

Paradise Lost

Finding Amelia

In archaeology, as in much of life, context is everything. Underwear on the bedroom floor can be a housekeeping chore or a legal issue depending upon whose underwear is on whose floor. A fossilized microbe in a rock becomes much more interesting if the rock happens to come from Mars. To know for certain whether pieces of aircraft aluminum found on a Pacific atoll are routine or startling requires more information about both the aluminum and the island.

Years of research have enabled us to assemble a fairly detailed chronicle of events on Nikumaroro, and yet the historical record does not account for the most interesting of the objects discovered there. Somehow, the people who once lived on this island acquired, and put to their own use, debris from at least two aircraft. One was an early example of the Consolidated B-24 Liberator. While the particulars are not yet documented, a plausible explanation for the presence of this material is suggested in the island's history. The other airplane seems to be Amelia Earhart's Lockheed Model 10E Special. Also found, but on a different part of the island, were the remains of a shoe which appears to match the type and size of those worn by Earhart. Although no more difficult

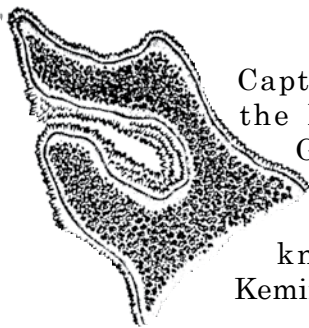
to explain than the B-24 parts, the apparent Earhart-related artifacts must be held to a higher standard of scrutiny because the implications of their presence on the atoll are historically significant.

Nikumaroro is a jigsaw puzzle, now largely complete, with some crucial pieces still missing. Attempting to explain, or explain away, the presence of objects for which there is no documented explanation requires speculation, but the trick to intelligent guessing is to guess as little as possible. That's why a thorough knowledge of context is so important. To stand the best chance of finding the hard evidence that will fill in the missing pieces of the Nikumaroro puzzle we must understand the picture we have so far.

Although there is some evidence of prehistoric human contact with the atoll, the recorded history of the jungled ring of coral which lies at 4°40' south latitude, 174°32' west longitude begins with an American whaling ship plying the waters of what was known as the South Seas Whale Fishery. It was in this region, noted for its abundance of sperm whales, that Melville would place the final confrontation between Ahab and Moby Dick.



1825



Capt. Joshua Coffin of the Nantucket whaler *Ganges* charts the position of an uninhabited coral atoll known variously as Kemin's Island and Mary Letitia's Island.

Although sadly inaccurate, this was the only map of Gardner Island publicly available at the time of the Earhart flight.

Coffin names the island after the ship's owner (and apparently

his father-in-law), U.S. Congressman Gideon Gardner.

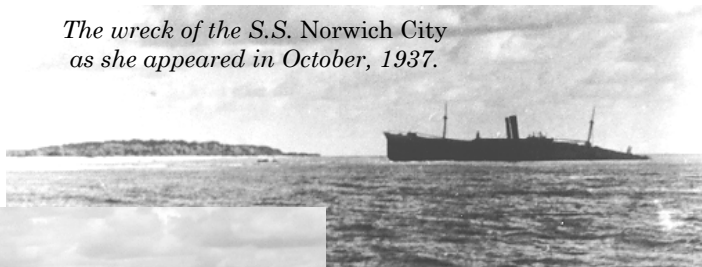
1929

Late on the stormy night of November 29, S.S. *Norwich City*, a 5,587 ton British freighter bound from Melbourne to Vancouver in ballast, runs hard aground on the reef at the island's northwest end. An SOS is immediately sent out but the ship's oil tanks have been ruptured and fire forces the crew over the side into the teeth of the storm. Eleven of the ship's thirty-five men drown trying to reach shore. The survivors are rescued five days later. The wreck becomes a prominent landmark which slowly deteriorates over the years. Its massive triple-expansion steam engine is still visible today.

1840

On August 19 the U.S.S. *Vincennes* of the U.S. Navy Exploring Expedition confirms the island's position and name. In the first, but by no means the last, erroneous assumption about the island by the U.S. Navy, Commander Wilkes noted, "Believing this to be the island discovered by Captain Gardner, I have retained his name."

