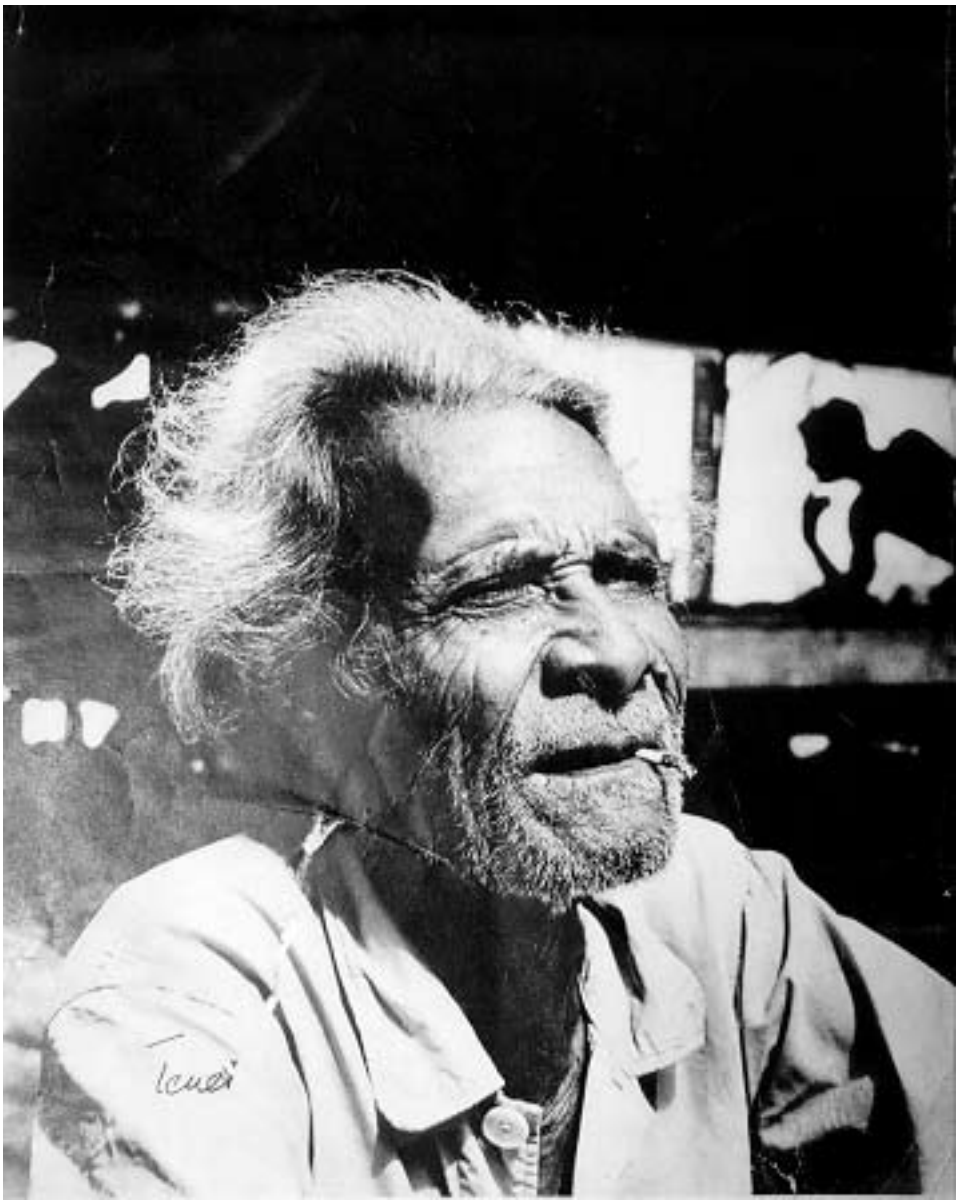
TIGHAR TRACKS

THE JOURNAL OF THE INTERNATIONAL GROUP FOR HISTORIC AIRCRAFT RECOVERY



1999

Volume 15

. . . that they might escape the teeth of time and the hands of mistaken zeal.

– John Aubrey
Stonehenge Manuscripts
1660

About TIGHAR

TIGHAR (pronounced "tiger") is the acronym for The International Group for Historic Aircraft Recovery, a non-profit foundation dedicated to promoting responsible aviation archeology and historic preservation. TIGHAR's activities include:

- Compiling and verifying reports of rare and historic aircraft surviving in remote areas.
- Conducting investigations and recovery expeditions in co-operation with museums and collections worldwide.
- Serving as a voice for integrity, responsiblity, and professionalism in the field of aviation historic preservation.

TIGHAR maintains no collection of its own, nor does it engage in the restoration or buying and selling of artifacts. The foundation devotes its resources to the saving of endangered historic aircraft wherever they may be found, and to the education of the international public in the need to preserve the relics of the history of flight.

TIGHAR Tracks, published four times each year, is the official publication of The International Group for Historic Aircraft Recovery. A subscription to *TIGHAR Tracks* is included as part of membership in the foundation (minimum donation $45.00 per year). The editors welcome contributions of written material and artwork. Materials should be addressed to: Editors, *TIGHAR Tracks*, 2812 Fawkes Drive, Wilmington, DE 19808 USA; telephone (302) 994-4410, fax (302) 994-7945; Email TIGHAR@AOL.com. Photographs and artwork will be returned on request.

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On the Cover

This is Temou Samuela, the carpenter on Nikumaroro in 1940. He built the box that held the bones and, according to his daughter, knew about the wrecked airplane on the reef. See "The Carpenter's Daughter, page 25.

Visit us on the Web

http://www.tighar.org

Board of Directors

Problems and Progress

The last year of the 20th century was an intense and difficult, but ultimately very productive year for TIGHAR.

Two Expeditions

For the first time we ran two simultaneous expeditions to the Pacific: a reconnaissance for the Niku IIII expedition which we called Niku IIIIP (for Preliminary), and a search in Fiji for the bones brought there in 1941, creatively termed The Fiji Bone Search. Although Niku IIIIP found no new Earhart-related artifacts on Nikumaroro and the Fiji Bone Search failed to turn up the bones, the summer's field work did succeed in uncovering an abundance of new and unexpected information which may prove to be the key to finding conclusive physical evidence. This issue of *TIGHAR Tracks* tells the story of what we learned.

Video Delayed

Our biggest disappointment this year was the loss of most the videotape that was shot during the summer's expedition to Nikumaroro. En route back to the U.S. from Fiji some of the baggage was left behind by the airline to lighten the aircraft for takeoff due to unfavorable runway conditions. When the baggage finally caught up with us a week later, the videotapes were missing. We've made every effort to recover them but to no avail. We'll still make the promised video of Nikumaroro—we have lots of other footage to work from—but production will be delayed somewhat. We appreciate your patience.

One Big TIGHAR Tracks

The constraints of time and the lack of a sponsor for production costs prevented us from publishing *TIGHAR Tracks* on schedule, and for that we are truly sorry. This single large issue covers the entire year. We're hoping to return to a more regular publication schedule in 2000, and we're still looking for a sponsor.

Membership

Although many new members joined TIGHAR during 1999, primarily through the TIGHAR website and Earhart Forum, an almost equal number of members who are not on line decided not to renew their membership, doubtless because of our failure to stay in touch with them. We recognize the problem and intend to correct it. The ease, speed and economy of communication afforded by the internet and email does not absolve us of our responsibility to serve that portion of our membership which does not yet have, or perhaps does not want, that capability. Members who dropped out during 1999 are receiving this issue of *TIGHAR Tracks*, and we hope that, if you let your membership lapse, you will consider rejoining. You can even have your old membership number back.

(cont.)

Voyage of Discovery

TIGHAR's multi-disciplinary educational program built around the Earhart Project is still in search of funding. Grant proposals to two large federal programs in 1999 were unsuccessful but we're convinced of the program's merit and are determined to find sponsorship for it.

WWW.TIGHAR.ORG

The TIGHAR internet website, instituted in November 1996 with about 50 visitors per week, now hosts an average of well over 1500 visitors per day. Periodic research bulletins report the latest findings and the Document of the Week series makes available rare primary source information. There are photos and maps, articles from *TIGHAR Tracks*, and even film of Earhart's last takeoff. New features are being added weekly.

"Love to Mother"

That unlikely phrase, often abbreviated "LTM," has become the traditional tag line of The Earhart Search Forum. TIGHAR's online research group has grown to more than 600 email subscribers and generates between a dozen and two dozen messages every day. The quality of postings is very high and the Forum has proven itself to be a powerful research tool.

The 8th Edition

TIGHAR's Earhart investigation status report, officially entitled "The Earhart Project, An Historical Investigation" and often referred to as simply "the Project Book," was last published as a 7th Edition in May 1993. During 1999 seven TIGHAR author/researchers prepared detailed reports in their various areas of expertise for the greatly expanded 8th Edition. Now in the editing and lay-out phase, this massive work is slated for publication in the spring of 2000.

PPPPPP

We start the new century with a new understanding of one of the old century's most perplexing riddles, and with a stronger-than-ever organization with which to find the final pieces of the puzzle. And you, the members of TIGHAR, have made it possible. We thank you.

OBJECTIVES

The expedition's first mission was to determine whether the anecdotal accounts gathered in Funafuti at the end of Niku III in 1997 might lead directly to discovery of the main body of wreckage and, thus, permit the Niku IIII expedition to be organized as an archaeological recovery operation. Recognizing that the identification of conclusive Earhart wreckage would, by definition, put those artifacts at risk, this purpose of the expedition was not widely publicized. No such wreckage was found on this trip, so the point is now moot. The secondary mission of the expedition was as a preparatory operation to gather information for Niku IIII, an intensive search operation now scheduled for 2001. The specific objectives of the expedition were:

1. Test the hypothesis that airplane parts could be found in the dense beachfront vegetation of Nutiran district near a "European-style house," per an anecdotal account by Tapania Taiki who was interviewed by TIGHAR on Funafuti in 1997 (see *TIGHAR Tracks* Vol. 13, No.1 "I Saw Pieces of an Airplane...", p. 9). Ms. Taiki lived on Nikumaroro as a young teenager with her family in the late 1950s/early 1960s just before the settlement was abandoned.
2. Conduct a reconnaissance of the beachfront areas on the lagoon shore where Pulekai Songivalu, interviewed by TIGHAR on Funafuti in 1997, said he saw airplane wreckage when he served as the island's schoolmaster during the late 1950s/early 1960s. Mr. Songivalu is Ms. Taiki's father.
3. Conduct a reconnaissance of Kanawa Point, one of three geographical locations identified by TIGHAR researchers as possibly fitting the description of where a castaway's remains and campsite were discovered by Gerald B. Gallagher, Officer-in-Charge, Phoenix Islands Settlement Scheme, in September 1940.
4. Familiarize the project's forensic anthropologist, Dr. Karen Ramey Burns, with

the site where shoe parts were found during Niku II in 1991 (known as the "Aukeraime Site") and conduct a further investigation of the site with the aid of remote-sensing data gathered during Niku III in 1997. The Aukeraime Site is the second candidate for where the bones were found in 1940.

5. Familiarize Dr. Burns with the site near the southeast end of the island where village-related artifacts were found during Niku IIIP in 1996. This is the third location suspected of being where Gallagher's discovery took place.

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TEAM

The team assembled to conduct these operations consisted of:

Richard Gillespie	TIGHAR Executive Director	Project Director.
Karen Ramey Burns, Ph.D.	TIGHAR #2071E	Forensic anthropologist.
John Clauss	TIGHAR #0142CE	Veteran of Niku I, II, IIIP, III, and the Kanton Mission.
Veryl Fenlason	TIGHAR #0053CE	Veteran of Niku I, II, IIIP, and III.
Richard "Skeet" Gifford	TIGHAR #0001CEB	Member of TIGHAR's Board of Directors and project sponsor.
Van Hunn	TIGHAR #1459CE	Veteran of Niku III.
Jerry Ann Jurenka	TIGHAR #0772E	TIGHAR member and project sponsor.
Chris Kennedy	TIGHAR #2068E	TIGHAR member and project sponsor.
Russ Matthews	TIGHAR #0509CE	Veteran of Niku I, II, IIIP, and the Kanton Mission.
Gary Quigg	TIGHAR #1025CE	Veteran of Niku III.
Richard Reynolds	TIGHAR #0981CEB	Member of TIGHAR's Board of Directors, veteran of the Kanton Mission, and project sponsor.
Ronald Rich	TIGHAR #2267E	TIGHAR member and project sponsor.

Accompanying the expedition as an official representative of the Republic of Kiribati was Senior Examining Officer, Kiribati Customs, Manikaa Teuatabo. Mr. Teuatabo also accompanied the Niku II and Niku IIIP expeditions.

Standing, from left: Kar Burns, Russ Matthews, Ron Rich, Skeet Gifford, Jerry Jurenka, Veryl Fenlason. Kneeling: Gary Quigg, Ric Gillespie, Chris Kennedy, John Clauss, Van Hunn. Not pictured: Dick Reynolds, Manikaa Teuatabo. TIGHAR photo by R. Gillespie.
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COST

The direct cost to TIGHAR for the Niku IIIIP expedition was:

Airfare*	$5,785
Ship Charter	$99,492
Kiribati representative	$1,904
Equipment and incidentals	$2,500
Total	**$109,681**

*several team members paid their own airfare

The cost of the Fiji Bone Search was:

Airfare*	$1,982
Accommodations	$1,300
Meals and incidentals	$2,849
Car rental	$1,351
Total	**$7,482**

*one team member paid her own airfare

In addition to these direct expenses, TIGHAR's operating expenses during the period of preparation and execution of the expeditions (February through July, 1999) were roughly $90,000.

Grand Total $207,523

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OPERATIONS

July 1-3. Team flies to Fiji and boards expedition vessel *Nai'a* at port of Lautoka. One large bag of expedition gear (with essentials such as metal detectors and laptop computer) is missing and it takes two days to track it down and get it to Fiji. When the bag finally arrives the screen of the laptop has been cracked in transit, but the computer is still usable.

Nai'a *sets course for Nikumaroro.*

Photo courtesy J. Clauss.

July 5. *Nai'a* departs Fiji. Once clear of Fijian waters, seas become quite high (approximately seven meters) with head winds and conflicting currents slowing progress at times to a little as 6 knots. Structural problems with the mast prevent the use of the sail with consequent loss of its stabilizing and fuel saving effect.

July 6–10. Continued high seas make for an unpleasant passage. No one can go out on the exposed decks, the galley is limited in what foods can be prepared and served, spills and breakage are commonplace, and just moving about requires constant vigilance. Most of the team is seasick to at least some degree and a few are truly miserable.

Photo courtesy J. Clauss.

A rough ride to Niku brought back memories of the storms of 1997.

July 11. Having arrived at Nikumaroro just before dark the previous evening, the team goes ashore at 07:45 and spends the day surveying and building a trail from the landing to the shore of the lagoon passage where a skiff, walked in over the reef at high tide, will be based to ferry the team over to Nutiran. Seas in the lee of the island are relatively calm—a welcome relief. However, tropical downpours during the day make the heavy work of clearing the trail through the jungle a soggy endeavor. It is also discovered that the ship's water maker, which had been unusable during the voyage out due to the extreme rolling, is not working. Without the ability to make fresh water the expedition must depend entirely upon the tanks of water aboard the ship. This supply should be adequate if carefully

Photo courtesy J. Clauss.

Heavy rain squalls and a wet welcome back to Nikumaroro.
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conserved, but luxuries such as laundry are out of the question.

July 12. In the morning a base camp is established on the Nutiran shore and base lines are "shot in" with the pulse laser from known features on the village shore to permit accurate mapping of the search area. More heavy rain slows the work. In the afternoon, the team begins the process of setting out grid lines 20 meters square in the sector where aerial photography indicates there was once a structure which may be the "European style house." Nearby, the 1953 photo also shows a cruciform feature in the beachfront vegetation which looks alarmingly similar to an aircraft. Hopes are high for a significant discovery but the day's searching yields no sign of a European style house (a structure built of wood frame and boards rather than local materials), let alone an airplane. A grave about four feet in length is found not far from the beachfront. Like the grave excavated on Aukeraime in 1991 and found to be that of an infant, this burial seems to be anomalous in the context of the island settlement and fits folklore about bones said to have been found and buried on Nutiran by the early settlers.

July 13. Further gridding and searching reveal a scattering of cultural material (nails, wire, cans, etc.) indicating that a structure of some kind once stood on the spot where the putative European style house is seen in the 1953 aerial photo, but the absence of boards or framing suggests that the structure was made from local materials. An area around the grave is cleared and, after consultation with Dr. Burns, the decision is made to seek permission from the Kiribati representative to excavate the grave.

Photo courtesy J. Clauss.

Looking for the "European style house." L to R, Ron Rich, Veryl Fenlason, Van Hunn, Jerry Ann Jurenka, Ric Gillespie.

July 14. After a discussion at the grave site with Senior Examining Officer Manikaa Teuatabo, permission to excavate is granted and digging begins. Meanwhile, a detailed search of the area where the cruciform object appears in the photo finds only vegetation and what may be a broken oarlock—possibly from one of the lifeboats from the SS *Norwich City*. Two divers, Van Hunn and Jerry Jurenka, inspect the lagoon passage and inshore reef area at high tide for any anomalous material. The results are negative. Search operations are extended northward along the Nutiran shore in the hope of finding something that better fits the description of a European style house.

Late in the day, Chris Kennedy comes upon boards and sheets of corrugated metal. Further investigation reveals the ruins of a structure incorporating wood framing and boards. There are pipes and a faucet. It seems quite likely that this was a European style house but it does not seem to be present in the 1953 aerial photos. Plant-ings of coconut and pandanus just inland from this location support the possibility that this structure is a relic of development in the later days of the settlement. That would conform to Ms. Taiki's time on the island in the late 1950s. Among the debris where the house once stood is a small (1.5 inch by 5 inch) piece of aluminum aircraft skin which had been cut through rivet holes along one long edge. The presence of zinc chromate corrosion inhibitor

TIGHAR photo by R. Gillespie.

The site of the "European style house".

would appear to disqualify it as being from Earhart's aircraft.

July 15. On doctor's orders, one team member with a foot infection remains aboard ship and is on antibiotics. Ashore, while Dr. Burns and two assistants, Quigg and Gifford, proceed with the grave excavation, the rest of the team begins to lay out grids and search the area southward from the newly identified European house. Heavy iron debris from the shipwreck is found as much as ten meters back into the beachfront vegetation along the shoreline directly in front of and southward from the *Norwich City,* but no aluminum or aircraft-related material is in evidence. Because it will be roughly the half-way point in the expedition, the following day is declared a "day off" for anyone who needs to take a break. Aboard ship, the water maker is still not working.

July 16. On this "day off" the entire team turns out for duty except for two people with minor injuries. Further gridding and searching southward from the European house fail to turn up anything of interest. Dr. Burns' team reaches the interment in the grave and finds the bones of a two or three year old child. As previously agreed, as soon as the grave is established to be unrelated to the Earhart mystery, further excavation ceases and the grave is later restored to its original condition and appearance.

At 13:00 a satellite telephone communication with TIGHAR's office in Delaware brings the news that Dr. Tom King in Fiji has interviewed a former resident of Nikumaroro who reports having seen aircraft wreckage (heavy structures, not aluminum sheet) on the reef north of the *Norwich City* shipwreck in the years prior to WWII (1939-1941). Reports dating from the late 1950s had placed scattered aircraft wreckage on the reef and along the shoreline south of the shipwreck. This new information matches our earlier hypothesis that the landing had been made on the reef and the airplane destroyed by surf action, but indicates a more northerly specific location than we had previously contemplated.

Later in the afternoon Gillespie and Clauss conduct a reconnaissance of the lagoon shore in the area where Mr. Songivalu reported seeing airplane wreckage. While access to the area by skiff is not as difficult as had been anticipated, the beachfront vegetation is quite heavy in most areas until a low ridge of land about 50 meters inland from the lagoon shore marks the beginning of open buka (*Pisonia grandis*) forest. A variety of lightweight flotsam (plastic, styrofoam, etc.) indicates that this first 50

Photo courtesy V. Fenlason.

The remains of the 1929 shipwreck. New information alleges that aircraft debris was once located just north (to the right in this photo) of the wreck.

meters of shoreline is occasionally subject to flooding, but conducting a thorough search of the entire shoreline by visual means would be labor intensive and time consuming.

