz, "The Tundra Army," 160; John Schaeffer, interview by Barry Zellen, July 1992 [unpublished, personal collection of the author].