The wreck of the S.S. Norwich City as she appeared in October, 1937.



E. R. Bevington



The wreck of the S.S. Norwich City as she appeared in October, 1991.

TIGHAR photo by P. Thrasher

1856

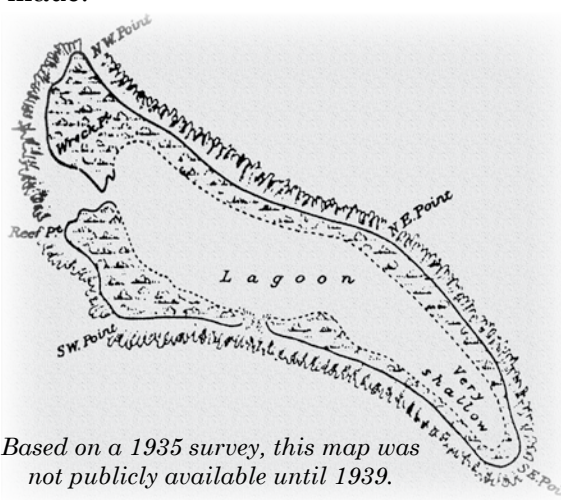
The island is claimed by C.A. Williams & Co. of New London, Connecticut under the American Guano Act but no worthwhile guano deposits are found. All claims are relinquished in 1882.

1935

On August 18 H.M.S. *Wellington* calls at the island and collects information from which the first (somewhat) accurate map of the shoreline is made.

1892

On May 28 H.M.S. *Curacao* calls at Gardner Island to claim the island formally for Great Britain. Twenty Niue islanders are there planting coconuts under a British license granted (somewhat prematurely) to entrepreneur John T. Arundel. Drought forces the abandonment of the project sometime before 1894.



Based on a 1935 survey, this map was not publicly available until 1939.

1937

On February 15, in response to new American claims of ownership to islands of the Phoenix Group, H.M.S. *Leith* calls at the atoll for just long enough to send a party ashore to erect a flagpole and placard proclaiming British ownership. This renewed interest in Central Pacific atolls is prompted by the emerging prospect of trans-Pacific commercial air travel and the need for suitable refueling locations.

On July 2, Amelia Earhart and Fred Noonan disappear aboard Lockheed NR16020. When last heard, they are near (but unable to find) Howland Island 350 nm to the northwest. Earhart says she is proceeding along a 157°/337° navigational line, but does not specify in which direction. Gardner Island lies very close to the 157° line and is within the aircraft's hypothetical fuel range.

During the nights of July 3 and 4, bearings are taken by Pan American stations at Oahu, Midway and Wake, on radio calls suspected of originating from the lost airplane. The majority of the bearings cross in the vicinity of Gardner Island. Experts at Lockheed assert that the signals indicate that the airplane must be on land and able to operate its right-hand, generator-equipped engine. The battleship U.S.S. *Colorado* is dispatched to search the islands of the region.

On July 9, three Vought O3U-3 floatplanes launched from the *Colorado* fly over Gardner Island searching for the lost Lockheed. No airplane is seen but the Senior Aviator later reports that "signs of recent habitation were clearly visible but repeated circling and zooming failed to elicit any answering wave from possible inhabitants and it was finally taken for



One of the three aircraft which flew over Gardner Island on the morning of July 9, 1937 searching for the Earhart plane. Courtesy U.S. National Archives.

granted that none were there." (The last documented habitation of the island was the brief stay by Arundel's coconut planters in

July 9, 1937. "Here, signs of recent habitation were clearly evident..." Photo courtesy Nat'l Archive of New Zealand.

1892.) The earliest known aerial photo of the island is taken from one of the Navy search planes.