July 17. Temperatures hover near 100 degrees Fahrenheit as they have since the team's arrival on the island. Shifting the Nutiran shoreline search northward based on the new information, the team begins inspecting the dense beachfront scaevola from the point of land just off the bow of the *Norwich City* wreck and working northward. In an attempt to inspect open areas inland, Gillespie leads several team members into vegetation so thick that it takes hours to cut their way out and resume an organized search. The methodology developed for searching what can only be described as the beachfront scaevola wall is for transects to be cut into the bush on a heading 90 degrees to the shoreline and flagged with colored tape. The flagged transects are spaced 25 meters apart and go back into the scaevola far enough to be well beyond any evidence of washed up material (typically 30 or 40 meters). Searchers then space themselves along the beach closely enough to be sure they can visually cover the area between themselves and their colleagues on either side, and start cutting their way in, staying on line as much as possible, much like the beaters in an old-fashioned tiger hunt. When the line reaches the end of the flagged transects the searchers make their way back to beach, move down to the next block, and start all over again.

Photo courtesy R. Gifford.

Veryl Fenlason and John Clauss shoot in a line in dense scaevola.

Yet another grave is identified on the point just off the bow of *Norwich City* but excavation is not an option due to lack of remaining time. In the afternoon, at low tide, an inspection of the reef north of *Norwich City* permits a preliminary evaluation of areas that appear flat and smooth enough to permit a Lockheed 10 to land intact.

That evening aboard *Nai'a* the water maker is still not working despite heroic attempts at repair by the ship's crew. Team members accomplish some semblance of laundry by showering fully clothed. Quasi-clean clothes are then dried overnight in the ship's drier.

July 18. In the morning, while most of the team continues to work northward along the Nutiran shore, cutting 40 meter transects back into the bush at five to ten meter intervals, Gillespie, Matthews, Clauss and Burns conduct a reconnaissance of Kanawa Point. The cove just east of the Point is found to be very deep in soft silt, making the landing of a skiff difficult (and dangerous if you don't realize that what looks like a sandy bottom is, in effect, quicksand. Hop out of the boat to push it ashore and—gloop—you're gone). Kanawa Point, while probably originally quite open and pleasant when shaded by Kanawa trees, is now so covered in dense scaevola as to be impossible to search visually from any practical standpoint. On the lagoon shore across the cove to the east of Kanawa Point, a feature first noted by Tom King in 1989 was noted. The coral shelf above the water line is strewn with the shells of an estimated 300 giant clams over an area easily 20 meters long by perhaps 5 meters wide. In some cases the shells have been there so long as to be cemented into the coral and, in at least one spot, a number of shells are neatly stacked, back to front. There is no doubt that this is where a human or humans harvested, opened, and possibly ate clams. A few clams still grow in the surrounding shallow water. A scattering of shells was also found on the shore of Kanawa Point itself.

The Aukeraime Site was also visited briefly. There has been a significant increase in lagoon shore scaevola growth since TIGHAR's last visit in 1997. A metal detector inspection of a spot where remote-sensing data gathered in 1997 suggested there might be metal in the

ground was negative. With time short, a decision was made to forego a visit to the southeast corner of the island.

In the afternoon, at low tide, further inspections and measurements were taken on the reef flat north of *Norwich City* and the pulse laser was employed to measure the length of areas that were smooth enough to permit a safe landing. The longest area measured was 213 meters (700 feet). It has been estimated that Earhart's aircraft, at near empty weight and landing into a 10 to 15 knot wind as is common on the reef flat, could come to a stop in as little as 91 meters (300 feet).

With one more full day of work remaining before the ship must depart for Fiji, the water maker is finally working.

Photo courtesy J. Clauss.

Kanawa Point.

July 19. Inspection of the heavy beachfront vegetation north of *Norwich City* continues. In addition to the search conducted at the southern tip of Nutiran in the area around the initially supposed "European style house" and the gridding and searching done near the ruin that does seem to fit that description, the entire length of the Nutiran beachfront from the north point southward to the west point just below the shipwreck, a distance of some 700 meters (nearly half a mile) has been searched visually to a depth into the vegetation of 30 to 40 meters. The search turns up no aircraft-related debris. *Norwich City* debris is present on the reef and in the first few meters of beachfront vegetation from a point perhaps 50 meters north of the bow to at least 500 meters southwestward down the beach. The reef and shoreline north of the wreck are free of any type of cultural debris other than flotsam, and these occur primarily on the open beach and in the first 20 meters of vegetation. After nine solid days of heavy physical labor in the intense heat, many team members are becoming dangerously exhausted.

July 20. Departure day. The skiff must be brought out of the lagoon by noon at high tide and the morning is spent finishing up some last minute searching, breaking camp and recovering all of the equipment back across the lagoon passage. By 14:00, everything and everyone is off the island and that evening *Nai'a* sets a course for Fiji.

July 21-25. As if to make up for the rough outward passage, the trip back to Fiji is smooth and fast, arriving in the port of Suva a full day ahead of schedule. This permits us to terminate the charter a day early and thus save nearly $5,000.

Photo courtesy J. Clauss.

Ready to leave. L to R, Dick Reynolds, Jerry Ann Jurenka, Chris Kennedy, Ric Gillespie, Russ Matthews, Veryl Fenlason, Gary Quigg, and Van Hunn.

Fiji Bones Search

by Thomas F. King, Ph. D., SOPA
TIGHAR #0281CEB
Project Archeologist

Introduction

TIGHAR photo by P. Thrasher

Tom King

The Tarawa File (*TIGHAR Tracks* 13:1) and the files of the Western Pacific High Commission (WPHC) (*TIGHAR Tracks* 14:2) document that the human bones found on Nikumaroro in 1940 were sent to Fiji for analysis, in a box built on Nikumaroro of kanawa wood (*Cordia subchordata*). The WPHC files contain the report of Dr. D.W. Hoodless of the Central Medical School (CMS) on his inspection of the bones, including his measurements. Though Dr. Hoodless concluded that the bones were most likely those of a European male, reanalysis of the measurements using modern anthropological procedures suggests that they may represent a European female of about Earhart's height (*TIGHAR Tracks* 14:2).

The last document we have about the bones is an exchange of notes among Dr. Hoodless, WPHC Secretary Henry Vaskess, and Sir Harry Luke, the High Commissioner of the WPHC and Governor of Fiji. On April 5, 1941, Dr. Hoodless says: "I will take charge of these bones until it is decided what to do with them." On April 11 Mr. Vaskess passed Dr. Hoodless' offer to Sir Harry, whose responding note directed him to "request him (Hoodless) to retain the remains until further notice." On April 12 Mr. Vaskess asked the Central Medical Authority to "take action accordingly." After this, the WPHC papers (at least, those we've found so far) have nothing to say about the bones.

Needless to say, it would be useful to find those bones. We could then (it is to be hoped) extract DNA that could be compared with that of living Earhart relatives. So on June 26 the Fiji Bones Search got underway.

The 1999 Bones Search

Actually, the search had been underway for several months, thanks to the enthusiastic cooperation of the Fiji Museum. The Museum is very much TIGHAR's partner in this project. Without the support of its Director, Kate Vusoniwailala, the Director of its Archaeology Department, Tarisi Vundadilo, and the whole staff, we would have made little progress in the search at all. By the time we arrived in Fiji, the Museum had already contacted all the appropriate government ministries to make arrangements, held press briefings, and located and interviewed a number of retired physicians and others associated with the CMS and its successor, the Fiji School of Medicine (FSM). The Museum made its offices available to us,

and took care of all ongoing contacts with the various elements of government with which we worked and will continue to work, for the Bones Search will go on.

Our search focussed on Suva, the capital of Fiji, on the eastern end of the island of Viti Levu. Suva is a city of about 90,000 (400,000 in the metropolitan area), with a rich colonial architectural tradition—in other words, a LOT of old buildings dating from the time of the WPHC and CMS. Reasoning that the box of bones might have been tucked away in an attic or basement or closet in one of these buildings and forgotten, one of our first orders of business was to find and search the buildings most closely associated with the Commission and the Medical School. Another high priority was to examine the collections of human bones kept by the FSM Anatomy Department and by the Fiji Museum itself, since it was possible that the Nikumaroro bones might have been absorbed into one of these collections.

Bones, Bones, and More Bones

In the first week, the Search team was made up of forensic osteologist Dr. Karen Burns and me, so much of our work—besides initial meetings with ministries, press conferences, and the like—was focussed on finding and examining known collections of bones. Armed with Dr. Hoodless' measurements, her calipers, and her laptop loaded with the FORDISC classification program, Kar first went through all the unprovenienced (i.e.: unknown origin) bones in the collections of the Museum's Archaeology Department. No matches. Next she examined the collection of the FSM Anatomy Department (we'd been told that this collection had been "disposed of" when teaching methods changed at the School, but it turned out that a dedicated Lab Manager, Satya Deo, had saved it). Unfortunately, no matches there either. Incidentally, the Anatomy Department is housed in a modern building that comprises the "nerve center" of the FSM and that is named "Hoodless House" in honor of the doctor himself, renowned as one of the founders of western Pacific medical practice.

Photo courtesy R. Gifford.

Kar Burns.

Early on, three young men generously volunteered their time to assist us. Faiz Ali and Elaitia Vakarau are students at the Fiji Institute of Technology, while Steven Brown is a martial arts instructor (all are now TIGHAR members). While Kar measured bones, "the guys" and I searched old buildings. The old CMS building is now the Dental Clinic at the Fiji Colonial War Memorial Hospital. Completely renovated several times over since Hoodless' time, it still has an attic that hadn't been looked at in years. It turned out to be full of stuff—some of it apparently dating back to World War II (old field medicine cases and such)—but alas, no kanawa wood box, no bones. Dr. Hoodless' residence still stands, too; it's now the office of the Student Housing housekeeper. It has an attic, too, but it turned out to be empty.

About the time we arrived in Fiji, a skeleton was found in the rainforest near Navua, west of Suva. As (probably) the most experienced forensic osteologist in several hundred if not thousand miles, Kar felt obligated to offer assistance to the police in their investigation of the discovery. Besides, it gave us a good opportunity to see how bodies decay in an environment not unlike Nikumaroro's. She examined the bones at the Hospital, and then we trekked out to the discovery site and recovered more bones. The skeleton turned out to most likely be that of a tourist who had gone missing back in April, leaving a suicide note. The interesting thing from our point of view was

that the body had become completely skeletonized, the bones more or less scattered, some of them chewed by animals, and a number of them missing, in a mere three months.

Weeks Two and Three: Searches and Interviews

On July 5, Kar departed for Nikumaroro aboard *Nai'a*, and Education Director Barbara Norris arrived. About this time we had a bit of a flap over the fact that the government had declined to allow us to search the President's mansion, where Sir Harry had had his offices and residence. This not altogether surprising decision (what would the U.S. do with a Fijian request to search the White House?) was picked up by the media, which caused some disquiet in the government. Eventually this got smoothed over, and the work continued. We had run out of known bone collections, but had plenty of buildings to search, plenty of archives to inspect, and plenty of people to talk with.

TIGHAR photo by P. Thrasher

Barb Norris.

A search of the Fiji Intelligence Service building (formerly WPHC Bachelor Officer Housing) yielded no bones. An interview with the head of maintenance for the Public Works Department resulted in his agreement to get all government maintenance workers to keep eyes open for the box. We ran down a rumor of "bones in a box" in the local Masonic Lodge—they were bones used in Masonic ritual, and didn't match the Hoodless description. In the Museum library we reacquainted ourselves with Margaret Guthrie's biography of her father, Dr. Hoodless, which sent Barb and the guys off to search the old garage that the Hoodlesses had used for storage. Nothing there but collapsed cardboard boxes and old tires.

An interview with Sir Leonard Usher, who had been with the government since 1930, gave us valuable information about Fiji during World War II, and especially about Vaskess. Examining the WPHC file, Sir Leonard said that its organization—elaborately annotated and cross-referenced—was "pure Vaskess." He described Vaskess as a "prince of bureaucrats," who made sure that records were kept in good order—suggesting that if government had done anything with the bones on Vaskess' watch (which ran until after World War II), it would have been entered in the file.

Meanwhile, thanks to Peter MacQuarrie (TIGHAR#1987), Kenton Spading (TIGHAR #1382EC), and Mr. Metuisela Moa, the generous head of the Fiji Intelligence Service, we had met Mr. Foua Tofiga, who became perhaps our most valuable contact and, I hope, a good friend. Mr. Tofiga is from Tuvalu, educated in Tarawa, and he came to Fiji in 1940 to work for the WPHC. He was literally in Sir Harry's office when the bones were sent in; he was a bit sorry that "the English" hadn't shared the matter with him, the "only brown face" in the office, but he understood their perceived need for secrecy.

Mr. Tofiga described Gerald Gallagher as his great friend; he had assisted Gallagher in loading the colonial ship *Viti* for the voyage that was to take Gallagher to his death on Nikumaroro. He had worked closely with Vaskess, and said he had seen the sextant box from Nikumaroro, which Vaskess kept in his

office. He travelled to Nikumaroro with Sir Harry in December of 1941, where he visited Gallagher's grave; *Viti* was on the high seas leaving Nikumaroro when word came of the attack on Pearl Harbor. Almost in passing, he mentioned that on this trip they had brought Emily Sikuli away to work in medicine for the WPHC. Emily, he said, was the daughter of Nikumaroro's carpenter, who doubtless had built the kanawa wood box. Needless to say, we were very interested in interviewing her.

On July 12, Kris Tague arrived. Since Kris' speciality is archival work, we'd reserved most of this kind of work for her. First, however, we went after the old U.S. military base at Tamavua, where the CMS had moved in 1953; a number of people had suggested this as a likely place, and Steven Brown knew of tunnels under the facility, that he'd played in as a kid. Kris, Barb, and the guys slipped and slid through the tunnels—to no avail—while I negotiated for, but failed to get, permission to search the War Memorial Hospital itself. About this time, permission did come through to search the cellar and bomb shelter at Government House—the President's mansion. This search, too, produced no bones, no box.

Photo courtesy J. Clauss.

Kris Tague

Meanwhile Mr. Tofiga had arranged a meeting with Emily Sikuli. We met over tea at the home of Mr. Tofiga and his wife, and began by asking Mrs. Sikuli about her father. She promptly produced pictures of her parents, said she well remembered her father's construction of the box, described it, and then mentioned, sort of in passing, that the bones that were put in it had been found "near that airplane wreck on the reef."

When we picked ourselves up off the floor, we asked her to continue and she gave us a great deal of useful information. Since much of this was subsequently duplicated in a long videotaped interview with Ric, Kris, and Russ, I won't get into it here. Suffice to say that the first thing we did upon getting back to the TIGHAR apartment was to get a radio message off to *Nai'a* about looking for wreckage on the reef north of *Norwich City.*

Weeks Four and Five: Interviews and Archives

The day of our interview with Mrs. Sikuli was also the day of my departure, but Barb and Kris carried on. Mr. Tofiga suggested another look at the Museum's collection, and it turned out that there were more unprovenienced bones there, in a collection not maintained by the Archaeology Department. Some of these looked promising, but when Kar examined them on her return from Nikumaroro, they turned out not to be those we're looking for. Barb returned to the U.S. a few days after I did, and Kris continued, shifting focus substantially to archival studies whose results she is digesting as this is written. She also arranged, with Mr. Tofiga, for videotaped interviews both with Mrs. Sikuli and with Mrs. Otiria O'Brian, widow of the wireless operator on Nikumaroro.

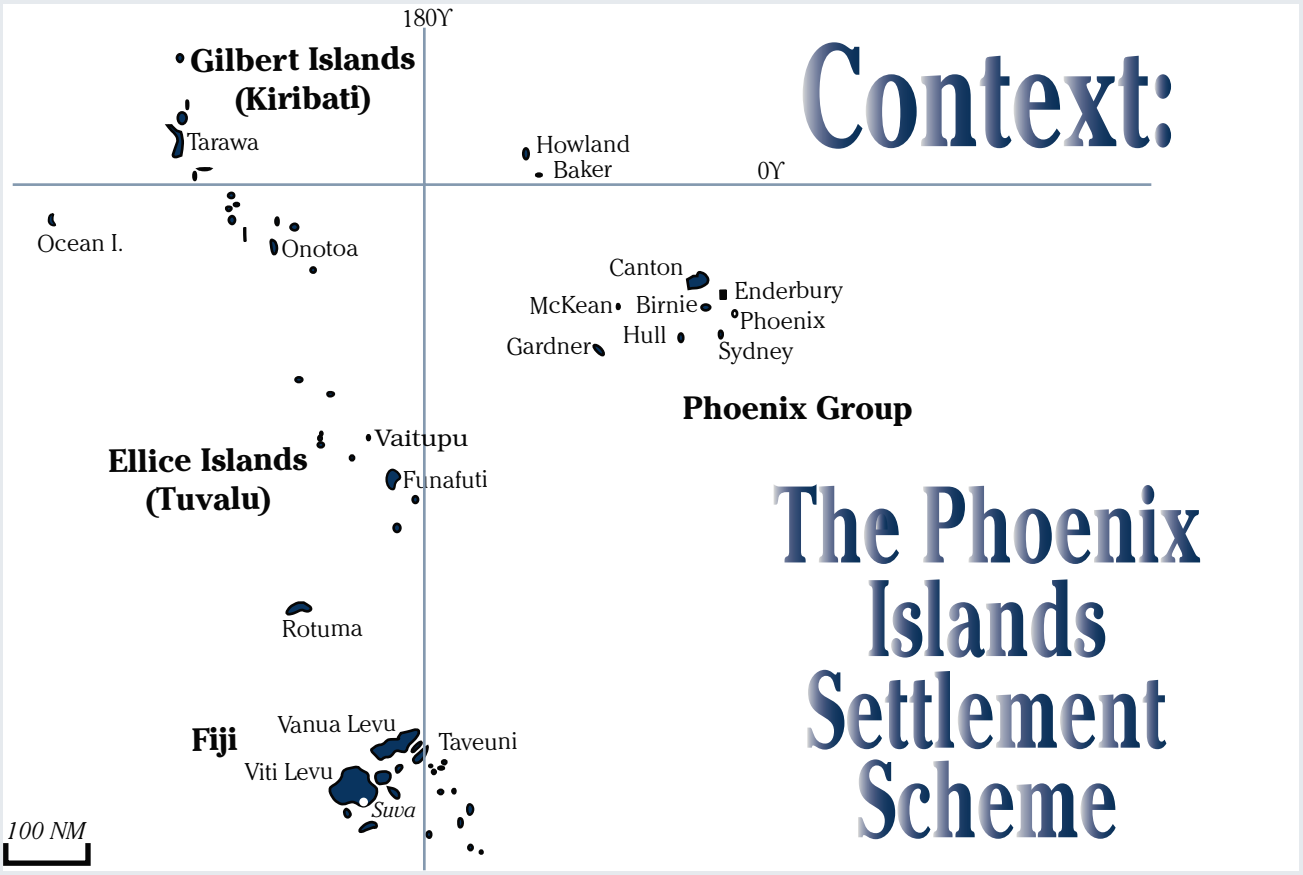
Conclusions

Obviously, we did not return from Fiji with a box of bones. We did, however, get a good deal of information about the circumstances surrounding their sojourn in Suva, and about the individuals involved in whatever it is that happened to them. We searched a lot of the most obvious places to look for the bones, and we left with the offer of a reward for information leading to their recovery. This coupled with the extensive media coverage we received and the knowledge that's been spread among government and Medical School employees should guarantee that people will keep a lookout for them. And of course, we met Foua Tofiga and Emily Sikuli, who provided information that we'd never expected to get.

So, where are the bones? We don't know, of course, but I came away finding it hard to imagine that they were just thrown away—though of course, in the early days of the War, almost anything could have happened. One possibility is that they were stored in caves during the War, and never came out. Lots of things were thus put away for safekeeping—the Museum's collections, for example—and most of the World War II era caves have been sealed up. The tunnel complexes under both Government House and Tamavua are reputed to be much larger than those we inspected, but their entrances may have been blocked and forgotten.

Another possibility is that they were buried. The Medical School has a pretty organized system for the burial of the cremated remains of cadavers no longer needed for teaching; apparently this system has been in place for a long time. Would unneeded bones have been burned? Maybe. Buried? Maybe. It's something to pursue.

They may have gotten sent on with the WPHC files to Honiara in the Solomon Islands when the Commission's offices moved there, or to Tarawa when Kiribati achieved independence. They may have been sent to London. Or they may still be languishing somewhere in Suva. There are lots of possibilities to check. What we need to do now is more archival and interview work to narrow the range of likely possibilities, and to continue the search.



Context: The Phoenix Islands Settlement Scheme

Throughout the first half of the twentieth century, British island possessions in the Central Pacific were administered by the Western Pacific High Commission (WPHC) headquartered in Suva, Fiji. Five hundred miles to the north of Fiji lay the Ellice Islands (Tuvalu) which include Emily's birthplace, Funafuti Atoll, and Foua Tofiga's home island of Vaitupu. Several hundred miles north of the Ellice Islands are the Gilbert Islands (Tungaru). Although the British lumped these two neighboring archipelagos together as the Gilbert & Ellice Islands Colony (G&EIC), the two peoples spoke mutually unintelligible languages and regarded themselves as distinctly separate peoples. During the late 1930s and early 1940s, the G&EIC was administered by a Resident Commissioner who lived on Ocean Island to the west of the Gilberts and answered to the High Commissioner of the WPHC in Fiji, the redoubtable Sir Harry Luke.

The Phoenix Islands Settlement Scheme (with perhaps history's most unfortunate acronym, PISS), was approved in 1938 as a means of relieving overpopulation in the southern Gilberts. It also had the distinction of being the last colonial expansion of the British Empire. The scheme was a project of the G&EIC and was the brain-child of Henry E. "Harry" Maude, then Lands Commissioner for the colony. His assistant, and later the Officer-in-Charge of PISS, was a dedicated young Cadet Officer by the name of Gerald B. Gallagher. Despite the reference to "officers," the administration of these colonial possessions was not a military or naval function and the individuals who served in the islands were non-uniformed civil servants.

Under the settlement plan, impoverished, landless families were recruited from islands in the southern Gilberts such as Arorae and Onotoa, to settle the uninhabited Phoenix Group which lay some 500 miles to the southeast. Evaluated in October 1937, only three of the eight islands of the archipelago were found to be suitable for cultivation and settlement—Sydney, Hull and Gardner—and each was given a Gilbertese name—Manra, Orona, and Nikumaroro respectively. Because Manra and Orona had previously seen some development as coconut plantations they could immediately ab-

sorb several dozen settlers when colonization began in late 1938/early 1939, but Nikumaroro was a clean slate with only 111 coconut trees surviving from a brief planting foray in 1892. Ten men began clearing the dense tropical forest in December 1938 and settlement of the island officially began when they were joined by their families in April 1939, bringing the island population to twenty-three.

The Phoenix Islands Settlement Scheme pushed forward despite the outbreak of war in Europe in September 1939. Funding and resources, never plentiful, became increasing difficult to obtain and what progress was made was due primarily to Gallagher's inspired leadership and unflagging efforts on behalf of the settlers. The 29 year-old officer quite literally worked himself to death and died on Nikumaroro of an intestinal condition known as "sprue" on September 27, 1941. The loss of Gallagher, followed shortly by the outbreak of war in the Pacific, effectively arrested the further development of the three Phoenix settlements. The island group was well outside the war zone and there is no record of any Japanese activity on or near any of the three settled atolls. In July 1944, Nikumaroro's southeastern tip became the site of a 25-man U.S. Coast Guard LORAN navigational facility which was subsequently shut down in December 1945 and dismantled in May of 1946. No British administrator had been in residence on the island since Gallagher's death and it was 1949 before clearing and planting operations on the island resumed in earnest.

An active international commercial airport on Canton Island, built and operated as a military facility during the war, provided employment for many of the residents of the three settled islands. The villages on Manra, Orona and Nikumaroro struggled along for another fourteen years but periodic droughts defeated attempts to make the islands self-sustaining and, in 1963, the British finally abandoned the scheme and evacuated the settlers, leaving the three atolls once more uninhabited.

In the late 1970s the British colonial system peacefully transitioned to self government for the indigenous peoples. The Ellice Islands adopted their ancient name and became the nation of Tuvalu, while the Gilbert Islands became, in 1979, the Republic of Kiribati (pronounced KIRibas, the local pronunciation of the English word "Gilberts"). The islands of the Phoenix Group are now part of Kiribati but remain uninhabited except for a few families on Kanton (formerly Canton Island).

Mrs. O'Brian

by Ric Gillespie

While still on Nikumaroro during Niku IIIIP we had received word via satellite phone that the team in Fiji had talked to a woman who was a former resident of the island. She described seeing aircraft wreckage on the Nutiran reef north of the Norwich City shipwreck. A few days later, another interview with an early settler, said to be the widow of the island's radio operator, appeared to confirm that villagers on Nikumaroro in the prewar years were aware that an airplane had come to grief there at some time before their arrival.

Photo courtesy R. Mathews.

Ric Gillespie on Nikumaroro learns via satellite phone of new information uncovered by the TIGHAR team in Fiji.

During the voyage back to Fiji, again via satphone, we made arrangements to do follow-up interviews with the two women. No video or audio tape had been made of the initial interviews out of concern that cameras or recorders might create an intimidating atmosphere, but a friendly rapport had been established and we hoped that it would be possible to videotape the second interviews. We arrived in Suva, Fiji early on the morning of Sunday, July 25 and were scheduled to fly back to the U.S. the night of Tuesday, July 27, so it was imperative that we waste no time in arranging and preparing for the interviews.

Foua Tofiga

(pronounced "fowOOa towFINGa")

That afternoon, July 25, Kristin Tague and I met with Foua Tofiga who had worked as a clerk for the Western Pacific High Commission in Suva during the years in question and had been instrumental in helping our Fiji Team locate and contact the two women. He also served as translator during the interviews. Kris and I spent a pleasant two hours with him at his home. I found him to be a well-educated, articulate, and soft-spoken man with an excellent command of English. Having studied the files of the Western Pacific High Commission, I was quite familiar with the names, procedures and personalities of the WPHC and in chatting about those times and those people it was immediately apparent that Mr. Tofiga was entirely genuine in his representation of his experience. He was, in fact, able to clear up several questions we had about the meaning of various abbreviations in the files and flesh out our picture of the various officials with personal anecdotes.

TIGHAR photo by R. Gillespie.

Foua Tofiga

Tofiga at Nikumaroro

Mr. Tofiga has only been to Nikumaroro once, in late November 1941 with High Commissioner Sir Harry Luke who was touring the Phoenix Islands settlements in the wake of the death of Officer-in-Charge Gerald Gallagher in September. Tofiga's presence on that trip is confirmed in the published diary of Sir Harry Luke (A South Seas Diary, Nicholson & Watson, London, 1945) who says: "The party consisted of Dr. Macpherson and 'Mungo' Thompson with Tofinga [sic], the Ellice Islander clerk from the High Commission, as interpreter." Tofiga has no recollection of seeing or hearing about bones or airplane wreckage during that visit but Sir Harry's diary indicates that the ship was only at Gardner one day (Sunday, November 30, 1941).

The Sextant Box Remembered

Despite his close association with the top officials of the WPHC, Tofiga had not been aware of the discovery of bones and artifacts on Gardner nor had he seen any of the official correspondence about attempts to identify them. This was because he worked in the Accounts section rather than in Correspondence and, as we know, the whole issue of the castaway of Gardner Island was kept "strictly secret." Tofiga does, however, remember that Henry Vaskess, Secretary of the WPHC, kept a collection of curios on a credenza in his office. The centerpiece was a wooden box which, Tofiga says, looked very much like the photos we showed him of the Pensacola sextant box. His recollection matches the official record which last mentions the sextant box as being stored in Vaskess' office. Mr. Tofiga doesn't remember whether it had any numbers on it and has no idea what may have eventually become of it.

Otiria's Odyssey

Otiria (pronounced "ohSEEria") O'Brian was interviewed twice by TIGHAR, once by Kristin Tague, with Foua Tofiga serving as translator, on Monday, July 19th and again by me, accompanied by Kris, with Tofiga again translating, on Tuesday, July 26th. The latter interview was videotaped. Mrs. O'Brian, despite her Irish surname, is a Gilbert Islander by birth. Her late husband, Fasimata O'Brian, was not Irish either but was born in the Ellice Islands. (Perhaps there was an Irishman involved somewhere along the line but that was not clear.) Otiria speaks and understands virtually no English. The interviews were conducted in her bedroom in her son's home where she is confined by her frail health. Tofiga translated my questions into Gilbertese, and her answers into English.

TIGHAR photo by R. Gillespie.

Otiria O'Brian

Throughout both interviews she appeared to be alert and lucid, and although some of her memories seemed to be jumbled, others tracked quite accurately with documented events. Otiria O'Brian is a Protestant Christian and, to my astonishment, began her videotaped interview by turning to the camera and singing several verses of a Gilbertese song which Mr. Tofiga later explained was a hymn about "Standing firm for Christ." She says she is 80 years old which would make her year of birth 1919, and her general appearance seems consistent with that age. But when asked what year she was born she said she was born in August of 670 and went to Nikumaroro in 178. It is possible that she was using a numbering system that is not familiar to Tofiga or to us.

Correct Recollections

Otiria says she was born on the island of Onotoa in the southern Gilberts. When asked how she and her family came to live in the Phoenix Islands, she says that the government came and told the people that "Those who wished to own land—they could go." That's a good description of what happened and most of the first settlers did come from the southern Gilberts, including several from Onotoa.

In both interviews Mrs. O'Brian said that she never lived on Nikumaroro but only stopped there briefly en route to Sydney Island (Manra) where she and her family settled. This seemed odd given the amount of detail she remembered about the island and the stories about an airplane wreck and bones. Our other interviewee, Mrs. Emily Sikuli, was adamant that Mrs. O'Brian had lived on Nikumaroro for a time as the wife of radio operator Fasimata O'Brian. Subsequent research has shown that Emily was correct. We have been able to track Otiria's movements through clues gleaned from her answers to various specific questions and from the official record.

Arrival Date

As best we can reconstruct events, Otiria traveled with her family from her home island of Onotoa in the Gilberts to settle on Manra, making a one night stop at Nikumaroro along the way.

Although Otiria doesn't remember the name of the ship that brought her to the Phoenix Group, she does recall that it was a "big ship" that "belonged to Banaba" (Ocean Island). "Word came from Heaven saying that it was all right to go on this ship because it was from the government." This could be a reference to an endorsement of the Phoenix Island Settlement Scheme by the London Missionary Society, the predominant religious presence in the southern Gilberts. Ocean Island was the headquarters for the Gilbert and Ellice Islands Colony which administered P.I.S.S. Its principal vessel was the Royal Colony Ship (RCS) Nimanoa. Indeed, most of the settlers for Gardner (Nikumaroro), Hull (Orona), and Sydney (Manra) were transported in Nimanoa.

RCS Nimanoa

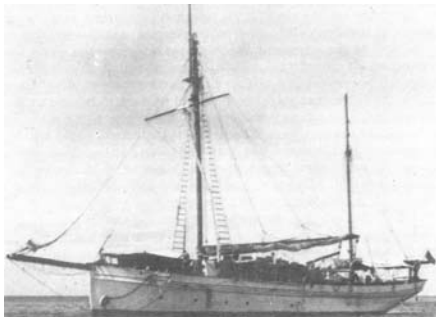


Photo courtesy E. Bevington.

Sailing from the Gilbert Islands they came first to Nikumaroro where they went ashore in boats that belonged to the ship and spent one night in the village where there was a "wooden house." About "20 or 10" people, including some women and children, "whose names were for Nikumaroro" stayed behind when, the next day, the others numbering "20 or 30" reboarded the ship and continued on to Orona where some disembarked. The rest, including Otiria and her family, came finally to Manra.

Gerald Gallagher, Officer-in-Charge of the Phoenix Island Settlement Scheme, whom Mrs. O'Brian refers to as "Kela," was already in residence on Nikumaroro when she got there. He had "a house that was just built" and he had "servants to cook for him." She says that he came with them when the ship continued on to the other islands.

Given that Otiria was from Onotoa, I wondered if she might remember the name of the headman on Nikumaroro who had been a prominent figure on Onotoa before becoming Native Magistrate on Nikumaroro. To my surprise, the name she came up with was not Teng Koata, but "Tikana." Bauro Tikana was Gallagher's clerk and interpreter. He arrived with Gallagher in September 1940 at the same time that Koata took a leave of absence and traveled to Tarawa. This is a further indication that Otiria was not on Nikumaroro prior to Gallagher's arrival.

It seems that Mrs. O'Brian's initial visit to Nikumaroro was sometime after Gallagher's arrival in early September 1940 but before his departure for Fiji in early June 1941. We can further constrain the time because, according to Gallagher's "Progress Report, Fourth Quarter 1940," his house on Nikumaroro was not sufficiently completed to permit occupancy until the middle of November. It is also clear from his report that no ships and no new settlers arrived between his arrival in September and the end of the year. He does mention that "RCS *Nimanoa* paid a very hurried visit to the District to distribute essential stores" in early January 1941. The ship called at Nikumaroro first, apparently on the 11th, and Gallagher accompanied it to Orona and Manra to check on the progress of those settlements. No mention is made of the ship bringing any new settlers but neither is it specifically stated that it did not. The "Progress Report, First Quarter 1941" specifically states that aside from *Nimanoa's* brief visit in January, "No shipping has been available for the transport of settlers, stores, or equipment..." through the end of the quarter (March 1941). During the spring of 1941 RCS *Nimanoa* was being overhauled in Suva and no other ships are mentioned in the record as having visited Nikumaroro.

It would therefore appear that there is really only one documented possibility for when Otiria O'Brian spent her night on Nikumaroro en route to Manra: January 11, 1941.

Return to Nikumaroro

Sometime later in 1941—we're not sure just when—Otiria married Fasimata O'Brian on Manra and traveled with him to the G&EIC colonial headquarters on Ocean Island. The provisioning records of HMFS *Viti* show that "Fasamata" [sic] and "Atiria" [sic] left there on September 11, 1941 and arrived at Gardner a week later on September 18th. This was the same voyage that would end with the death Gerald Gallagher. After a brief stop at Gardner on the 18th, *Viti* continued on to Canton, Sydney and Hull, returning to Nikumaroro on the 25th with Gallagher gravely ill. He died on September 27, 1941 and was buried at the foot of the island flagpole. This would seem to explain Otiria's answer to my question:

RG: How did you hear about this thing [airplane crash] that happened on Nikumaroro?

OO: This I heard because this happened before we arrived at Nikumaroro. We arrived and we followed the burial procession. The man who died was a government official. He was buried under the flag, not in the common graveyard.

Date of Departure

Otiria and her husband lived on Nikumaroro for the next two months until *Viti* returned with High Commissioner Sir Harry Luke. According to the ships records, on November 30, 1941 "Fasamata [sic], W/T operator, and wife" were transported from Gardner Island to Hull Island, arriving there the next day. By coincidence, this is the same voyage that took Emily Sikuli from her home on Nikumaroro to nursing school in Fiji—so Emily and Otiria left the island at the same time and on the same ship. In her earlier interview with Kris Tague, Otiria had said that Fasimata had been assigned to Orona for only a short time before settling on Manra where she says she spent the war years.

Otiria's Bone Story

Having placed Otiria's initial arrival at Nikumaroro in January 1941, well after Gallagher had found the bones the previous September, it's clear that any information she has is second hand at best. Indeed, the same ship that brings her to the Phoenix Group carries the box of bones and the arti-

facts away from Nikumaroro when it leaves (Gallagher's letter that accompanies the shipment is dated December 27, 1940). This may help explain her confusing response to my question:

RG: Was there a shipwreck at Nikumaroro?

OO: No. It went aground, but was not broken up. Maybe it is still there. There was no damage to it. It was right on the reef but there were no people on board. I remember seeing it. Standing there firm. Nothing broken. No people. Another ship came and took away the people from the ship. The government put a stop to people going on board.

When Mr. Kela [Gallagher] arrived he went to that ship and found a person that had been killed but he was put under the ship, below the ship. Mr. Kela then directed certain ones to come and build a box and put this person in it and take it to be buried. The person was lifted and put in the box. The one who died was not a European. He came from Onotoa.

The story about the body and the box may be a very garbled rendition of something she heard on the island about the bones Gallagher found and the box built to contain them. We've heard other stories about bones being found near the shipwreck which may or may not be true, but Gallagher certainly made no mention of any such discovery. Her assertion that the one who died was from Onotoa could stem from the fact that the original discovery of the skull seems to have been made by Teng Koata, the Native Magistrate from Onotoa who left the island when Gallagher arrived.

Two Crashes, One Memory?

If Mrs. O'Brian's recollections about Kela finding a body are difficult to match with known events, her account of an airplane wreck at Nikumaroro is even more confusing. Greatly complicating the issue is the fact that she spent the war years on Sydney Island (Manra) where we know that a C-47 crashed catastrophically on December 17, 1943 (See "The Crash at Sydney Island" TIGHAR Tracks Vol. 14, No. 2, page 15). How much of what she remembers of that event is mixed up with what she says about what she heard talked about on Nikumaroro is hard to determine.

In her initial interview, Kris Tague asked her whether she had seen wreckage of any kind at Nikumaroro. She answered:

OO: Many things I have seen. Things that float or move about in the sea. People said they were parts of an airplane.

[Note: As far as we know, Mrs. O'Brian had no idea that Kris had any interest in an airplane. I later asked Mr. Tofiga if, in setting up the initial interview, he had told Mrs. O'Brian that we are searching for an airplane. He was quite sure that he had not.]

People and even members of the government came to look at it. ... Men were making expressions of sadness about the fate of those whose plane crashed. I didn't see because we were there only briefly. ... It is said that they broke up and sank in the ocean. They said that the parts were seen by a ship and they went to look for more of them.

In her second interview eight days later, I tried everything I could think of to give her an opportunity to talk about the airplane wreckage without "leading" her. I asked if there was anything unusual about the island. She said the fishing was very good. I asked if there were other wrecks on the island besides the ship that was on the reef. She said there were other wrecks there and on Orona, but volunteered no details. (There were no other shipwrecks at Nikumaroro but there was a shipwreck at Orona). Finally, in desperation, I asked:

RG: Did the people on Nikumaroro say anything about an airplane?

OO: We did not stay on Nikumaroro. I was on Manra.

Okay, I thought, let's see if she knows about the crash on Manra.

RG: How long did you live on Manra?

OO: We were there when we were young and when we were girls. [giggles]

RG: During the war?

OO: Yes.

RG: Do you remember an airplane crashing on Manra?

OO: There was one, but it landed in the lagoon. [As indeed it did.] Nobody died. Only a few days and they went away.

I said nothing while she thought for a minute.

We buried three of them and maybe the one who piloted the plane. One died and one lived. I do not know for sure if they were American or British. [In fact, there were nine fatalities in the Sydney Island crash. All died on impact except one who lived for about fifteen minutes.]

I then said to her as a statement, not a question:

RG: But you remember nothing about an airplane at Nikumaroro.

After a long thoughtful pause she said,

OO: There was a plane that crashed at Nikumaroro. There was a woman. No. A couple. A man and a woman. The man was the pilot. He was the one flying the plane.

Another long pause during which I said nothing.

A bullet hit him in the eye [gestures toward her eye] and of course that made him lose control [moves her hands as if rocking a steering wheel]. One died. The Onotoa people came and lifted him out and made a box for him. When he was questioned why he didn't take care, he said that he was hit and he didn't have any control. The Onotoa people were very angry so that that one became very frightened [here she laughs] and he was saying, "I didn't kill him. I didn't do anything bad to him. He was my brother." And he left his plane and followed the Onotoa people. One died. The other lived.

Which details belong to which crash? The pilot of the plane who was questioned by the Onotoa people could be the one brief survivor of the Sydney crash. The C-47 had been circling the island and inexplicably hit a palm tree on a low pass. Was the fatally injured pilot trying to explain to the islanders who found him that a bird had come through the windshield and struck him in the face? Were the protestations of innocence that Mrs. O'Brian found so amusing, in fact, the hysterical apologies of a guilt-ridden dying pilot? We'll never know.

It would be tempting to ascribe all of her memories about crashed airplanes to the one accident we know happened on the island where she lived, except that some of the details she offers about the Nikumaroro wreck don't fit the Sydney wreck at all. The mention of "a woman, a man and a woman, a couple" is remarkable. She also describes not a witnessed crash but parts said to be "pieces of a plane." The Sydney crash happened in full view of the villagers. The phrase "the parts were seen by a ship" can be interpreted as "the parts were seen by people on a ship" or it could mean "the parts were seen near a ship." If she meant the latter, then her recollections match those of Emily Sikuli who says she saw aircraft wreckage on the reef at Nikumaroro near the wreck of the S.S. Norwich City.