On October 13-15, a party of 19 Gilbertese delegates led by Gilbert & Ellice Islands Colony Lands Commissioner Henry E. (Harry) Maude, assisted by Cadet Officer Eric R. Bevington, perform a cursory inspection of the atoll to evaluate it for future colonization by settlers from the overcrowded Gilbert Islands. Prominent among the Gilbertese



October 14, 1937. "In the afternoon we got a canoe and Maude came in it. ...We found many interesting things including signs of previous habitation." Diary of British Colonial Service Officer Eric Bevington. Photo by E.R. Bevington

delegates are Tem (Mr.) Mautake Maeke, Permanent Head of Delegates; Teng Koata, Magistrate of Onotoa; and Assistant Native Medical Practitioner Tutu. Severe back pain limits Maude's activities but Bevington makes a difficult all-day trek around the atoll with some of the Gilbertese. His diary describes coming upon "signs of previous habitation" which he later described as "looking like someone had bivouacked for the night." Although only 111 of Arundel's coconut trees had survived, the island's lush environment was judged suitable for future colonization. Because of the atoll's unusual abundance of Buka trees (*Pisonia grandis*) the Gilbertese name the island Nikumaroro after the legendary home of the goddess/ancestor Nei (Miss) Manganibuka who was said to have come from a beautiful island covered with Buka trees which lay southeast of the Gilberts.

1938

On December 1 a party of six New Zealanders arrives to begin an evaluation of the island as part of the British Pacific Islands Survey Expedition. Their purpose is to determine whether the lagoon is suitable for seaplane landings and to assess the practicality of constructing an airfield on the atoll. At least two aerial photographs



December 1, 1938. Photo taken from Supermarine Walrus launched from HMS Leander. Photo courtesy Nat'l Archive of New Zealand.

of Gardner Island are taken from a Supermarine Walrus aircraft launched from the cruiser H.M.S Leander. The survey team focuses on taking soundings in the lagoon and mapping the island's northwestern tip, the only land area big enough for a runway.

On December 20 Lands Commissioner Harry Maude returns aboard the Royal Colony Ship (RCS) *Nimanoa*, this time assisted by Cadet Officer Gerald Gallagher, to drop off the first colonists of the Phoenix Island Settlement Scheme (with the unfortunate acronym P.I.S.S.). Although the New Zealand survey party is on the island at this time, their presence is unrelated to the arrival of the first settlers. The Gilbertese work party, made up of six men from Onotoa and four from Arorae (both islands in the southern Gilberts), is put ashore to begin clearing land for the establishment of a village and coconut plantation. Maude is disappointed to see that a severe drought has turned the lush paradise he had seen in 1937 into a parched and hostile landscape.

On December 22 Maude and Gallagher depart to deposit other settlers on Hull and Sydney Islands to the east. Jack Kima Pedro, a half-Portuguese/half-Tokelau construction foreman, is left with the work party to operate two condensing plants for the distillation of drinking water.

1939

On January 2, Maude and Gallagher return to Gardner to find the work party greatly distressed because well-digging attempts have failed to find drinkable water and one of the condensing units has burned out. Maude puts Mautake, Koata and Tutu ashore to help with the search for water.



January 2, 1939. "...I decided to land all the headquarters staff, including Native Medical Practitioner Tutu, to assist in the search for water." Report by Native Lands Commissioner Maude. Left to right, NMP Tutu, Head of Delegates Mautake Maeke, Native Magistrate Koata. Photo by E.R. Bevington.

On January 4, with no water yet found at Gardner, Maude and Gallagher once again depart to check on progress at the other islands, leaving the Gilbertese officials behind to help the ten-man work party in the desperate and wide-ranging search. Their trek later becomes part of the island's folklore, as does another story. Sometime in these early days (possibly during the great search for water) the workers are said to have come upon the bones of a woman and a man. They could tell that they were white people from the remnants of their clothing and from their shoes. No one knows what became of the bones but the area where tradition holds that they were found is the same region where Bevington noted "signs of previous habitation" a year and a half earlier

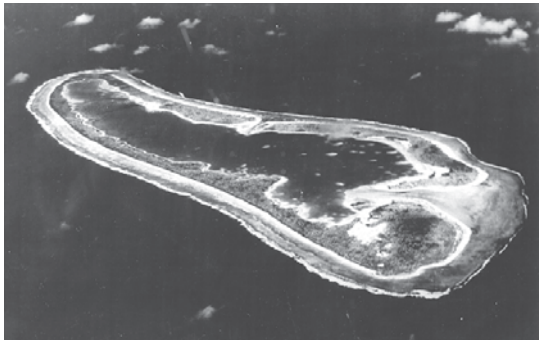
The week following Maude's departure is marked by unusually high westerly ocean swells. Water levels measuring four feet above the already high spring tides pummel the island's west-facing shorelines and may have overwashed some portions of the atoll.