In the end, Mrs. O'Brian's recollections are not terribly helpful except as garbled corroboration of Emily Sikuli's far more detailed and specific account of an airplane that was wrecked at Nikumaroro before the first settlers arrived in 1938.

The Carpenter's Daughter

In TIGHAR's efforts to find a conclusively identifiable piece of the Earhart aircraft, it would be difficult to overstate the potential importance of Emily Sikuli's recollections. If credible, her testimony confirms the general scenario that TIGHAR had already deduced from other sources. She provides specifics that not only fill in the picture of what really happened, but may enable us to determine where we should look to find what we're looking for.

But Emily's information is anecdotal. It is a reminiscence of events that occurred over half a century ago and, in principle, is no more credible than the memories of those who claim to have seen Earhart imprisoned on Saipan. How do we assess the accuracy of her recollections?

The first step is to pay close attention to what she said. Mrs. Sikuli was interviewed twice, once on July 15, 1999 by Project Archaeologist Tom King and again twelve days later on July 27th by Ric Gillespie. The records of the two interviews, separated by more than a week, and conducted by different researchers, provide a good check on how consistent Emily was in her story.

Transcripts of both interviews are presented as appendices at the back of this issue of *TIGHAR Tracks*.

Evaluating Emily

Emily's startling description of airplane wreckage on the reef at Nikumaroro merits close examination. Although she had apparently never heard of Amelia Earhart and had little or no information about TIGHAR's investigations, she nonetheless described a situation which not only fit our hypothesis (that the aircraft was landed on the reef flat off the western end of the island), but also provided details (a specific location and appearance) which seem to explain what has always been the most disturbing aspect of the puzzle—how could the airplane have escaped the notice of the various Westerners who later visited the island?

If Emily's recollection is accurate, it seems that the landing was made on the outer portion of the reef-flat just north of the shipwreck.

Emily Sikuli

TIGHAR photo by R. Gillespie

Although this is one of the few areas where the reef is smooth enough to permit a safe landing, it is also perilously close to the breakers along the reef edge. Calm conditions could have permitted the sending of radio transmissions for as much as a few days, but the building of any significant swell on the ocean could have resulted in surf that quickly reduced the Electra to the sort of nondescript debris Emily describes. Visible only at low tide, rusty rather than silver-colored, not far from the shipwreck, and masked to view from the populated part of the island by the shipwreck itself, what little remained of the airplane might have been easily missed, or if seen, dismissed by anyone who did not have occasion to view it up close. The reef edge is a dangerous place and the only people with a reason to go there were the Gilbertese fishermen—so they were the only ones who knew. Later accounts of bits and pieces found along the shoreline, including some of TIGHAR's own discoveries, could be chance encounters with a widely scattered debris field. It may be that Emily has given us the missing piece of the puzzle and our best clue yet as to where we should look for that elusive "smoking gun" artifact that will prove the case. It's a tantalizingly tidy explanation, but it's just a good story unless verified from sources that are not reliant upon the ever-fallible human memory.

The Carpenter's Daughter?

In evaluating any anecdotal account it is essential to verify as many details of the testimony as possible through contemporary written records. This process is not intended to disparage the sincerity of the witness but rather to get a general impression of the reliability of his or her memory of the events in question. If our interrogation of Emily's credibility seems rigorous it is only because her testimony is potentially so important.

To begin, we must ask the most basic question and establish that Emily is who she says she is. Emily says that her father Temou Samuela was the island carpenter on Nikumaroro. Photographs she showed us leave no doubt that Temou was her father, but was he the island carpenter? Dr. Duncan Macpherson's first hand account of the death of Gerald Gallagher, dated November 9, 1941, specifically mentions that "...Temou (native carpenter at Gardner island) proceeded to prepare a casket for the remains." It would seem that Emily is, indeed, the carpenter's daughter.

The next task is to determine whether Emily herself was on Nikumaroro and, if so, just when she was there. This allows us to put her alleged experiences in a specific historical context and check them against known events.

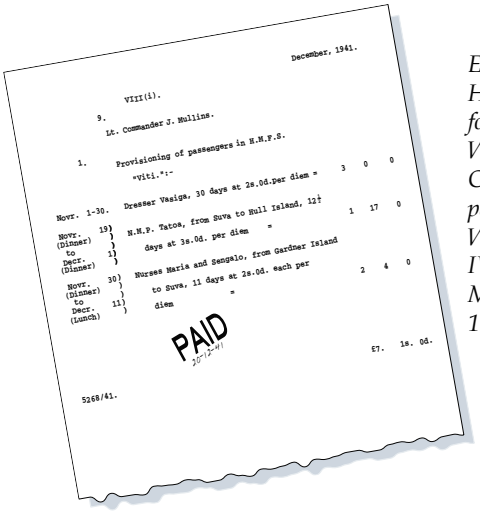
Emily's father.

Photos courtesy E. Sikuli.

Emily's mother.

Date of Departure

We are able to confirm Emily's presence on the island and establish the date of her departure by means of a rather obscure document which we examined in November 1998 at the archives of the Western Pacific High Commission in England. The provisioning records of His Majesty's Fijian Ship (HMFS) *Viti* show a charge of two shillings per diem for the transport of a "nurse" by the name of "Sengalo" from Gardner Island on November 30, 1941 to Suva, Fiji (11 days). Emily's first name in Tuvaluan is "Segalo," pronounced (and often spelled) "Sengalo." Is this Emily?



December, 1941.

VIII(i).

9.
Lt. Commander J. Mullins.

1. Provisioning of passengers in H.M.F.S. "Viti."-

Novr. 1-30. Dresser Vasiga, 30 days at 2s.0d.per diem " 3 0 0

Novr. 19} (Dinner) } to 1} Decr. (Dinner) } N.M.P. Tatoa, from Suva to Mull Island, 12† days at 3s.0d. per diem " 1 17 0

Novr. 30} (Dinner) } to 11} Decr. (Lunch) } Nurses Maria and Sengalo, from Gardner Island to Suva, 11 days at 2s.0d. each per diem " 2 4 0

PAID 30-12-41

£7. 1s. 0d.

5268/41.

Excerpt from "Viti, *H.M.F.S.: - Claims for Messing of W.P.H.C. and Coastwatching personnel on"*, *WPHC List No. 4, IV, Vol. for 1940-41, M.P. No. 5268/ 1941, (Fiji).*

RG: Tell me about when you left Nikumaroro, when you went away. How did that happen?

ES: That was the year we came away. It was the government that made that decision. Because we sat a test and it was decided that it was not practical to send us to Tarawa but to bring us to Suva. *[In an earlier conversation she had said that, as a teenaged girl, she assisted as midwife at several births on Nikumaroro and had later attended nursing school in Suva.]*

RG: Was it your whole family or just you?

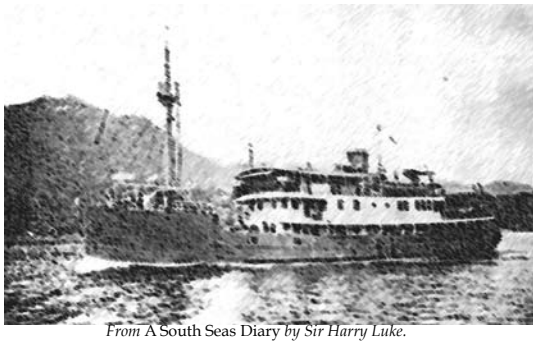
ES: It was I only.

RG: So there was a test and you were selected because of this test?

ES: Yes. That is why I came.

RG: Mr. Tofiga, I understand that you remember this. You were there at that time. Is that right?

FT: I was aboard the *Viti*. We traveled from here *[Suva]* in the late November or early December of 1941. I never forget the date because we were at Nikumaroro when the Japanese bombed Pearl Harbor.



From A South Seas Diary *by Sir Harry Luke.*

In the earlier interview Tom King had asked:

TK: Where you there when Mr. Gallagher died?

ES: No, I wasn't. *[she has a brief conversation with Mr. Tofiga]* NO! I WAS there. When I was picked up *[to go to Suva to attend nursing school]* he had already died. It was Sunday morning, we were getting ready for church, December 7th, when I left. *[Emily traveled to Suva with Tofiga who remembers that she cried all night long and he felt helpless to comfort her.]*

That Mr. Tofiga was aboard *Viti* on that voyage is confirmed by the published diary of High Commissioner Sir Harry Luke who, in November/December 1941, made a tour of the Phoenix settlements in the wake of the death of Officer in Charge Gerald Gallagher the preceding September. "I managed to get on board the *Viti* by midnight of the 19th [November] and sailed at once. The party consisted of Dr. MacPherson, 'Mungo' Thomson ..., with Tofinga, the Ellice Islander clerk from the High Commission, as interpreter."

The ship's records show that *Viti* was at Nikumaroro on Sunday, November 30, 1941, not Sunday, December 7th, so Tofiga's memory of hearing about the Pearl Harbor attack while at Nikumaroro is apparently not accurate. However, Emily's recollection that she left on a Sunday is correct. Clearly the nurse "Sengalo" is Segalo Samuela, now Emily Sikuli, and she left Nikumaroro on November 30, 1941.

Date of Arrival

Pinning down just when the Samuela family arrived on Nikumaroro is a bit more difficult. Unfortunately, we don't have passenger manifests for all of the ships that transported settlers and skilled artisans for the Phoenix Islands Settlement Scheme, but transportation of personnel and supplies was enough of a problem for the struggling colony that the comings and goings of ships are fairly well documented. Emily was unable to give us a firm date for her arrival at Nikumaroro, but there are clues in what she remembers, and does not remember, which make it possible to constrain the date of her arrival.

TK: When did you get to Nikumaroro?

ES: We had not been on Beru Island a year when we were sent to Nikumaroro. Perhaps 1938-39. In less than 3 years, I left Nikumaroro.

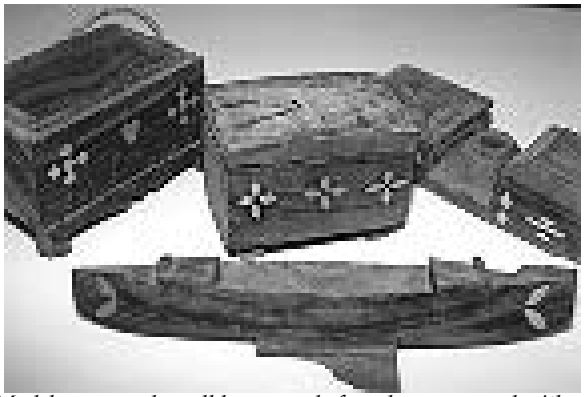
Beru, in the southern Gilberts, served as a staging area for the settlement of the Phoenix Group. We don't know when Temou and his family came to Beru but we do know that Emily left Nikumaroro in late 1941. Her "less than 3 years" on the island puts her arrival not earlier than late 1938 but, in fact, there were no women at all on Nikumaroro until April 1939.

TK: What caused your family to move to Nikumaroro?

ES: Instructions from the government to build houses and plant coconuts. Uncle Kemo went to Manra to build the hospital building and water tank.

There are a couple of good clues here. The big push to build houses and plant coconuts on Nikumaroro was in the early days of the settlement—from the arrival of the first women and children in April 1939 through Gallagher's death in September, 1941. "Uncle Kemo" is Jack Kima Petro (sometimes spelled Kemo Pedro). He was a half-Portuguese construction specialist who acted as foreman for many of the building projects in the G&EIC and PISS. He was on Gardner in early 1939 building the 10,000 gallon water collection cistern which still stands today, and Emily seems to imply that he was on Beru when she left for Nikumaroro. Gallagher's proposal for the hospital to be built on Sydney Island (Manra) is dated July 4th, 1939 and was drawn up on Beru. He left Beru on July 11th and went to Fiji for medical treatment and administrative duty, returning on November 7th. Gallagher left Beru to go back to the Phoenix Group on January 7, 1940 and his "Progress Report, First Quarter 1940" states that the building of the hospital on Sydney was underway between January and March. Emily's correlation of her arrival on Nikumaroro with the departure of "Uncle Kemo" to build the hospital on Manra seems to place the event in January 1940.

Further support for this hypothesis is found in another passage from Gallagher's "Progress Report First Quarter 1940." In describing the settlement on Gardner he says, "Apart from an expert canoe builder and



TIGHAR photo by P. Thrasher

Model canoe and small boxes made from kanawa wood with inlaid aluminum, given as presents to PBY pilot John Mims by residents of Nikumaroro in 1944.

his family of four, there have been no additions to the population of Gardner since the last report was written." (This would have been Lands Commissioner Harry Maude's Second Progress Report dated November 29, 1939.) Curiosity about this statement is what prompted me to ask Emily the following series of questions:

RG: Any brothers or sisters?

ES: Three brothers, I was the only girl.

RG: Did the whole family come to Nikumaroro?

ES: Only three of us. Our eldest brother was at Tarawa.

RG: Did your father ever work at building canoes?

ES: Yes, he used to build canoes.

RG: Was that part of his job on Nikumaroro?

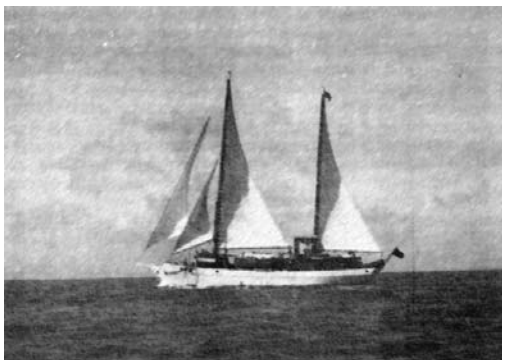
ES: Not while I was there. He did build small model canoes as presents.

Although he may not have actually practiced that particular skill while at Nikumaroro, it would appear that Temou, his wife, and three of his children are the "expert canoe builder and his family of four."

RG: Do you remember what ship brought the family to Nikumaroro?

ES: It was the government ship, *Kiakia*. Not a big boat.

There was, indeed, a small government ship named *Kiakia* which was used for administrative work.



Courtesy E. Bevington.

Royal Colony Ship Kiakia

RG: Were there many people who came with you?

ES: A policeman and his family came also.

Gallagher doesn't mention a policeman and family but they could have been destined for one of the other islands.

RG: Was there ever a time when there were Europeans who came to the island to do things?

ES: No.

This would seem to confirm that she arrived after the USS *Bushnell*'s survey of Gardner Island which was conducted from November 28 to December 5, 1939.

Gallagher's return to the Phoenix Group from Beru in January 1940 is the only known voyage which fits all of the conditions of Emily's description. It is not clear from the record what ship was used, but it could well have been the *Kiakia*. In his "Progress Report, First Quarter 1940" Gallagher mentions that he stopped briefly at Gardner in January but doesn't give the exact date. Other correspondence mentions that he arrived at Hull on January 14th and at Sydney, his final destination, on the 18th. Logically, that puts him at Gardner on or about the 12th. Unless better documentation turns up to the contrary, we will use mid-January 1940 for the supposed date of Emily's arrival at Nikumaroro.

Emily's Age

It is not uncommon for older people in Oceania to have difficulty placing their year of birth because they tend to have fewer points of reference, or connections to recorded dates than is common in Europe and America. Emily's statements about her age while she was on the island are not consistent. At one point she said, " I came in 1938-1939, when I was 11 years old" which would make her year of birth 1927 or 1928. When Tom King asked, "How old were you when your father built the box?" she said, "14 years old, not yet 15."

The box was built in the fall of 1940, so that would mean that she was born in 1926, but in response to my specific question:

"What year were you born?" she replied "1923," which would make her 16 or 17 at the time of her arrival and 17 or 18 when she left to attend nursing school. Because most people can more reliably relate the year of their birth than how old they were at the time of a particular event in the past, and because the older age is perhaps more credible for a young woman to go away to school, it seems most likely that Emily was a youth of about 17 during the period in question. In either event, she was a youth or young adult, not a child.

Having established fairly reliably that Emily lived, as a youth, on Nikumaroro from mid-January 1940 to November 30, 1941 with her father Temou, the island carpenter, and her mother and two of her three brothers, we can now review the context in which her experiences took place.

The Pioneers

When Emily and her family arrived on Nikumaroro in January 1940, the island's population was made up of 16 men, 16 women, 11 boys and 15 girls, for a total of 58 individuals. Of the 16 men, one was the Native Magistrate, and one was a medic, known as a Native Dresser. The remaining fourteen were Gilbertese laborers who, with their wives and children, hoped to eventually become landowners in the new colony. Like pioneers everywhere, they were poor people who had come to the wilderness to find opportunity and a better life. They were Protestant Christians, as were Emily and her family, for the London Missionary Society had established a firm hold in both the Ellice Islands and the southern Gilberts. The laborers spoke the Gilbertese language and had little or no English. We didn't ask but we must presume that Emily's father, an Ellice Islander sent by the government to help people to whom he was a foreigner, spoke at least some Gilbertese.

We don't have the name of the Native Dresser. In the British colonial system there were two categories of medical certification for indigenous people. "Native Dressers" received training in basic health, hygiene, and first aid. "Native Medical Practitioners" received more extensive instruction and served virtually as physicians for island communities between rare visits by the colony's Medical Officer who was a British doctor.

The Onotoa Man

The leader on Nikumaroro, whom Emily calls "the Onotoa man," was the Native Magistrate and overseer Teng (Mr.) Koata. Formerly Native Magistrate on the island of Onotoa in the southern Gilberts, Koata had been recruited by Lands Commissioner Harry Maude to help establish the settlement on Nikumaroro with the understanding that it would be a temporary assignment. Koata, whose "exceptional qualities of loyalty and leadership had been proved in the Onotoa religious troubles of 1931" (Maude, *Of Islands And Men*) had been one of the senior Gilbertese delegates on the original voyage in October 1937 when Maude, assisted by Cadet Officer Eric Bevington, evaluated Gardner, Hull, and Sydney Islands for future settlement. Koata also helped Maude and Gallagher install the first ten-man work party on the island in late December 1938 and returned to take up residence on the island with his family in June

Native Magistrate Teng Koata on Nikumaroro in December 1938. Photo courtesy Wigram Air Force Museum, New Zealand.

1939. He left Nikumaroro in 1940 on the RCS *Nimanoa* and traveled to the Central Hospital in Tarawa in the Gilberts where he arrived on or about September 30th. Whether he ever returned to the Phoenix Group is not known but a memorandum by Lands Commissioner Paul B. Laxton circa 1950 lists him as retiring and being replaced by "Teng Iokina" in 1941.

Kela

The other player in the drama is Gerald B. Gallagher, Officer-in-Charge of the Phoenix Islands Settlement Scheme, whom Emily calls "Kela." When the scheme was launched in early 1939, Gallagher, then 27 years old, made his headquarters on Sydney Island (Manra). He was able to keep track of events on Hull (Orona) and communicate with his superiors in the Gilberts and in Fiji by radio, but he was totally dependent upon rare visits by government ships for any inter-island travel. Because there was no radio on Nikumaroro until Gallagher moved his headquarters there in September 1940, his contact with the island prior to that time was sporadic at best.

Emily's two years on Nikumaroro, 1940 and 1941, span a crucial period in TIGHAR's investigation. She is there in the spring of 1940 when the skull is found. She is there in September when Gallagher arrives, learns of the discovery, and searches out the partial skeleton and artifacts. She is there when the bones are shipped off to Fiji in a box built by her own father. She is there the following September when Gallagher dies. And she leaves the island a week before the outbreak of the war in the Pacific.

Photo courtesy D. Clancy.

Gerald B. Gallagher, circa 1937

The Plane on the Reef

In Emily's mind, the bones for which her father built the box are inextricably linked to the airplane wreckage she says she saw on the northwestern reef, and yet we know from Gallagher's telegrams that the bones he found were near the lagoon shore on a completely different part of the island (which he describes variously as "the South East corner" and "on the South Eastern shore"). The correspondence also gives no indication whatever that Gallagher was aware of an airplane wreck on Nikumaroro. Clearly there is a conflict between Gallagher's and Emily's respective descriptions of the discovery.

Emily does not claim to be a witness to the finding of the bones and, in fact, says that she never saw them herself. Nevertheless, the documentary record leaves little doubt that bones were found. But what about the wreckage on the reef, which she says she saw on at least two occasions? Emily's description of what she saw from the beach, which is roughly 600 feet from the edge of the reef, was consistent in both interviews.