Late in the month (the exact date is not certain) Maude checks in at Gardner on his way back to Tarawa in the Gilberts. "A fair supply of well water" has at last been found and the Gilbertese officials rejoin RCS *Nimanoa* for the trip home. The original ten-man work party, however, is

not happy. Five of the men consider the newly found well-water undrinkable and all are ready to abandon the project. Maude only succeeds in convincing them to stay on by promising to return soon with their wives.

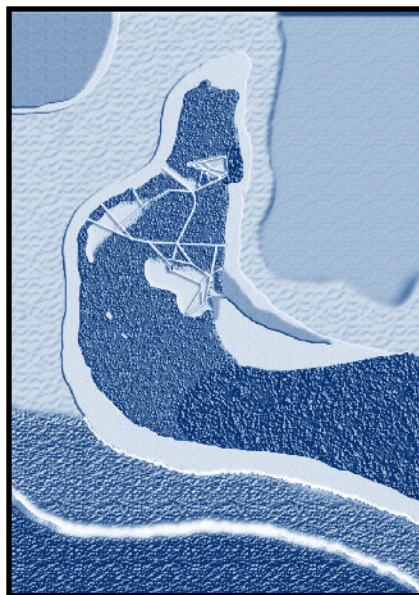
On February 5 the New Zealand survey party departs having determined that the atoll is not a desirable base for aircraft operations.

On April 28 Maude returns with twelve new settlers for Gardner including the wives of the workers. He also brings materials for the construction of a 10,000 gallon cistern (which still stands). By this time rains have returned the island to its former bountiful appearance.



April 30, 1939. Photo looking north to south taken by a U.S. Navy aircraft from U.S.S. *Pelican*. Absence of vegetation just east of the southern lagoon passage may indicate recent overwash. Tradition holds that bones were found near this area. Courtesy U.S. National Archives.

On April 30 a floatplane (probably a Grumman J2F Duck) is launched from the seaplane tender



Village as of April 30, 1939.

U.S.S. *Pelican* to take a mosaic of aerial mapping photos as part of a U.S. Navy survey of the Phoenix Islands.

On June 17 additional settlers arrive bringing the new colony's population to a total of 58 (16 men, 16 women, 11 boys and 15 girls).

During this period the island's government is headed by Teng Koata who acts as supervisor and magistrate. Around this time, according to legend, his wife has an encounter with the goddess Manganibuka on a remote part of the island.

On November 28 the U.S.S. *Bushnell* arrives to begin an American survey of the atoll. The island's shoreline is established by sighting from eight "primary stations" (which include three eighty-foot steel towers erected along the northern shore) and fourteen "secondary stations." Extensive soundings are taken in the lagoon and surrounding ocean. Magnetic and tidal observations are also made. A population of eighty colonists is reported as living in "about twenty grass houses."

On December 5 the *Bushnell's* survey is completed and the ship departs.

1940

In late September, Gerald Gallagher, promoted to Acting Officer In Charge of the Phoenix Island Settlement Scheme, moves his headquarters from Sydney Island to Gardner. Gallagher, known to the Gilbertese as "Karaka" and to his fellow officers as "Irish," is the island's first and only resident European magistrate.



Photo by E.R. Bevington

"Irish."

In December, Gallagher reports "severe and almost continuous north-westerly gales" which cause considerable damage to the village and alter the course of the southern lagoon passage.