On July 15th Tom King asked:

TK: Where were the parts of the airplane?

ES: Not far from where the ship was. Not toward the village but away from it. The struts were there. (holds up hands in circle, apparently indicating that the struts were round in cross-section, about 20 cm. in diameter)

TK: Did people use parts of the airplane?

ES: I don't know for sure. When we got there only the steel frames were left, only the long pieces were there. We were frightened to go close to the plane. Where the shipwreck was—the remainder of the

plane was not very far from there. The waves were washing it in low tide.

And on July 27th I asked:

RG: Did you ever see any part of that plane?

ES: Only the frame, a piece of steel.

RG: And where was this piece?

ES: Nearby that wrecked ship. It was not far from there. From about here to that house. *[She points to a house across the road.]*

RG: OK. That's probably 100 meters. Was it on land or in the water?

ES: On the rocky part. It was not far from where the waves break.

RG: Let's look at a map. If you could show us the shipwreck?

ES: Is this the part called Nutiran? *[points to northwestern end of island]* Maybe this is the place. *[points to the small ship symbol on the map]* It was not very far from that place.

RG: *[explaining map]* This part here is the rock. The waves of the ocean break out here. The beach with the sand is here.

ES: That means this is where that plane was. It was not very far from the ocean where the waves break. That's why the parts of the plane got carried away quickly. That frame was also very rusty.

RG: Could you put a mark on the map where the plane was?

ES: *[marks the map]* It was here.

RG: And on the back of the map could you draw a picture of what you saw?

ES: It was a long steel. *[draws a line]* There was a round part of it. *[adds a small solid circle at the end of the line]* I do not know what part of the plane it was. We were forbidden to go there. I was following my father. When I went there my father stopped me.

RG: How big was this piece?

ES: About four arm spans. *[Holds her arms out.]*

RG: So it might fit in this room?

ES: Yes, barely. It was a big plane. *[The room was perhaps twelve feet long.]*

RG: How did you know that this was part of an airplane?

ES: I heard it from those who were there before us that it was part of an airplane.

RG: So the people on the island said that this was part of an airplane.

ES: Yes.

Russ: What color was the wreckage that you drew on the map?

ES: It was very rusty.

RG: What color rust?

ES: Very red. When it is seen at low tide. Not observable at high tide. At low tide it could be seen. Very rusty, bad, useless.

TIGHAR photo by R. Gillespie.

Low tide on the reef flat where Emily says there was once airplane wreckage. The distance from the beach in the foreground to the surf line is about 200 meters.

TIGHAR photo by R. Gillespie.

The reef surface near the shore is deeply pitted and quite jagged. The outer section of the reef flat, however, is relatively smooth.

RG: Was there other wreckage or debris around it or all by itself?

ES: Nothing.

RG: Did the people in the village have any pieces?

ES: No.

RG: You saw none of the other parts of the plane. The aluminum, the shiny parts?

ES: No, all gone. Nothing.

Fortunately we have a number of photographs taken between the date of the Earhart/Noonan disappearance and Emily's departure from Nikumaroro which include the specific location she describes. If Emily could see the wreckage, we should be able to see it too. And we can, or at least we can see something that fits her general description of what she saw in the place where she says she saw it.

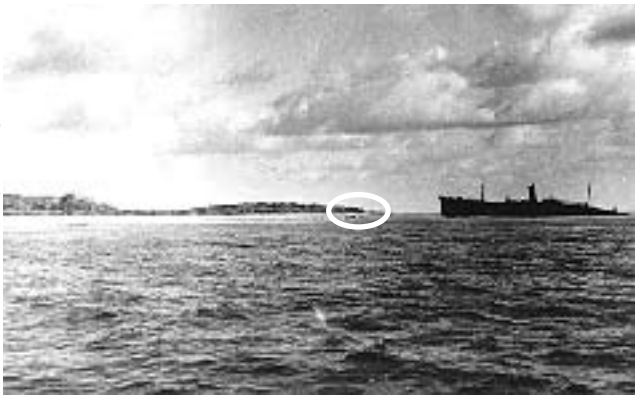


Photo courtesy E. Bevington

Photo #1 (above) is a copy photo of a photograph taken by Eric Bevington in October 1937 during the first British evaluation of the island for future settlement. It shows the western shoreline of Nikumaroro and the northern side of the wreck of SS *Norwich City* which is, at that time, largely intact. The sea is quite calm and a line of low breakers delineates the outer edge of the reef. Just north of the shipwreck and just behind the line of breakers two objects are clearly visible.

Photo #2 (right) is a photograph taken in December 1938 by the New Zealand survey party which was on the island at that time. The camera is looking out through a hole in the north side of the SS *Norwich City* and shows the reef edge looking northward from the wreck. The photo is one of several dozen in a scrapbook of the expedition. The caption reads "Undertow through gap in side of Wreck." It is possible to make out what appear to be the same objects on the reef which appear in the 1937 photo.

Neither of these photos has been altered or enhanced in any way, but even from these "raw" images it is apparent that there was something where Emily says there was airplane wreckage.

The objects in the photos are not there now but forensic examination of better copies of these and other photos might provide more information about what they were and where they went. Of course, we can't tell from the black and white photos what color the objects were, but we should be able to get some idea

Photo courtesy Wigram Air Force Museum, New Zealand.

of how big they were by scaling them to *Norwich City* whose dimensions we have. Could the airplane pieces have been, in fact, merely debris from the shipwreck? That doesn't seem very likely. At the time the photos were taken the ship had not yet started to break up and when it did, the debris field scattered predominantly southeastward toward the shore and the main lagoon passage. Gales and high seas hit Nikumaroro almost exclusively from the northwest.

With photographic confirmation that there was something there, and in the absence of a good alternative explanation for what it might be, it makes sense to accept Emily's

second-hand identification of it as a working hypothesis. If further photographic research can establish that the material which is present in Bevington's October 1937 photo (a contemporaneous, primary source document) is from an aircraft, the implications are obvious. Air traffic over the remote reaches of the Central Pacific prior to October 1937 was extremely rare and is very easy to catalog. Only one airplane from this period is missing: Earhart's.

The Bones from the Plane

But what about the bones? Emily quite clearly talks about two different groups of bones—one set which she associates with the airplane wreckage and other bones which she associates with the shipwreck. Of the former she said in the first interview with Tom King:

TK: Did you see the plane fall?

ES: No, it was already there when I came. ...The steel of the plane was there sometime before we got there. *[asked specifically about aluminium, she says no]* Fishermen found the bones. They were frightened and they brought the story of them to the Onotoa man.

TK: What did Koata do?

ES: He sent people to bring the bones. People were frightened. Only people working for the government received the bones. My father had to look at the bones. Mr. Gallagher asked my father to make the box.

And in the second interview:

RG: What can you tell us about the bones that were found?

ES: Some Gilbertese went to fish, they saw in the shallows some pools, at the place where the plane crashed, some bones, and they knew these were human bones because of the skull bone. They went and reported to Teng Koata, there were bones. So from that they assumed that these must have been the bones of those who were in the plane when it crashed. These were under the plane, near the plane. This was near the top end of the steel.

RG: Did you see the bones?

ES: I didn't see them. We were forbidden, but my father told us.

RG: Were the bones found while you were on the island or did this happen before?

ES: These bones were found when we had already arrived on the island. These Gilbertese came and found bones and reported to Teng Koata. Then Teng Koata took them to the European. So it was arranged for a box to be made for the bones and the bones were brought. There were not many bones.

RG: Were any other bones ever found on Niku?

ES: Only these few bones they found. They do a search around that area but they found no other bones. Only these big bones that they found. I do not know how many. My father knew.

Aside from where she says the bones were found, her account actually tracks fairly well with the known facts. A Gilbertese work party found a skull which Koata knew about. The European (Gallagher) did find out about the skull and conducted a search. Not many bones were found (a total of 13) and most of these were relatively large. Gallagher had a box made for the bones. In short, it does seem that the bones Emily associates with the airplane wreck are the bones that were actually found elsewhere on the island.

For another opinion see "Where Were The Bones" by Dr. Tom King on page 38.

Too Many Bones

Sorting out the bones associated with the shipwreck is more difficult. Emily told Tom King of "Maybe 10 different people whose bones were found along that area" (near the shipwreck). She is quite clear that these bones were found on land:

> "You would come up on the reef, then the beach comes up where the island shrubs start to grow. That is where the bones were found."

Emily's account is consistent with the recollections of Gallagher's clerk, Bauro Tikana, who wrote in 1991, "When we first arrived I saw the ship wreck and asked Mr. Gallagher about it. He told me that it was *Norwich City*. Later when the laborers were cleaning (clearing) the land they told me that they found bones near the ship. I do not know if Mr. Gallagher knew about the bones as I did not tell him about it. The laborers also told me they found bones at the other end of the atoll."

Mr. Tikana marked a map showing that bones were found on shore near the shipwreck, but to show where the "other bones" were found he could only circle the entire southeast portion of the island.

We know that there were eleven men lost in *Norwich City* wreck in 1929 and that three bodies washed up and were buried by the survivors. If the burials were not very deep and were on or close to the beach, it seems possible that they may have been uncovered by storms in the ensuing ten years or so. It's also possible that other bodies from the wreck washed up after the survivors were rescued. However, if a body from the airplane wreck (Noonan?) also washed up or was buried on that same beach it could be indistinguishable from the shipwreck bones.

Answers and Questions

Emily Sikuli's story, supported by historical documents and photographs, offers some long-sought answers to the riddle of the Earhart/Noonan disappearance. Whether or not they are the correct answers remains to be seen. They do, however permit us to adjust and refine the hypothesis we are attempting to test.

But as answers to old questions are offered, new questions arise. Why does Emily associate the bones so strongly with the airplane wreck? And why did Koata put the area off limits? It is apparent that this was done before Gallagher arrived and found the other bones and the artifacts. Why did the finding of just a skull on a different part of the island cause Koata to put the airplane wreck off limits? And why didn't Koata , or anybody else, tell Gallagher about the plane?

The association of the bones with taboo airplane wreckage is something that we've heard before. Tapania Taiki, in 1997, told us of seeing pieces of an airplane on the reef and in the shoreline vegetation when she was a child on Nikumaroro in the late 1950s:

"The older people said they saw the skeletons of a man and woman, one each. The elders said, 'Do not go where the plane is. There are ghosts there.' They were trying to scare us to keep us away from there."

Tapania Taiki

Photo courtesy K. Spading.

Debris Field

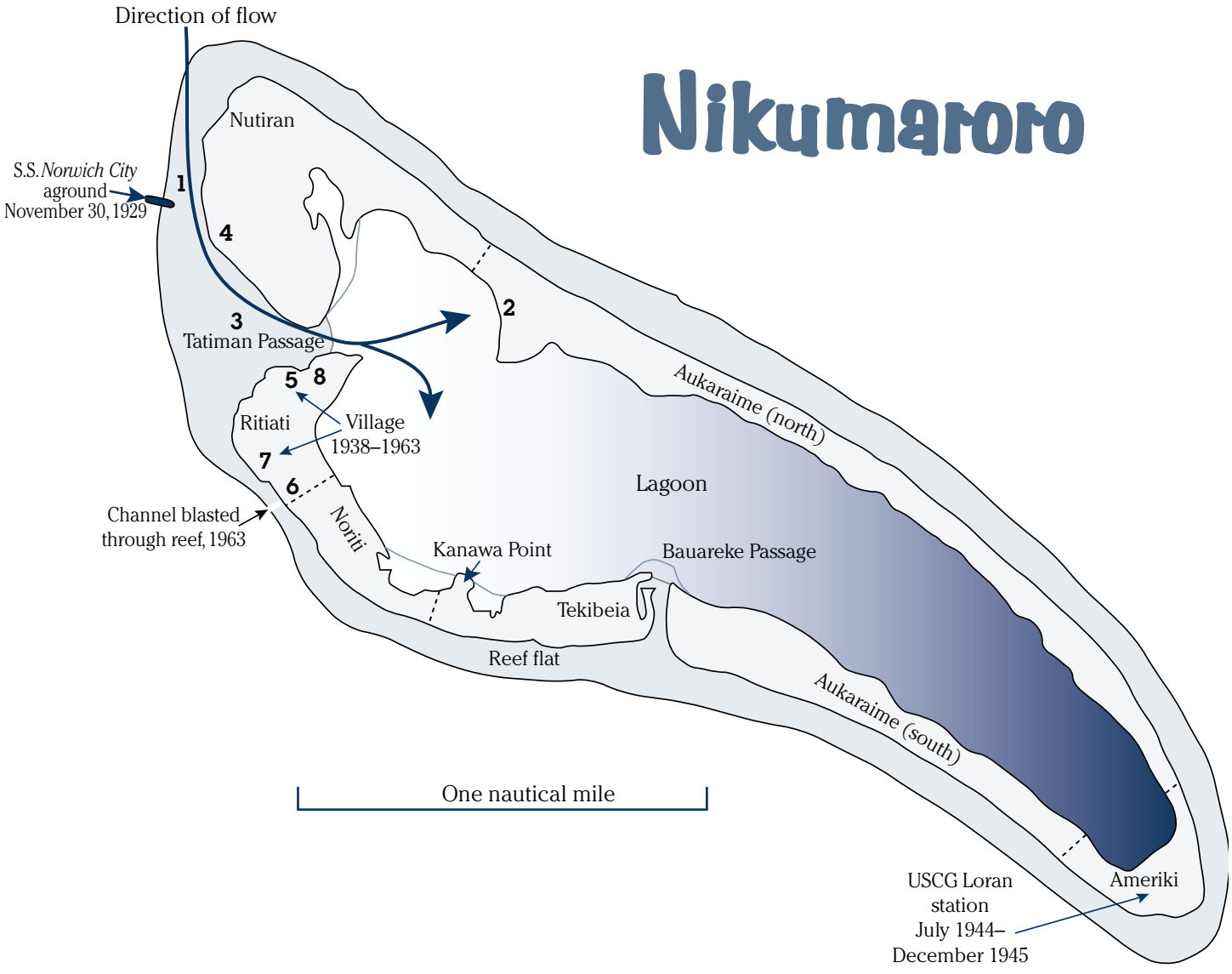
But Tapania's plane parts were not seen in the same place Emily describes. Over the years we have come across a number of anecdotal accounts of aircraft wreckage seen at Nikumaroro; and we have ourselves found a few pieces of aircraft debris which we suspect might be from the Electra. Are these real and rumored airplane parts random and contradictory? Or do they all fit together to form a logical sequence of events?

- On two occasions between January 1940 and November 1941 Emily Sikuli sees rusted structures, said to be the wreckage of an airplane, on the reef near the ocean just north of the shipwreck (**map reference 1**). Emily does not see the wreck up close and no aluminum is visible from shore, but fisherman have been to the plane.
- Sometime in late 1944 or early 1945, U.S. Navy PBY pilot John Mims is shown an aircraft control cable being used as a heavy-duty fishing line leader by Gilbertese fishermen on Nikumaroro. When asked where it came from one of the islanders replies that when the Gilbertese people first came to the island there was an airplane here. When asked where the plane is now, he just shrugs.
- Sometime in the late 1950s or early 1960s, the schoolmaster on Nikumaroro, Pulekai Songivalu, sees aircraft wreckage along the lagoon shore just opposite the main passage (**map reference 2)**.
- During roughly the same time period, his daughter Tapania sees a "piece of a wing" in the water on the reef off the shore of Nutiran not far from the main passage. Aerial photographs taken in 1953 indicate the presence of anomalous light-colored, reflective material on the reef in this same area (**map reference 3**). Tapania also sees "airplane parts" in the shoreline vegetation (**map reference 4**). not far from a "European house" made of lumber rather than native materials.
- In 1989 TIGHAR finds an aluminum aircraft component near the shore of the main passage in the abandoned village (**map reference 5**). The "dado," an interior feature usually found in the cabins of small civilian aircraft including the Lockheed Model 10, is a complete assembly still bearing a fragment of the quarter-inch kapok insulation which once covered one side. Quarter-inch kapok insulation was standard on the Lockheed 10. Unlike military parts, the dado is stamped with no part number.
- In 1991 TIGHAR finds a section of aluminum aircraft skin on the island's southwestern shore in the wash-up from a recent severe storm (**map reference 6**). Although exhaustive research has not yet been able to match the rivet pattern to any aircraft, the general features of the skin (type of aluminum, thickness, rivet type, size and spacing) are typical of the Lockheed 10. The damage to the skin indicates that it was blown outward by a tremendous fluid force, such as wave action.
- In 1996 TIGHAR finds a fragment of Plexiglas in the abandoned village which matches in material, thickness, color and curvature the specification for Lockheed Part Number 40552, the cabin windows of the Lockheed 10 (**map reference 7**). Also found are two lengths of what appears to be pre-war American radio cable with connectors of a type used in aviation applications. These were found near the shore of the main passage in the remains of what was once the shop of the island carpenter, Temou Samuela (**map reference 8**).

These seem to suggest that the aircraft arrived at or near the place where Emily saw wreckage (**map reference 1**) and was quickly, perhaps within days, destroyed by the violent surf. In the ensuing years, storms further scattered the wreckage along the natural lines of

force. Buoyant material would travel farthest and may account for Pulekai's sighting of wreckage on the lagoon shore (**map reference 2**). Some non-buoyant wreckage might eventually be pulled back out over the reef edge but most of the aluminum should be scattered southeastward along the flat, as is indicated by Tapania's piece of a wing and the 1953 photos (**map reference 3**). Storms could drive pieces of the wreck ashore anywhere to the leeward of its starting place where they might be found and used by the locals.

It is important to remember that, by itself, Emily's anecdotal recollections do not prove anything, but just as garbled anecdotal accounts of bones being found on Nikumaroro eventually led us to archival sources which documented a fascinating but forgotten chapter in the Earhart puzzle, so Emily's tale has set us on a trail that may lead us to whatever is left of NR16020.



Where Were the Bones?

by Thomas F. King, Ph.D., SOPA

Although TIGHAR's Executive Director Ric Gillespie attributes the differences between Emily's and Gallagher's descriptions of where the bones were found to a misimpression Emily may have had at the time (see "The Bones from the Plane," page 34), that is certainly not the only possible interpretation.

TIGHAR's Senior Archaeologist Dr. Tom King offers another view of what may have happened.

There are two major discrepancies between the 1940-41 correspondence surrounding the discovery of human remains on Nikumaroro, and the 1999 testimony of Emily Sikuli.

1. In the 1940–41 correspondence, on two separate occasions Gerald Gallagher says the discovery site was on the southeast end of the island. Mrs. Sikuli describes bones found on the northwest end.
2. Gallagher makes no mention of an airplane wreck; Mrs. Sikuli does.

There are three major ways I can think of to account for these discrepancies:

1. Gallagher was keeping things from his superiors, and deliberately misleading them as to the location of the discovery. Related possibilities include some sort of dyslexic confusion of northwest with southeast, and a collective effort by Gallagher and his colleagues to avoid recording the wreck or expunge references to it from the record.
2. Mrs. Sikuli is misremembering, or deliberately seeking to mislead.
3. The two accounts refer to two separate bones discoveries.

Let's look at each of these possibilities in turn:

Gallagher Isn't Telling the Truth.

It is difficult to imagine what motive Gallagher would have for keeping information about the discovery from his superiors, and if he did want to keep information from them, why keep only some of it? Why report the bones and cook up a fairy story about where they were found? Why not simply let the dead lie, and report nothing? Besides, the correspondence surrounding the bones and their transport to Fiji is so rich in detail, and so internally consistent, that it would have taken a considerable effort to construct it artificially, or to take it apart, remove pieces, and put it back together in the seamless form we now find it to have. As for dyslexia, we have no evidence that Gallagher suffered from such a syndrome, which would, one would think, have been hard to miss in someone who traveled a good deal over the ocean and supervised the subdivision of land. The only piece of evidence suggesting that something might have been going on concerning the bones that is not represented in the documents is a reference by Isaac, the medical officer in Tarawa, to a "guillotine conversation" with Gallagher (see "The Tarawa File," *TIGHAR Tracks* Vol.