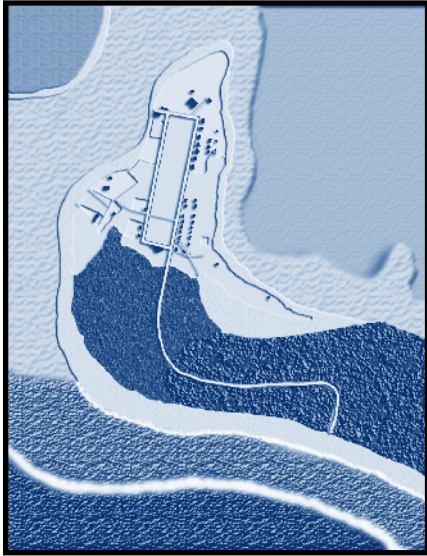
November 18, 1940. "[The Government Rest House], although smaller, is modelled after the Native Lands Commissioner's house on Beru (Gilbert Islands)." Report by Gerald B. Gallagher, Officer-in-Charge, P.I.S.S.

TIGHAR Collection

1941

In May, Gallagher goes to Fiji (headquarters of the British Western Pacific High Commission) on leave.

On June 20 at least four PBY flying boats of U.S. Navy Patrol Squadron 22 visit the island as part of a "Reconnaissance of Pacific Islands



Village as of June 20, 1941

of the Phoenix Islands." Nine aerial photographs are taken and at least one of the aircraft lands in the lagoon and calls at the village which is reported to be "inhabited by 30 natives presided over by a native magistrate and policed by

On September 24 Gallagher returns from Fiji aboard the S.S. *Viti* but has become seriously ill enroute. He dies three days later and is buried in the center of the Government Station area of the settlement. No replacement officer is appointed. Teng Koata retires and returns to Tarawa. His position as head man is taken by Teng Iokina.



Gallagher's grave, February 4, 1996.

TIGHAR photo by John Clauss.

1942

On November 30 Colonial Service Officer D.C.I. Wernham visits the island and finds the coconut plantings healthy, with one tree approaching bearing age. The island is outside the active war zone and no contact with Japanese forces is known to have occurred.

1943

On April 23 District Officer R. M. Major visits the island and finds the trees healthy and the population "not discontented."

On November 17 the District Officer returns aboard a U.S. Coast Guard flying boat with a survey party to select a site for the construction of a Loran navigation station. The island's southeastern tip is chosen. The population at this time is officially listed as 57.



November 17, 1943. U.S. Coast Guard PBV 189 is met by canoes from the village. Photo by Jack Shea

1944

On July 24 U.S. Coast Guard Construction Detachment D (Unit 211) arrive aboard USCG *Balsam* to begin construction of the Loran facility.

On August 17-18 a British officer, Lt. Col. Huggins, finds that little progress has been made by the colony since Gallagher's death.

On September 29 the Gardner Loran goes on the air. The station is staffed by 25 men as USCG Unit 92. The commanding officer, Ensign Charles Sopko, restricts his men to the immediate area around the station and limits their contact with the colonists to prevent "fraternization."

Sometime in late 1944 or early 1945, PBV pilot Lt. (jg) John Mims sees the Gilbertese settlers using an aircraft control cable as a heavy-duty fishing line leader. Asked about its origin, one of the Gilbertese replies that, "When our people first arrived a few years ago there was an airplane here."

September 24, 1944. The U.S. Coast Guard Loran station at the island's southeastern tip. Photo courtesy Charles Sopko.



1945

On January 25 Lt. Col. Huggins returns and instructs the settlers to devote more time to planting and less to village maintenance.

Sometime in “the late war years” a large four-engined aircraft is reported to have crashed on Sydney Island two hundred miles to the east. Details are not clear, but supposedly the bodies of the crew were recovered and the wreck abandoned to be salvaged for useful metal by the local settlers. This is probably the source of a few B-24 parts which later turned up on Gardner. During the time that the USCG Loran station was at Gardner, PBYS delivered mail and perishable supplies. Records still exist for all of those flights. On no occasion was an aircraft reported lost or even damaged at Gardner Island.

In December the Loran station is de-activated and abandoned.