13, Nos. 1&2, page 30). At the time, Isaac had confiscated the bones and quarantined the Tarawa harbor; he was coming under a good deal of pressure from his superiors to change his stance, and one can imagine some reference to a guillotine in a conversation among the parties involved ("You are putting your head under the guillotine, Isaac."). But how could Isaac and Gallagher have conversed, unless there was some means of communication other than the key-operated wireless, which according to all accounts was the only radio link between Tarawa and Nikumaroro? We don't know, but this small mystery would be a lot to build a whole conspiracy theory upon.

In short, based on current evidence there is no reasonable basis for thinking that the 1940–41 documents contain anything other than the truth, the whole truth, and nothing but the truth as understood at the time by the parties involved.

Mrs. Sikuli is Mis-remembering or Lying

Misremembering is certainly plausible. We all misremember from time to time, and it is particularly easy to misremember things that we don't talk about often. Mrs. Sikuli says that she has not talked about the bones or the airplane with Mrs. O'Brian in all the years they have lived in Fiji, and it was apparent that she had not discussed them with Mr. Tofiga. Her daughter says that the bones/wreck story was not among those she recounted to her children when remembering Nikumaroro. But she is so positive in her assertions, and provides so much detail (found near the wreck by fishermen, turned over to Koata; the area restricted by Koata; the bones turned over to Gallagher; put in the box, etc.) that one has to conclude there is something real upon which her memory is based. As for a deliberate effort to mislead: Mrs. Sikuli has no known motive for doing so, and there was nothing in her manner that suggested to any of us that she was being anything but entirely forthright in recounting her recollections. This is not proof, of course, but we have no reason to suspect the accuracy of her account – as an account of events as she remembers them.

Another reason for believing Mrs. Sikuli is the independent testimony, eight years earlier, by Bauro Tikana, Gallagher's clerk. Mr. Tikana said he had been told by the laborers on the island about the discovery of bones near the wreck of the *Norwich City*.

In summary: it is certainly possible, even likely, that Mrs. Sikuli's recollections aren't entirely clear and accurate reflections of what really happened in 1940, but there is good reason to think that she is reliable in reporting the discovery of bones somewhere near the *Norwich City*.

The Stories are About Different Bones

In addition to the bones near the *Norwich City*, Mr. Tikana reported bones found on the southeast end of the island. Similarly, Rev. Aberaam Abera, who said he was born on Nikumaroro in 1940, reported that "the older people told a story about finding bones of white people – two white people – on Gardner," going on to say that "some people said those bones were from people who had been on the wrecked ship." In the same set of interviews, Dr. Teinamati Mereki reported the discovery of skeletons of "white people wearing shoes," and identified the discovery site as the lee ocean side of the island toward its southeast end. Thus there is reason to believe that there were two sets of bones found on the island – one near the *Norwich City*, the other somewhere on the southeast end.

But Mrs. Sikuli identified the Nutiran bones as those that were put into the kanawa wood box and given to Gallagher. How do we account for this, if the Nutiran bones are not the ones referred to in the 1940–41 documents?

"Memory," says ethnohistorian Jan Vansina, "reorganizes the data it contains," going on to note that "in the reordering of topics accounts from a later period are placed with those of earlier times and vice versa." Vansina's focus is on long-developing oral tradition—though he alludes to one case in which "a major personage in Lugbara creation (traditions) is a British District Officer from the tern of the century"—but we have all probably experienced the compression of multiple memories into one, and its converse. In reviewing my own field notes from the 1989 expedition to Nikumaroro, I've been surprised at the number of times that events I recall as being more or less coincident were substantially separated in time, and at the number of events I had thought were quite separate that in fact happened almost coincidentally. Who can recall on precisely which Christmas they received a particular gift?

So what may have happened on Nikumaroro?—and I confess that I'm attracted to this hypothesis because it accounts for so many things.

1. The laborers find the first skull somewhere on the southeast end of the island. They bury the skull, and Koata takes the Benedictine bottle. Gallagher arrives and Koata sails for Tarawa. Gallagher learns about the skull and bottle, telegraphs Tarawa to get the latter back from Koata, and searches the site, finding the rest of the bones, the sextant box, and the shoe parts, but of course not finding the airplane wreck because it's not there. He has the box built and the bones shipped to Fiji. By this time Koata has returned from hospital (indeed, it may be that Gallagher's delay in exhuming the skull resulted from the need to await Koata's return; perhaps Koata, as a traditional elder and leader of the group, had taken it upon himself to bury the skull in some safe place known only to him).
2. Gallagher goes to Fiji. While he is away, fishermen find more bones, on Nutiran near a pile of wreckage on the reef. They report this to Koata. Having learned from Gallagher about Earhart's flight, Koata associates the wreckage with the airplane, declares the area off limits, and holds the bones somewhere pending Gallagher's return.
3. Gallagher returns and promptly dies. Koata and his colleagues, for whatever reason (one can imagine several) don't report the bones to anybody else, and quietly dispose of them.
4. Mrs. Sikuli, remembering all this almost sixty years later, compresses the two discoveries into one.

This proposition has advantages. It resolves the conflict between Mrs. Sikuli's and Gallagher's accounts, and it accounts for Gallagher's failure to say anything about the airplane wreck. It is consistent with the reports of two bones discoveries. It doesn't require anybody to be lying, and it is plausible in the context of the way memory tends to work. It is, of course, also entirely hypothetical.

It also leaves some questions unanswered. Were the bones on Nutiran those of *Norwich City* casualties, or those of somebody else? In her interview with Barb Norris, Kris Tague and me, Mrs.Sikuli seemed pretty clearly to indicate that there were two different sets of bones on Nutiran—one group of perhaps ten people on the shore, and one set in the water near the airplane wreck. In her interview with Ric and his colleagues, she had much less to say about the on-shore bones; it was almost as if she had further consulted her memory and concluded that she wasn't so sure about them. But in any event, we know that people died in the water around the *Norwich City*, that some were buried, and that others may have washed up on shore. The shipwreck seems the

most plausible source for the bones found near the plane wreck, though clearly this was not what Mrs. Sikuli—and presumably the adults who told her about them—thought. We don't know why they thought the bones were from someone other than a *Norwich City* casualty, except for their putative association with the plane wreck. But this association is suspect; it is very difficult to imagine human bones surviving in the active environment of the reef edge.

Going through this exercise also highlights another issue: was what Mrs. Sikuli saw on the reef really the remains of an airplane wreck? If the "just so" story I've posited above is anything like accurate, then it would have been Koata—or perhaps other colonists—who identified the pieces of metal as parts of an airplane. It would not have been anyone with extensive knowledge of what an airplane wreck might look like. So was the wreckage really that of an airplane, or was it something off the shipwreck that was misinterpreted by the colonists, who perhaps were feeling a little sensitive about having failed to report the first bones discovery to Gallagher?

As usual, all this hypothecating leads me around in a circle, but it does point to a couple of lines of research—one of which we're already pursuing, the other one that we haven't seriously considered in the past.

Clearly Koata is an important player in whatever happened with bones in 1940–41. Koata is dead, but as of the 1950s he had a son, Teunaia, who probably would have been around ten at the time of the bones discovery. If we can find Teunaia, he may have something to tell us. An ethnographer in Norway, Dr. Sidsel Roalkvam, worked with Teunaia in the 1950s; TIGHAR's resident in Norway, Lonnie Schorer, is looking up Dr. Roalkvam.

Another person who might have been able to discriminate between airplane and *Norwich City* wreckage would have been Emily Sikuli's uncle, Jack Kima Petro, a skilled mechanic and builder with wide experience throughout the area. One of Mr. Petro's sons is a senior elected official in the government of the Republic of the Marshall Islands; we tried to contact him some years ago, but not with any great urgency since we had no reason to think that Mr. Petro was a particularly key figure in the Earhart story. He may not be; we do not know whether he was even on the island when the bones discovery (or either of the bones discoveries) was made. But we need to look further into this, and we need to try harder to contact his son.

References

Dirk A. Ballendorf and Jul Hoehl: The Waghena Island Connection. MS, TIGHAR, February 1996, p. 11A.

Op cit, p. 9.

Jan Vansina: Oral Tradition as History. University of Wisconsin Press 1985, pp. 176-7.

Ibid.

Gallagher's Clues

Whether or not there were bones found other than the partial skeleton collected by Gerald Gallagher is still a matter of debate. What is not in dispute is that the young Colonial Service officer found human remains that possibly, even probably, were those of Amelia Earhart. If we can pinpoint where on the island Gallagher's discovery was made we can conduct a thorough search and perhaps find more material. But that is easier said than done.

As far as we know, Gallagher never marked a map or provided a detailed description of exactly where he found the bones. Instead, he made passing references in various correspondence from which we must assemble our treasure map.

1

On October 6, 1940 in response to a question from the Resident Commissioner as to how far from shore the bones were found, Gallagher says:

"100 feet from high water ordinary springs"

His reference here is to "spring tides" which have nothing to do with the season of the year. Spring tides occur twice each month, just after full and new moon, and are ordinarily the highest tides of the month. Tidal excursions slowly diminish over the following week to neap tides, when the tides are typically at their lowest. Other references (see below) make it clear the Gallagher is talking about the lagoon shore rather than the ocean beach.

2

On October 17, 1940 in response to a question from the Secretary of the High Commission as to where the bones were found, Gallagher says:

"Bones were found on South East corner of island about 100 feet above ordinary high water springs..."

The problem here is figuring out how broadly he is defining the "South East corner" of the island.

3

In the same communication Gallagher says:

"Body had obviously been lying under a "ren" tree and remains of fire, turtle and dead birds appear to indicate life."

"Ren" refers to *Tournefortia argentia*, a smallish tree that now grows pretty much all over the island, so that's not much help. Birds, likewise, are not unique to any one part of the atoll but their principle nesting grounds tend to be along the northern and southern shore (see map). We've seen turtle tracks most often on the ocean beach along the northern shore but also occasionally on the southern shore.

4

In the same communication Gallagher says:

"All small bones have been removed by giant coconut crabs which have also damaged larger ones."

Whether or not the scattering was actually done by coconut crabs, Gallagher obviously thought that there were crabs in the area. *Birgus latro* much prefers the shady forests to the harsher, more open parts of the island–but then, logically, so would a castaway.

5

In the same communication Gallagher says:

"... this part of island is not yet cleared"

From aerial photos and official reports we have good information about what parts of the island were cleared and planted, and when (see map).

6

In Gallagher's letter that accompanied the bones and artifacts to Fiji, dated December 27, 1940 he says:

"... found on the South Eastern shore of Gardner Island"

Again, that's a pretty broad statement.

7

In the same letter Gallagher says:

"...the skull has been buried in damp ground for nearly a year"

This would seem to be another indication that the site was in a shady forest area.

8

In the same letter Gallagher says:

"... something may come to hand during the course of the next few months when the area in question will be again thoroughly examined during the course of planting operations, which will involve a certain amount of digging in the vicinity"

Clearly, the area in question was scheduled to be planted. Whether those plans were ever carried out is another question.

9

In the same letter Gallagher says:

"... the coffin in which the remains are contained is made from a local wood known as "kanawa" and the tree was, until a year ago, growing on the edge of the lagoon, not very far from the spot where the deceased was found."

This would seem to place the site quite definitely near the lagoon shore.

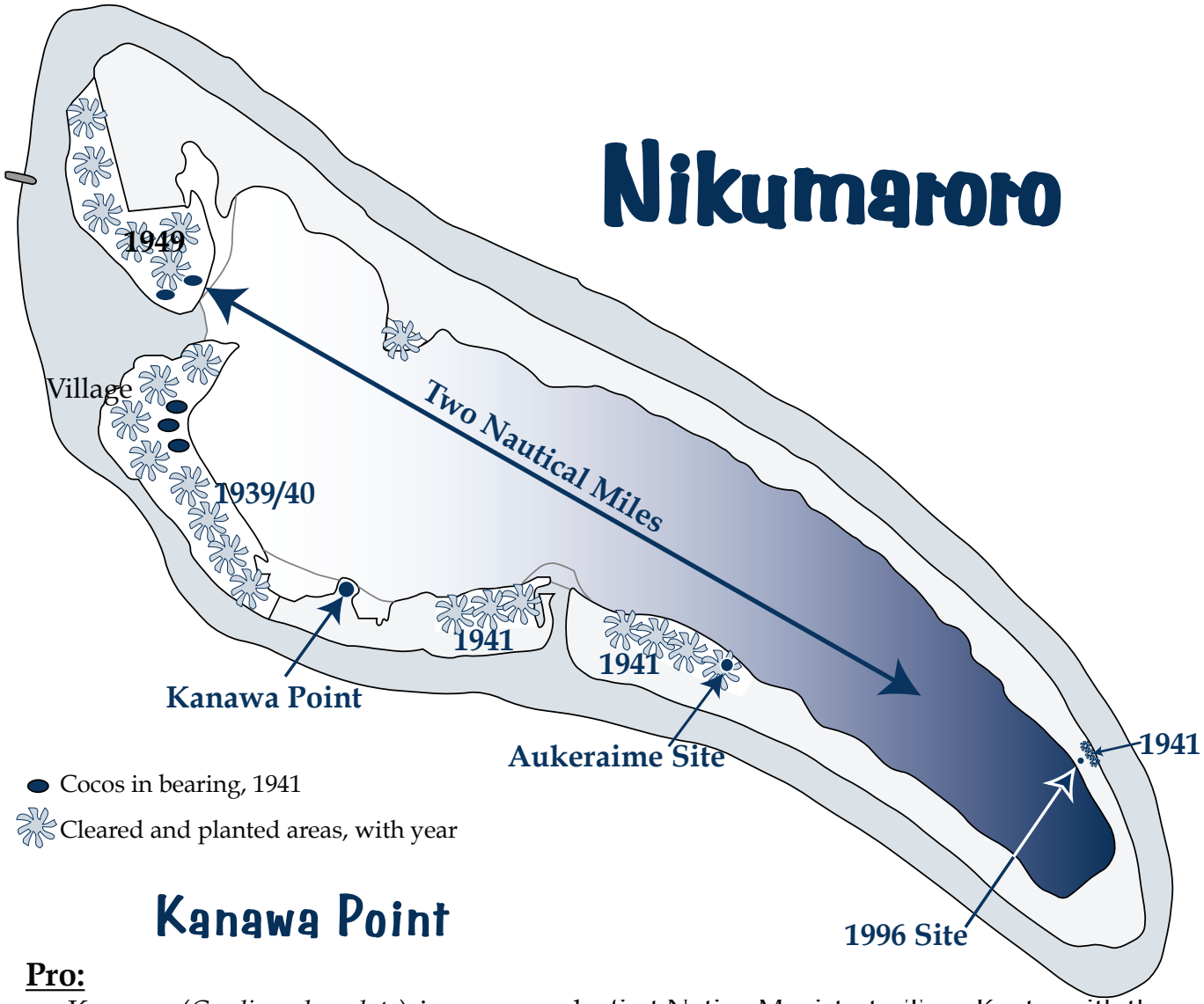
10

In a note to the file in Fiji on July 3, 1941 Gallagher wrote:

"There was no evidence of any attempt to dig a well and the wretched man presumably died of thirst. Less than two miles away there is a small grove of coconut trees which would have been sufficient to keep him alive if he had only found it. He was separated from those trees, however, by an impenetrable belt of bush.

This could be a pretty good clue, depending upon how literally we want to take Gallagher's estimate of distance. In 1941 there were five groves of mature coconut trees on the island (see map).

From these and a few other sparse clues we have come up with three possible sites. Each fits Gallagher's formula in some ways, but not in others. Perhaps one of them is the right place or maybe none of them is. Here are the arguments pro and con for each one.



Kanawa Point

Pro:

Kanawa (*Cordia subcordata*) is a rare and valuable hardwood that once grew on Nikumaroro but is apparently now extinct, having been harvested out early in the colonial period. The specific mention of a kanawa tree growing on the lagoon shore close to the castaway's campsite (No. 9 above) raises the suspicion that the site was on the one place on the island where we know that kanawa trees once grew in abundance. A small peninsula along the atoll's southern shoreline appears as "Kanawa Point" on the map made by the 1938/39 New Zealand survey party for that reason. It was also said to be the scene of a strange encounter by the wife of the island's first Native Magistrate, I'eng Koata, with the atoll's guardian spirit Nei Manganibuka (see "Kanawa Point" in *TIGHAR Tracks* Vol. 14, Nos. 1&2).

Con:

By no stretch of the imagination is Kanawa Point on the south east corner (Point 2 above) or the south east shore of Nikumaroro (Point 6 above). Also, Kanawa Point was never planted to coconuts (see Point 8 above) and is within one mile, not two, of the nearest stand of coconut trees that were present in 1941 (see Point 10 above).

Summary:

Favoring Kanawa Point: Points 5, 9.

Against Kanawa Point: Points 2, 6, 8, 10.

Assessment:

TIGHAR has found no artifacts on Kanawa Point but neither have we conducted any kind of real search there. Although it was probably once open and quite pleasant, it is now thickly overgrown with dense scaevola underbrush. An organized inspection of Kanawa Point would be a labor intensive and time consuming enterprise. With so little going for it, a search of Kanawa Point now seems to be a low priority.

The Aukeraime Site

Pro:

This is the location where, in 1991, TIGHAR found the heel, fragmented sole, and one brass shoelace eyelet from what appears to have been a shoe identical in type, vintage, and size to those worn by Earhart on her final flight. Nearby was the heel from a different pair of shoes. Given that Gallagher also found the partial sole of a "woman's stoutish walking shoe" and some portion of a man's shoe, this would seem to be a strong indication that we're in the right neighborhood. The place where we found the shoe parts is near the lagoon shore and it is certainly possible that a kanawa tree once grew there (Point 9). Our find was made a bit more than 100 feet above the usual high tide line; however, it's also clear that we found shoes that Gallagher didn't find, so the site of his discovery could be a bit closer to the lagoon (Point 1). The Aukeraime site is on the southeastern part of the island (Point 6) and we know that the area was cleared for planting by June of 1941 (Point 8). The nearest stand of cocos in 1941 was just under two miles away (Point 10).

Con:

Although on the southeastern shore, the Aukeraime site is nowhere near the southeast "corner" of the island (Point 2). Another more speculative argument against this site is that the width of the land mass between lagoon shore and ocean beach is about 400 meters and, presuming that the turtle was caught on the ocean beach, it is difficult to imagine a castaway dragging a several hundred pound turtle that far (Point 3).

Summary:

Favoring the Aukeraime Site: Points 1, 6, 8, 9, 10.

Against the Aukeraime Site: Points 2, 3.

Work in progress at the Aukaraime Site, 1997. TIGHAR photo by P. Thrasher.

Assessment:

Because the Aukeraime Site has appeared to be so promising as the place where the bones may have been originally found, TIGHAR devoted a considerable amount of time to detailed searches of the area during Niku II in 1991 and Niku III in 1997. Results have been disappointing. Aside from the shoe parts found in 1991, the only object of interest was a partially burned fragment of a paper can label found in the ashes and charcoal of a small fire uncovered in 1997. Subsequent analysis of the fragment has reliably dated it to relatively modern times and we now suspect that it, and the fire it was in, may be from a 1978 survey of the island by Kiribati authorities. A further examination of the Aukeraime Site would mean

expanding the search area into the surrounding coconut jungle–a difficult prospect given the carpet of fallen nuts, some rotted, some rooted, which covers much of the ground.

The 1996 Site

TIGHAR's attention was first drawn to this area in 1990 by anecdotal accounts from Coast Guard veterans who told of coming upon an abandoned "water collection device" while out exploring along the island's northern shore. The device was said to consist of a tank , possibly metal, with a covering of some kind rigged above it on poles so that rainwater would drain into it. There was said to be a pile of bird bones and feathers nearby and a place where there had been a small fire. We speculated that this could be a survival camp with a cistern fabricated from one of the aircraft's fuel tanks and, during Niku II in 1991 we made a concerted but unsuccessful effort to find it.

Late in 1995, at TIGHAR's request, Photek Inc. of Hood River, Oregon performed a forensic imaging analysis of aerial photographs of the area taken in 1941. The process revealed the presence of man-made objects in a particular spot within the suspect area. Guided by the enhanced photos, a short (4 days on the island) expedition to Nikumaroro in February 1996 succeeded in locating the site but we were disappointed to find that the tank and several other artifacts nearby were clearly associated with the British colonial settlement, not an aircraft. Detailed measurements were made and the objects and features found were photographed and videotaped. Five artifacts were collected (see below). It appeared that the expedition had disproved the hypothesis that the site had been an Earhart/Noonan survival camp. (See *TIGHAR Tracks* Vol. 12, No. 1 "The Niku III Preliminary Expedition.")