1946

In March a Coast Guard work crew disassembles and secures the station’s Loran gear in the quonset huts formerly used as living quarters. Floyd Kilts, a Chief Carpenter’s Mate involved in this work, later (in 1960) tells a San Diego newspaper reporter that one of the Gilbertese told him of “the skeleton of a woman with American shoes and the skull of a man” found by the island’s first settlers in 1938.

1947

In June a new supervisor-magistrate, Aram Tamia, is appointed to try to speed up development of the colony which is deemed to have stagnated during the war years. As a youth Aram Tamia had served as Gallagher’s personal assistant. A visit by Chief Lands Commissioner B.C. Cartland and District Officer McKenzie finds the situation “even less satisfactory than had been thought.”

1948

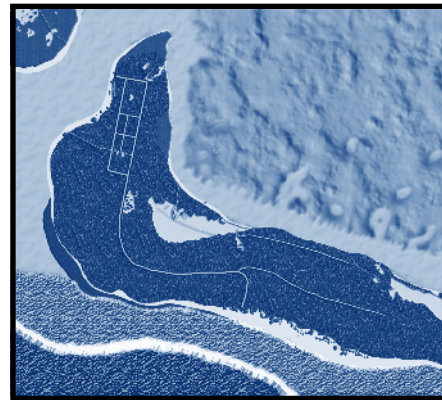
Further official visits during the year confirmed a need for a re-organization of the colony.

1949

On January 2 Lands Commissioner Paul B. Laxton arrives to give the settlers a choice between repatriation to the Gilbert Islands or committing to further development of the atoll under a system of land grants and leaseholdings. Six families elect to leave, three of whom were among the first colonists, but the remainder stay on. The village is moved to the site “originally selected by Mr. Gallagher, freeing the main area of developed trees for a leasehold party selected from Manra (Sydney Island).” These Sydney residents may have brought with them a few useful pieces of aluminum salvaged from the wartime crash on that island.

1953

A new aerial photo survey of the island shows the enlarged settlement. During this period the island reached its maximum population of nearly 100 people.



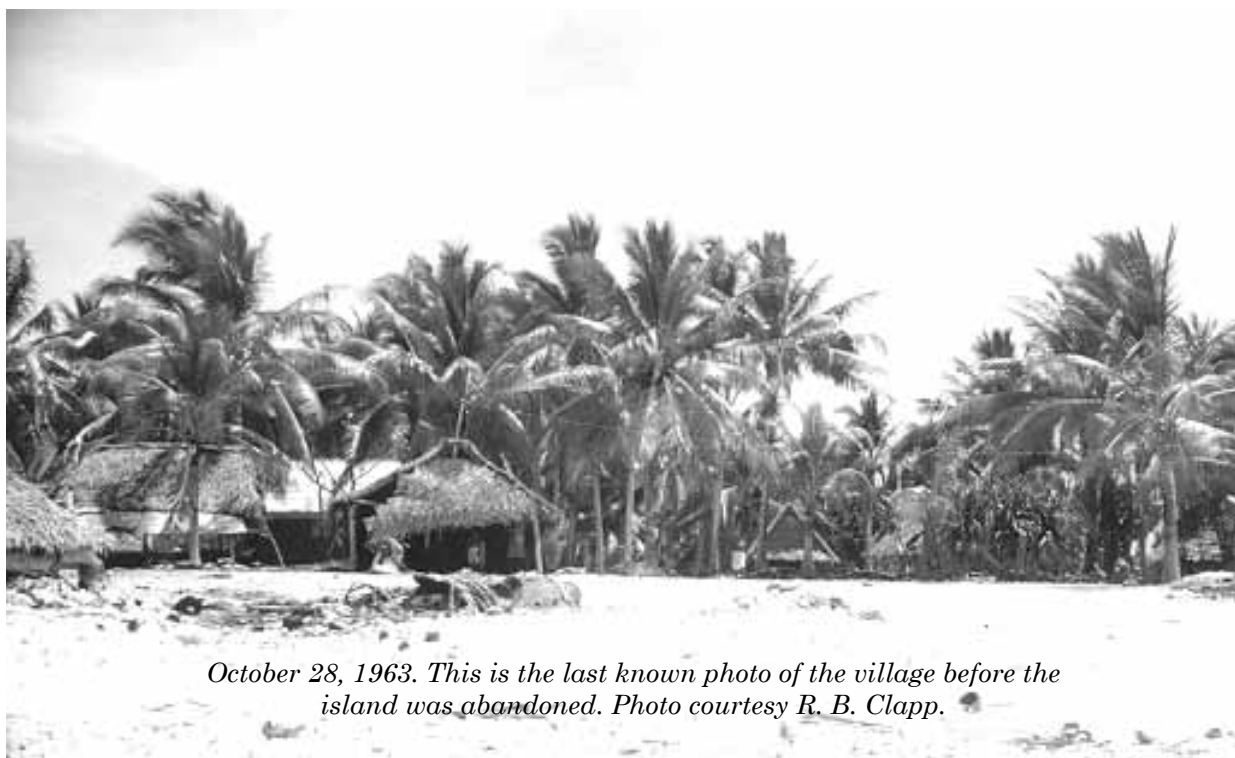
*Village as of
April 2, 1953*

1963

Yet another severe drought damages the coconut plantations and prompts a British decision to abandon the colony. A channel is blasted through the reef at the island’s west end to facilitate the evacuation and the process of resettling the island’s residents 2,000 miles to the island of Vaghena in the Solomons is begun.

1964

A scientific party from the Smithsonian Institution visits the atoll to study the bird and plant life. Only a few residents remain to be moved.



October 28, 1963. This is the last known photo of the village before the island was abandoned. Photo courtesy R. B. Clapp.

1975

Smithsonian naturalists return, this time aboard a U.S. Air Force helicopter. It is believed that the now completely abandoned island was under consideration as a possible test site for biological weapons. Fortunately, that never happened.

1978

On October 24-27 a party of geologists employed by Geomarex Corp. surveys the lagoon for exploitable minerals. None are found.

1979

Gardner Island becomes part of the new Republic of Kiribati and is officially renamed Nikumaroro.

1989

From September 17 to October 6, TIGHAR's Niku I expedition ranges far and wide over the island hoping to find the Earhart aircraft in the underbrush. Scuba divers scout the edge of the fringing reef on the chance that the Electra rests somewhere on the first shallow shelves of coral. In the last days of the expedition, exhausted, disappointed and empty-handed, the team puts aside dreams of dramatic success and contents

itself with whatever scraps the abandoned village might offer. Of the nineteen village artifacts deemed worthy of collection, only one—Artifact 2-18, the dado (see page 13)—ultimately emerges from the analytical process as a probable relic of the Lockheed.



1991

From October 10 to 19 TIGHAR's Niku II expedition team targets specific areas on the island while the ship conducts a side-scan sonar search of the deep water off the reef. As in 1989, the underwater search is fruitless while, on-shore, the search for a possible campsite seen on

the atoll's remote northeastern arm by Coast Guardsmen in 1944 is also negative. The excavation of a suspicious grave near Bauareke Passage on the south coast produces the bones of an infant, not Amelia Earhart, but coincidentally encounters shoe fragments and



other interesting objects nearby. Again, in the last days of the expedition, an inspection of the abandoned village turns up aircraft debris, including a torn section of aluminum skin. Research would eventually show that the artifact could be part of a unique repair patch known to have been installed on the Earhart aircraft in May 1937.

1995

Interviews with former residents of Nikumaroro now living in the Solomon Islands corroborate the story that bones were found by the first work party in 1938/39. No one knew a story about an airplane having been on the island.

1996

From February 2 to 5 TIGHAR's Niku III Preliminary expedition tries again to locate the campsite on the northeastern shore, this time guided by early aerial photos which have been digitized and enhanced to reveal the presence of metal debris. Hopes that the campsite is that of Earhart and Noonan are dashed when the debris is at last located but proves to be comprised of objects from the Gilbertese settlement two miles away. For a third time, the apparently defeated expedition ends with a walk through the abandoned village, and once again, aircraft parts are found. This time the recovered artifacts include a fragment of Plexiglas which subsequent analysis shows is probably from Lockheed Part Number 40552, the cabin window of an Electra (see page 21).