Recently, however, TIGHAR Senior Archaeologist Dr. Tom King suggested another possible explanation for the material found at the 1996 Site. We had noted that by the time the bones and artifacts reached Fiji in the spring of 1941, a few items were present which had not been mentioned by Gallagher in his original notification in September of 1940 (namely, parts of a man's shoe, "corks with brass chains" thought to have come from a "small cask," and an "inverting eyepiece" for a sextant that was subsequently "thrown away by the finder"). It is, of course, possible that Gallagher merely neglected to mention these items in his original report but that seems rather unlikely given his apparent thoroughness. The other possibility is that the additional items were found later during further search operations. In a posting to TIGHAR's Earhart Forum email research group, Tom King put it this way:

- *Gallagher, newly arrived on Niku, first reports the bones discovery on 23rd September 1940. He reports the skull, other bones, the shoe, and the sextant box, but not the inverting eyepiece or the corks on chains.*
- *On 6th October, when he provides amplified details, he still doesn't mention them (but he's responding to specific questions).*
- *On 17th October he still doesn't mention them, though by now he says "we" have "searched carefully." He opines that an "organized search" would take several weeks.*
- *On 26th October Vaskess (Secretary of the High Commission) directs him to make an "organized search."*
- *According to Gallagher's quarterly progress report for this period, "[t]he second half of the quarter was marked by severe and almost continuous North-Westerly gales, which did considerable damage to houses, coconut trees, and newly planted lands." The second half of this quarter would have been November-December. Hard to make an organized search.*
- *On 27th December, however, he acknowledges the 26th October telegram and says that the bones and sextant box have been packaged for shipment to Fiji. The latter, he*

says, also "contains all the other pieces of evidence which were found in the proximity of the body."

So one wonders, was there a further, organized search during the second half of the last quarter of 1940, during breaks in the storms, which produced (perhaps among other things) the corks on chains? And if so, who did the searching? All the colonists? Some smaller group? Gallagher by himself? And does this suggest anything to us about where the search might have taken place? It would seem to argue against anyplace very far from the village – hard to travel very far in the heavy weather – unless one equipped oneself to go and stay for awhile. Which makes one wonder about the "house built for Gallagher" that Laxton (an administrator who visited the island in 1949) places on the southeast end of the island, and that is apparently represented by the water catcher seen by the Coast Guard and re-located by TIGHAR in 1996. – – Tom King.

This interesting hypothesis has prompted a re-examination of the data collected in February 1996. The site is located on the northern coastline of the atoll about 1,000 meters from the extreme southeastern tip. In this area the ribbon of land surrounding the lagoon is at its narrowest, spanning only a little over 100 meters from lagoon shore to ocean beach. Today the region is solid scaevola ("te Mao") with scattered *tournefortia* ("Ren") but aerial photos show that in June 1941 there was a band of *Pisonia grandis* ("Buka") behind the beachfront bulwark of scaevola. The presence of many old fallen Buka trunks today confirms that the area was once open forest such as still predominates just a few hundred meters further along the coastline to the northwest.

This is what we found in 1996:

About 25 meters into the bush from the vegetation line along the lagoon shore was a steel tank measuring 3 feet square by 4 feet high. It was painted white with the words "Police" and "Tarawa" dimly legible in blue. The corners and bottom were very rusty and the tank had not been watertight for a long time. The top was open, apparently rusted away, and in the bottom lay a steel ring which had clearly once been the fitting for a heavy round steel hatch that lay on the ground nearby with the words "Baldwins Ltd.–Tank Makers–London" molded into it. In the bottom of the tank were six coconut shell halves which had apparently been used as drinking cups. There were no coconut trees in the area.

On the ground beside the tank were three wooden poles, each roughly two meters long, a few very rusted scraps of corrugated metal, and the base of an unusual-looking light bulb (which we collected as Artifact 2-3-W-3). About three meters from the tank was a small Ren tree at the base of which was a scattering of very dry bird bones (see photo next page).

The water tank; note pole beside tank. TIGHAR photo by P. Thrasher.

About seven meters from the tank, on the side away from the bird bones, was a depression in the ground roughly 3 meters across by less than a meter deep. The coral rubble in the bottom of the hole was quite loose, suggesting that the hole had once been deeper but the sides had slid down. At the time, we speculated that the hole represented an abortive attempt to dig a well. Lying amid the loose coral rubble in the bottom of the hole was a spent .30 caliber rifle cartridge with the number "43" on its base (collected as Artifact 2-3-W-4). This is consistent with the M-1 carbines carried by the Coast Guard and reportedly used to shoot at birds.

The bird bones with six inch scale in foreground. TIGHAR photo by P. Thrasher.

Beginning about 15 meters from the tank, going toward the ocean beach, and scattered over the next 24 meters were:

- three small pieces of very fine copper screening. (Sample collected as 2-3-W-1)
- a dark brown four-hole button 15 mm (a little over a half inch) in diameter. Material uncertain. (Collected as 2-3-W-5)
- a broken finished wooden stake approximately 1 inch square in cross section and perhaps 18 inches long.

A half-dug well? Or the place where the skull was dug up?

TIGHAR photo by P. Thrasher.

- an empty, very rusted can about the size and shape of a can of car wax.
- a flattened roll of tar paper with green roof shingle material on one side.
- an irregularly shaped sheet of asbestos (?) roughly 18 inches square by 1/4 inch thick (fragment collected as 2-3-W-2).
- the rusted remains of a steel barrel or drum.
- a broken shard from a white porcelain plate
- near the plate shard were two holes in the ground about two meters apart which gave the impression of having once held poles upright, although no poles were in evidence. (See map of site, next page.)

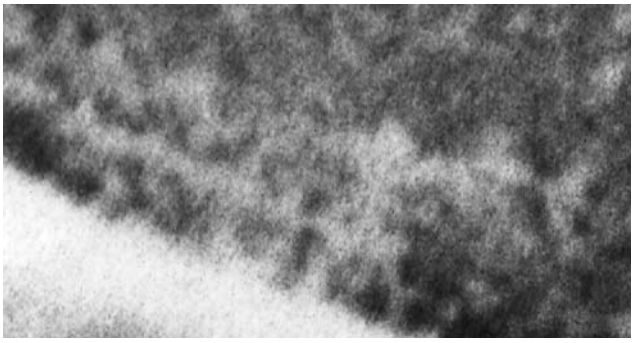
Considering the hypothesis that the site, as surveyed in 1996, represents the original 1940 bone discovery site with an overlay of later material brought there to support the "organized search" ordered by the Western Pacific High Commission, we can subject the site to the same evaluation process we've used on the other two candidate sites.

Pro:

The 1996 Site is within a kilometer of the southeastern tip of the island and so would seem to match Gallagher's description of being at the south east corner (Point 2) and on the south east shore (Point 6) of the island. An examination and comparison of aerial photos taken in 1937, 1938, 1939, and 1941 shows that the site remained uncleared (Point 5) until 1941 when clearing operations became evident on the ocean side but, curiously, not on the lagoon side. It appears that planting was contemplated (Point 8) but was never carried out, possibly as a consequence of Gallagher's death in September 1941.

The narrowness of the land mass at this point means that the site is both close to the lagoon shore (Point 9) and close to the ocean beach where turtles come ashore to lay their eggs (Point 3). The presence of bird bones at the site also fits Gallagher's description but there is no way, at present, to determine whether the bird bones are the same ones seen by Gallagher and later the Coast Guardsmen,

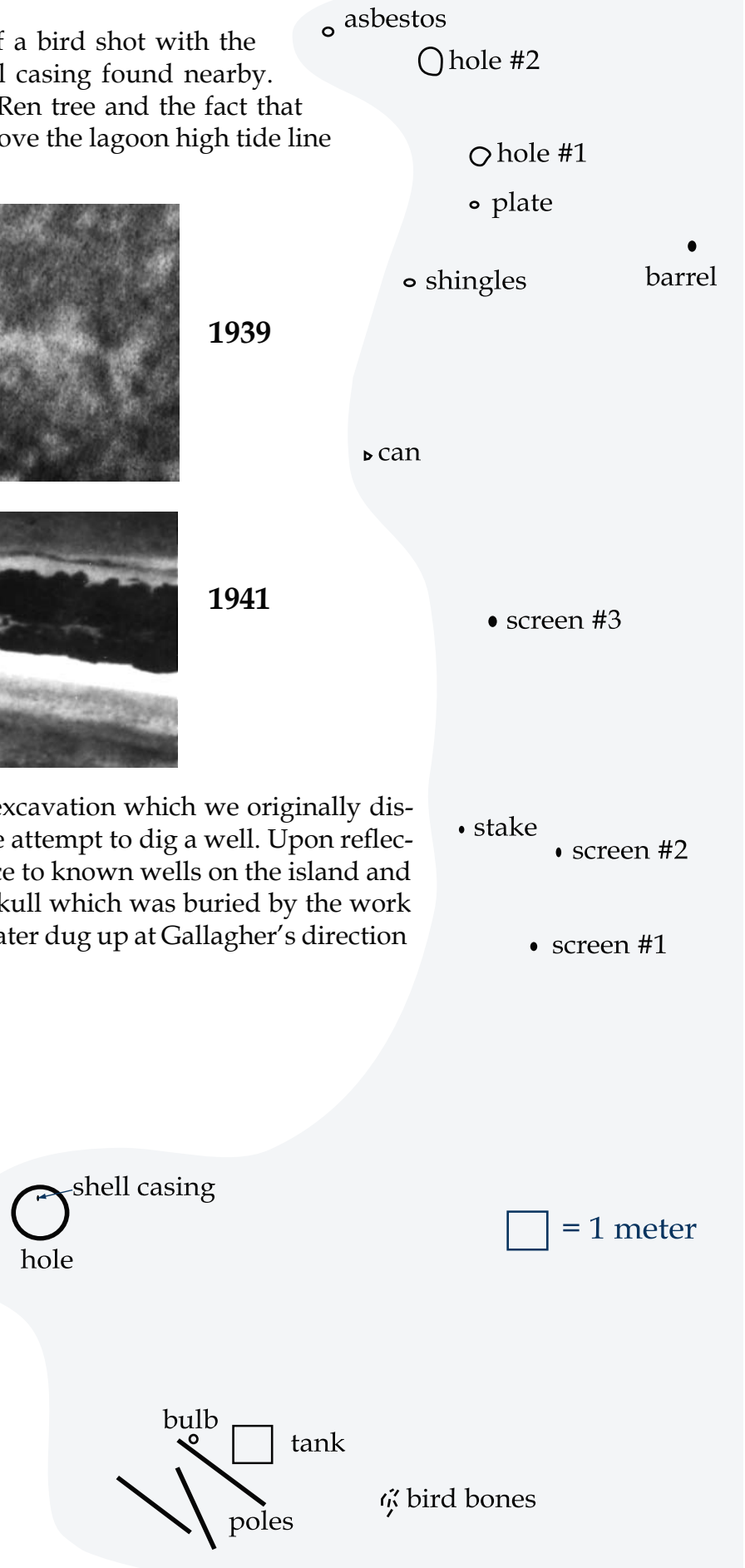
or may even be the bones of a bird shot with the bullet from the carbine shell casing found nearby. However, the presence of a Ren tree and the fact that the site is roughly 100 feet above the lagoon high tide line (Point 1) are interesting.



1939

1941

Of particular note is the excavation which we originally dismissed as someone's abortive attempt to dig a well. Upon reflection, it bears little resemblance to known wells on the island and could, in fact, be where the skull which was buried by the work party that first found it, was later dug up at Gallagher's direction (Point 7).



Con:

The only aspect of Gallagher's description of the bone discovery site that does not fit the 1996 Site is that the nearest stand of cocos in 1941 is more than two miles away (Point 10).

Summary:

Favoring the 1996 Site: Points 1, 2, 3, 5, 6, 7, 8, 9.

Against the 1996 site: Point 10.

Assessment:

Based upon a straight quantification of the attributes described by Gallagher, the 1996 site would seem to be the most promising of the three candidate sites. But if the bones were originally found there, how did the shoes end up at the Aukeraime Site? Of course, any answer is purely speculative, but because we know that both sites were actively being worked in 1941 it seems possible that material found after Gallagher's departure in early June may have been brought across the lagoon to Aukeraime. When Gallagher returned in late September he was gravely ill and died within three days.

Further search operations at the 1996 Site will be difficult due to the remoteness of the area and the heavy scaevola growth, but we're accustomed to dealing with those problems. One particularly attractive aspect of this site is that, unlike the other two candidate sites, it is remote from the settled part of the island and appears to be relatively undisturbed since Gallagher's time. If the excavation we found there is, in fact, where the skull was exhumed, the possibility exists that one or more teeth may still be in the hole. Teeth can be an excellent source of mitochondrial DNA. If DNA from a tooth found in that hole were matched to that of Earhart's living relatives we would have the conclusive proof we've been looking for, but for now it's all just another hypothesis to be tested when we return to Nikumaroro.

The TIGHAR Hypothesis

In the course of twelve years of research, our impression of what happened to Amelia Earhart, Fred Noonan, and the Lockheed Electra in which they disappeared has changed and evolved many times as new information has been uncovered and old theories have been laid to rest. We fully expect that process to continue, but here is how the picture looks at this time.

1. At 08:43, twenty hours and thirteen minutes into the flight, and with somewhere between three and four hours of fuel remaining, Earhart and Noonan have been unable to make visual or two-way radio contact with Howland Island. They implement the only procedure available to them which will minimize the chance of having to land the aircraft in the sea—they proceed southeastward on a heading of 157°.

2. Shortly before noon, the aircraft is landed successfully on the reef-flat at Gardner Island at low tide on the smooth stretch of coral just north of the S.S. *Norwich City*, the ship that ran aground there eight years earlier.

3. That evening, the aircraft's radio is used to send distress calls. Transmissions continue for a few days.

4. By a week later, rougher seas and increased surf on the reef have forced Earhart and Noonan to abandon the aircraft which is now obscured from view at high tide. The castaways seek shelter from the sun in the dense bush inland and come upon a cache of provisions left behind by the rescuers of the *Norwich City* survivors eight years earlier. When search planes from the USS *Colorado* are heard overhead on the morning of July 9th Earhart and Noonan are unable to reach the open beach in time to be seen. If anything of the airplane was visible through the surf, its proximity to the *Norwich City* led the searchers to dismiss it as debris from the shipwreck.

5. Literally marooned on a desert island, Earhart and Noonan survive for a time but eventually succumb to any of a number of possible causes including injury and infection, food poisoning (some local fish are highly toxic), or simply thirst. Noonan dies not far from the site of their landing. His bones are later found and buried by the island's first settlers. Earhart dies at a small makeshift campsite near the lagoon shore on the island's southeastern portion. Her remains are discovered there in 1940 by British authorities.

6. The airplane on the reef is destroyed by surf action and the debris is scattered "downstream" across the reef-flat, along the shoreline, and into the lagoon. During the island's period of habitation (1938—1963) the colonists encounter, and in some cases recover and use, various bits of wreckage, but most of the debris is eventually swept through the main lagoon passage and deposited in the large sandy shoal just inside the passage. Those components recovered by the colonists are mostly consumed in local uses such as fishing tackle and decorative items.

Today Whatever now survives of NR16020 is either on the lagoon bottom or buried in the sandy shoal just inside the main passage. Some wreckage may have been pulled seaward from the original landing site and may rest on an offshore coral shelf. The apparent absence of wreckage in the shoreline vegetation at the west end of the island (as indicated by TIGHAR's 1999 search) is probably due to earlier salvage activity by the colonists and the scouring action of significant weather events in subsequent years. Buoyant bits of wreckage may have washed up anywhere along the lagoon shore and may still survive deep in the dense shoreline vegetation. More scraps of salvaged material used by the islanders almost certainly survives in the abandoned and overgrown village.

The portions of Earhart's skeleton that were found on the island in 1940 (a skull and several arm and leg bones) and taken to Fiji for examination in 1941 may still exist. The bones that were not found (primarily the spine, ribs, half of the pelvis, hands and feet, one arm, and one lower leg) have probably now been consumed by the forces of nature. The bones that were recovered and examined may still exist but search efforts to date have been unsuccessful. Noonan's remains may be buried in one of the graves found on the western end of the island.

The Evidence

Here are the puzzle pieces that make up the picture described above.

July 2, 1937
08:43 Local time

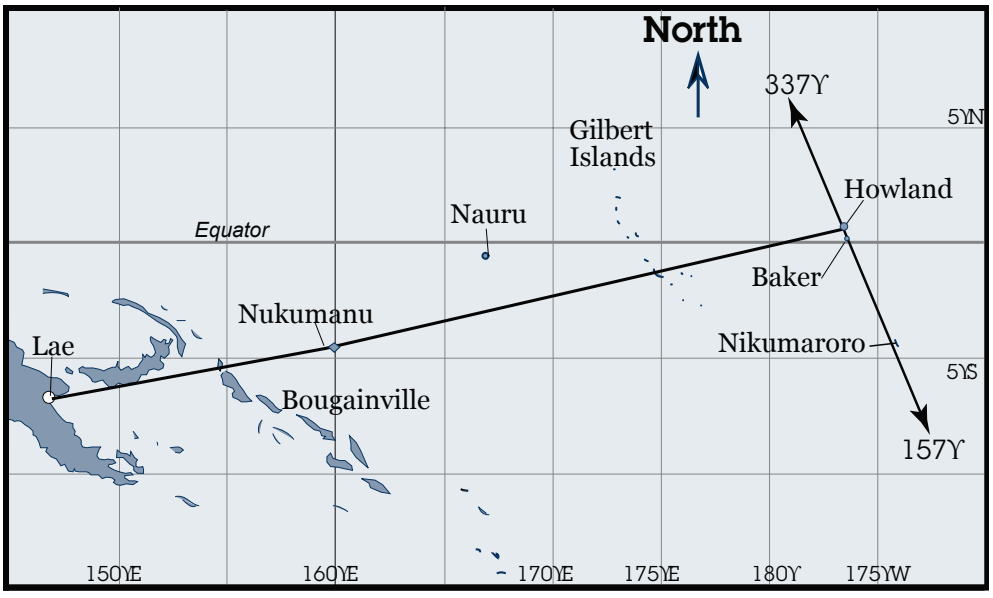
HYPOTHESIS 1

Twenty hours and thirteen minutes into the flight, and with somewhere between three and four hours of fuel remaining, Earhart and Noonan have been unable to make visual or two-way radio contact with Howland Island. They implement the only procedure available to them which will minimize the chance of having to land the aircraft in the sea–they proceed southeastward on a heading of 157°.

SUPPORTING EVIDENCE

- The aircraft's known fuel load at departure and the power/fuel management recommendations given to Earhart by Lockheed engineer Clarence "Kelly" Johnson, indicate that the aircraft should have had a maximum endurance of roughly 24 hours. (*Report by Guinea Airways Manager Eric Chater dated 25 July 1937 and telegrams from Johnson to Earhart dated March 11 & 13, 1937.*)
- When last heard from at 08:43 (20 hours and 13 minutes into the flight) Earhart said she was flying on a "157/337" line. *(Radio Log USCG* Itasca*, 2 July 1937.)*

  She was not understood to say which direction she was flying but U.S. Navy authorities in 1937, Earhart's husband George Putnam, and her technical advisor Paul Mantz all agreed that the flight probably proceeded southeastward on the line in the hope of reaching land. (*Report of Capt. W.L. Friedell, commanding officer USS* Colorado*, date 13 July 1937.*)
- Such a line passing through Howland Island also passes within visual range of Gardner Island (see map below, Nikumaroro).



July 2, 1937 Late Morning

HYPOTHESIS 2

The aircraft is landed successfully on the reef-flat at Gardner Island at low tide on the smooth stretch of coral just north of the S.S. Norwich City, the ship that ran aground there eight years earlier.

SUPPORTING EVIDENCE

- Early settlers on Gardner Island (Nikumaroro) tell of an airplane wreck seen in 1940,, long before any possibility of WWII activity. The wreckage is said to have been located on the reef near "where the waves break" and just north of the shipwreck. (*Interviews with former residents Emily Sikuli and Otiria O'Brian in Fiji in July 1999.*)
- Photographic evidence confirms the presence of anomalous material in that location as early as October 1937. (*Photographs taken by Eric Bevington in October 1937 and by New Zealand Pacific Aviation Expedition in 1938/39.*)

July 2, 1937 Evening

HYPOTHESIS 3

The aircraft's radio is used to send distress calls. Transmissions continue for a few days.

SUPPORTING EVIDENCE

- On the evening of July 2nd, the radio station on the island of Nauru (which had heard Earhart's in-flight transmissions the night before) hears "Fairly strong signals, speech not intelligible, no hum of plane in background, but voice similar to that emitted from plane in flight last night." (*Telegram dated 3 July 1937 addressed to U.S. Secretary of State, Washington, D.C., reporting transmission heard on Nauru.*)
- The signals are heard on 6210 kilocycles, the frequency to which Earhart said she was switching in her 08:43 transmission. (*Radio log USCG* Itasca.)
- The unintelligibility of the voice message is attributed to "bad modulation or speaker shouting into microphone." (*Message received by USCG* Itasca *July 3, 1937.*)
- While in Lae, New Guinea Earhart was advised to "pitch her voice higher to overcome distortion caused by rough carrier wave" when using 6210 Kilocycles. (*Report by Guinea Airways Manager Eric Chater dated 25 July 1937.*)
- Experts at the time agree that for the airplane to be sending radio transmissions it must be on land and able to operate the starboard generator-equipped engine to recharge its batteries. (*Message received by USCG* Itasca *on July 5, 1937.*)
- Over the next few days further transmissions heard by a variety of stations cause the Navy to concentrate its search on the islands of the Phoenix Group. (*Official U.S. government message traffic July 2- 9, 1937.*)
- Analysis of the alleged post-loss messages using modern radio propagation software reveals many to be effectively impossible but some, such as the transmission described above, appear to be highly credible. (*Report by Robert Brandenburg, LCDR, USN [Ret.].*)

July 9, 1937 Morning

HYPOTHESIS 4

Rougher seas and increased surf on the reef have forced Earhart and Noonan to abandon the aircraft which is now obscured from view at high tide. The castaways seek shelter from the sun in the dense bush inland and come upon a cache of provisions left behind by the rescuers of the *Norwich City* survivors eight years earlier. When search planes from the USS *Colorado* are heard overhead on the morning of July 9th Earhart and Noonan are unable to reach the open beach in time to be seen. If anything of the airplane was visible through the surf, its proximity to the *Norwich City* led the searchers to dismiss it as debris from the shipwreck.

SUPPORTING EVIDENCE

- The captain of the S.S. *Norwich City*, rescued from the island with the surviving members of his crew in 1929, wrote that: "Before leaving camp all provisions, etc., were placed in the shelter, but I sincerely hope that no one will ever be so unfortunate as to need them." (*Undated written statement by Capt. Daniel Hamer, master, S.S.* Norwich City.)
- A photograph of the *Norwich City* survivors' camp taken in 1938, shows the site to be in considerable disarray and may be an indication of later use. (*Photo of "Wreck survivors' camp" taken by New Zealand Pacific Aviation Survey, December 1983/February 1939.*)
- A photograph taken during the July 9, 1937 aerial search for the Earhart plane shows that the tide was high and there was significant surf running on the reef at the time of the Navy overflight. (*Aerial photograph of Gardner Island dated July 9, 1937.*)
- The description of the search by the Senior Aviator notes that "Here, signs of recent habitation were clearly evident but repeated circling and zooming failed to elicit any answering wave from possible inhabitants and it was finally taken for granted that none were there." (*Article entitled "Aircraft Search for Earhart Plane" written for U.S. Navy Bureau of Aeronautics Weekly Newsletter by Lt. John O. Lambrecht, Senior Aviator, USS* Colorado.)
- The only documented inhabitation of Gardner island prior to 1937 was a brief stay by perhaps 20 laborers who planted coconut trees in 1892 for a few months. (Lambrecht did not know the island was uninhabited.) (*British government report "History of Gardner Island", H.E. Maude.*)

1937/1938

HYPOTHESIS 5

Literally marooned on a desert island, Earhart and Noonan survive for a time but eventually succumb to any of a number of possible causes including injury and infection, food poisoning (some local fish are highly toxic), or simply thirst. Noonan dies not far from the site of their landing. His bones are later found and buried by the island's first settlers. Earhart dies at a small makeshift campsite near the lagoon shore on the island's southeastern side. Her remains are discovered there in 1940 by British authorities.

SUPPORTING EVIDENCE

- In October 1937 a small British expedition to Gardner Island noted unexplained "signs of previous habitation" along the southeastern lagoon shore. The site was later described as looking "like someone had bivouacked for the night." (*Diary of Eric R. Bevington, entry for October 13, 1937 and interview with Bevington in 1991.*)

- Anecdotal accounts by former residents and an American serviceman tell of the remains of a man and a woman discovered on the island and, in some cases, associated with the purported airplane wreck. (*San Diego Union interview with Coast Guard veteran Floyd Kilts in 1960; TIGHAR interviews with Dr. Teinamati Mereki and Reverend Aberaam Abera in the Solomon Islands in 1995; with Tapania Taeke on Funafuti in 1997; with Emily Sikuli and Otiria O'Brian in Fiji in 1999.*)
- Extensive official British government records confirm the discovery in 1940 of the partial skeleton of a castaway who perished while attempting to survive on Nikumaroro sometime prior to the island's settlement in 1939. The remains of a fire, dead birds and a turtle were present. With the bones were found a sextant box bearing a stencilled number that is similar to a number written on a sextant box known to have belonged to Fred Noonan, and the remains of a woman's shoe and a man's shoe. Also at the site were "corks with brass chains" thought to have been from a small cask and may have come from the *Norwich City* supply cache. Similarly, a Benedictine bottle found with the remains may have been part of the cache. Although at first suspected of being the remains of Amelia Earhart, the possibility is later discounted by British authorities after a doctor (with no forensic training) pronounces them to be the bones of a short, stocky male. (*Records of the Western Pacific High Commission.*)
- Although, so far, the present location of the bones themselves is not known, evaluation by modern forensic anthropologists of measurements taken in 1941 indicate that the individual who died on Nikumaroro was most likely a white female of northern European extraction who stood approximately 5 feet, 7 inches tall (not a bad description of Amelia Earhart). (*Paper prepared by Dr. Karen Ramey Burns, Dr. Richard Jantz, and Dr. Thomas F. King for the annual meeting of the American Anthropological Association in 1998.*)
- The remains of a shoe found on Nikumaroro by TIGHAR in 1991, in the same part of the island where tradition holds that the bones were found in 1940, has been judged to be of the same vintage, style and size as the shoes worn by Earhart on her final flight. (*Analysis by the BiltRite Corporation in 1992.*)

  Other bones are said to have been found near the shipwreck by the island's first settlers in 1939. TIGHAR has identified at least one, and possibly two, graves in that area. (*Correspondence with Bauro Tikana in Tarawa in 1991; interview with Emily Sikuli in Fiji in 1999; search operation conducted in 1999.*)

1938–1963

HYPOTHESIS 6

The airplane on the reef is destroyed by surf action and the debris is scattered "downstream" across the reef-flat, along the shoreline, and into the lagoon. During the island's period of habitation (1938—1963) the colonists encounter, and in some cases recover and use, various bits of wreckage, but most of the debris is eventually swept through the main lagoon passage and deposited in the large sand shoal just inside the passage. Those components recovered by the colonists are mostly consumed in local uses such as fishing tackle and decorative items.

SUPPORTING EVIDENCE

All of the anecdotal and photographic evidence is chronologically and sequentially consistent.

- The earliest accounts and photos depict a large body of wreckage on the reef-flat near the ocean. (*Interview with former resident Emily Sikuli in Fiji in July 1999. Photographs of anomalous material in the alleged aircraft wreck location taken by Eric R. Bevington in 1937 and the New Zealand Pacific Aviation Survey in 1938.*)
- The anomalous material visible in the 1937 and 1938 photos is no longer apparent in photos taken after December 1940 when severe weather is known to have damaged the western end of the island. (*Photographs taken by the U.S. Navy in 1941 and the U.S. Army Air Corps in 1942; Phoenix Islands Settlement Scheme Quarterly Report for fourth quarter 1940 by Gerald B. Gallagher, Officer in Charge.*)
- An anecdotal account describes an aircraft control cable used as a heavy-duty fishing line leader and a large fishhook fashioned from aluminum by residents of Nikumaroro in 1944. When queried, the locals said the material came from "an airplane that was here when our people first came." When asked where the airplane is now they just shrugged. Small wooden boxes made on the island are decorated with inlaid 24ST aircraft aluminum. (*Interview with former USN PBY pilot Dr. John Mims in 1995; souvenir boxes owned by Dr. Mims.*)
- Two 1953 aerial photos indicate the presence of light colored metal debris on the reef-flat near the main lagoon passage "downstream" of the location of the anomalous material seen in the 1937 and 1938 photos. The *Norwich City* debris is uniformly dark in color. (*Forensic imaging of 1953 aerial mapping photo.*)
- Anecdotal accounts of former residents describe aircraft debris seen on the reef near the main lagoon passage, in the shoreline vegetation, and along the lagoon shore just opposite the passage in the late 1950s. (*Interviews with Pulekai Songivalu and Tapania Taeke on Funafuti in 1997.*)
- Aircraft debris consistent with the Lockheed Model 10 and, to date, not identified as consistent with any other aircraft type known or suspected to have been in the region, has been found in and near the abandoned village on the island. (*Results of TIGHAR expeditions in 1989, 1991, and 1996.*)

Today

HYPOTHESIS 6

Whatever now survives of NR16020 is either on the lagoon bottom or buried in the sandy shoal just inside the main passage. Some wreckage may have been pulled seaward from the original landing site and may rest on an offshore coral shelf. The apparent absence of wreckage in the shoreline vegetation at the west end of the island (as indicated by TIGHAR's 1999 search) is probably due to earlier salvage activity by the colonists and the scouring action of significant weather events in subsequent years. Buoyant bits of wreckage may have washed up anywhere along the lagoon shore and may still survive deep in the dense shoreline vegetation. More scraps of salvaged material used by the islanders almost certainly survives in the abandoned and overgrown village.

The portions of Earhart's skeleton that were found on the island in 1940 (a skull and several arm and leg bones) and taken to Fiji for examination in 1941 may still exist. The bones that were not found in 1940 (primarily the spine, ribs, half of the pelvis, hands and feet, one arm, and one lower leg) have probably

now been consumed by the forces of nature. The bones that were recovered and examined may still exist but search efforts to date have been unsuccessful. Noonan's remains may be buried in one of the graves found on the western end of the island.

Testing the Hypothesis

Pre-Expedition Research

Before returning to Nikumaroro, several research projects need to be completed so that we can further validate (or, if need be, modify) the working hypothesis to maximize the expedition's chances for success.

- **Re-evaluation of the aircraft's range and endurance.**

New information has made possible a much more detailed evaluation of the aircraft's performance on its final flight. Especially in the light of recently published speculation that the aircraft ran out of fuel at the time of the final radio transmission heard by the *Itasca*, it is important to establish what can and can not be said about the flight's capabilities. TIGHAR is presently assembling a blue ribbon panel of independent experts to perform a new evaluation.

- **Propagation analysis of the post-loss radio signals.**

Recent software advances make possible a detailed computer analysis of the various transmissions suspected at the time as emanating from the lost aircraft. A team of TIGHAR volunteers has compiled a comprehensive list of the recorded incidents which will be databased and evaluated. It should be possible to know which alleged post-loss transmissions are almost certainly bogus and which are more credible. This technique has already shown the transmission heard by Nauru on the evening of July 2nd to be highly credible.

- **Forensic imaging of historical photos.**

This hi-tech project has the potential for producing a photographic "smoking gun." If the anomalous material visible on the reef at Nikumaroro in the 1937 and 1938 photos can be shown to be aircraft wreckage, there is only one aircraft that it could be. Air traffic in the region prior to World War Two is easy to document and only one aircraft is missing—Earhart's.

- **Verification and further analysis of how the western end of Nikumaroro "works."**

Only recently have we come to have an understanding of how the shape of the main lagoon passage and the force of major weather events out of the west and northwest seem to create a venturi effect that greatly influences the distribution of any material caught up in it. We need to consult with experts in this field to learn more about where we should look.

- **Continued analysis of artifacts recovered.**

We still have many avenues of research to follow in learning more from the artifacts we've recovered from the island. Only a few of the dozens of items collected have been conclusively identified.

- **Examination of archival records and interview of former island residents in Tarawa.**

We know that there are official records in Tarawa that we've never seen, and we've heard of former residents of Nikumaroro living in Tarawa who have interesting stories to tell (like the woman who says she was shown "the grave of a pilot").

- **Further efforts to find the bones in Fiji.**

There is much more that could be done to try to find a paper trail that could lead us to Earhart's bones.

The Niku IIII Expedition

Assuming that on-going research continues to support the current hypothesis, the following search operations are contemplated for NIKU IIII.

- A side-scan sonar and visual scuba search of the lagoon bottom just inside the main lagoon passage.
- A sub-bottom profiling sonar search of the sandy shoal.
- Excavation of sonar "hits" in the sandy shoal using an underwater archaeological suction dredge.
- A hand-held metal detector and visual scuba search of the offshore ledge north of the shipwreck.
- A detailed examination of *Norwich City* wreckage on the reef-flat in search of aircraft components that may have become hung up in the shipwreck debris.
- Ground Penetrating Radar examination of the known grave and suspected grave on the island's western end and excavation of the features if warranted.
- Further archaeological survey of the abandoned village.
- Detailed examination of the 1996 Site.

At this time, the NIKU IIII expedition is scheduled for the summer of 2001.

(Frequently Asked Questions)

Isn't it more logical that the Electra simply ran out of gas and crashed into the ocean?

Intuitive? Yes. It's a big ocean and Howland is a tiny island. Logical? No. Howland was by no means the only island within range and the aircraft should have had more than enough fuel to reach an alternate destination. Certainly the crew was highly motivated to reach land and Noonan was probably the finest aerial navigator in the world. A means of finding land, even if they couldn't find Howland, was available to them and Earhart said, in the last radio transmission heard by the *Itasca*, that they were following that very procedure: running along the 157/337 line of position. That call came at her regularly scheduled transmission time. It was not a distress call and Earhart said nothing about running out of gas or landing at sea. She did say that she was changing her radio to a different frequency. The *Itasca* had never heard her on that frequency, and they never heard her after she switched. The extensive search which followed the flight's disappearance found no evidence that the plane went into the water and, to this day, there is none. There is, however, abundant evidence (but, as yet, no absolute proof) that the flight reached a logical alternate destination: Gardner Island, now known as Nikumaroro.

Isn't it possible that Earhart was captured by the Japanese?

Possible? Yes. It is also possible that she was kidnapped by space aliens. There just isn't any evidence to suggest that either event occured. The trouble with all of the many eyewitness accounts of a woman thought to be Earhart being captured, imprisoned, executed, etc., by the Japanese is that there is little or no agreement about where or when or how this was supposed to have happened. All the stories are different and there is not the first shred of real evidence to support any of them. No documents, no photographs, no artifacts, no human remains—just stories. Various authors have presented documents, photos, artifacts, and even human remains to support their claims, but in each and every case the evidence has proven to be false, misrepresented, or so vague as to be meaningless.

What the historical record does show is that it was a physical impossibility for the Earhart flight to have reached territory controlled by Japan and, even if it had, there was nothing there to spy on in 1937, and no military to capture her for spying on something that wasn't there.

How hard would it be to land the Electra on the reef at Nikumaroro?

Depends on where you try. Large stretches of the reef flat are smooth enough to ride a bicycle on. Other parts are pitted and quite jagged. Today, the area where former residents say they once saw airplane wreckage is marginal. The Electra had nice big fat tires. I'd say that you'd probably blow the tires but wouldn't necessarily collapse the gear or flip the airplane. What it was like in that area 60 years ago is anybody's guess.

If the Electra was on the reef at Gardner Island when the search planes from the battleship *Colorado* flew over the island a week later, why didn't they see it?

This question troubled us for years until new information about exactly where the airplane was made the answer apparent. If the airplane was near the ocean side of the reef where former island resident Emily Sikuli says she saw wreckage, and where anomalous material on the reef is visible in early photos, the airplane was hidden by the crashing surf. A photograph taken during the Navy search documents that, at the time of the overflight, the tide was high and the ocean was rough enough that the seaward portion of the reef was completely obscured by surf.

Why wasn't the Electra found when a British exploratory expedition visited Gardner Island in October 1937, just three months after the Earhart disappearance?

It does seem highly unlikely that the aircraft was not seen, but several factors may have contributed to the fact that it certainly was not recognized for what it was. Contemporaneous written accounts and photos show that the party made their landing on the reef just south of the wreck of the S.S. *Norwich City*. At that time, the grounded ship was still intact and thus masked from view the northern portion of the reef edge where the aircraft wreckage is said to have been located. In a photo taken during the visit, the material on the reef is visible but not recognizable as aircraft wreckage. There is no reason to suspect that it would appear differently to the eye than to the camera. It should also be noted that the two British Colonial service officers and nineteen Gilbertese delegates who made up the expedition party probably had no knowledge of the Earhart disappearance at the time of their three-day visit to Gardner Island. Their purpose was to assess the island for future settlement and their attention was focused upon determining whether the island's soil was suitable for agriculture and upon digging wells in search of potable water. On the southeastern side of the island they did come across "signs of previous habitation" described as looking as if "someone had bivouacked for the night."

Why wasn't the Electra found when a six-man survey party from New Zealand spent two months on the island in December 1938/ January 1939?

Many of the same factors apply to the New Zealand survey party as applied to the earlier but much briefer British visit. The New Zealanders, too, came ashore on the south side of the shipwreck which masked the possible aircraft wreck site from view, and the focus of their work was inland and on the lagoon. Like their predecessors, they took a photo that shows the material on the reef. The photo was taken though a hole in the hull of the shipwreck looking northward along the reef at high tide and is captioned "Undertow through gap in side of wreck." The suspect material on the reef is visible in the photo but seems to be submerged by the high tide and certainly is not recognizable as aircraft wreckage. (The allegation that the material on the reef was from an airplane comes later in the island's history when

Gilbertese fishermen had occasion to be up close to the wreckage while fishing along the reef edge.) An additional impediment was the weather. November through March is the "westerly" season during which the island is subject to heavy seas out of the west and northwest. Heavy westerly weather was experienced by the survey party in the first part of January, 1939.

Why wasn't the Electra found when a U.S. Navy survey party from U.S.S. *Bushnell* spent a week mapping the island in November 1939?

As with the 1937 British visit and the 1938/39 New Zealand visit, the 1939 Navy survey was focused inland. The material on the reef was obscured by high tide at least half of the time and, during periods of high seas, all of the time. When it was visible it was not recognizable from a distance.

How does this new information effect TIGHAR's evaluation of the Wreck Photo?

This puzzling photo of uncertain origin shows an extensively damaged aircraft in a tropical setting. A forensic analysis of the photo seems to suggest that the airplane is a Lockheed Electra with the large P&W R1340 engines of the C and E series of the Model 10. Is it a photo of NR16020 on Nikumaroro? For a while that looked like a reasonable possibility (see *TIGHAR Tracks* Vol. 14, No. 2 "The Wreck Photo), but Emily Sikuli's recollections and the photographic confirmation that there was something out on the reef where she says she saw badly deteriorated airplane wreckage, argue strongly against a largely intact body of wreckage in the shoreline vegetation as shown in the Wreck Photo.

What about the Canton Engine?

The possibility that an engine of the same type as those used on the Earhart aircraft was recovered from a reef in the Phoenix Group and taken by helicopter to Canton Island in 1970 or 1971 remains an intriguing question. A TIGHAR expedition to Canton (now Kanton) in 1998 established that the dump where the engine is said to have been deposited was subsequently bulldozed and buried. Excavation is, at this time, prohibitively expensive. We have also been unable to find corroboration of the story of the engine's recovery, despite having tracked down several people who were involved in helicopter operations on Canton at the time. Research continues.

Earhart's Electra on Nikumaroro? Probably not.

TIGHAR TRACKS

The First Fifteen Years

The International Group for Historic Aircraft Recovery was officially born on January 18, 1985. The first issue of *TIGHAR Tracks* was published later that month and was mailed to about a dozen charter members. Volume 1, Number 1 didn't look much like the magazine you're now reading. It consisted of one photocopied 11 x 17 sheet of paper folded into four pages. The text was typed and the artwork was done with rub-on letters and pasted-up line drawings. There were no photographs.


TIGHAR TRACKS

newsletter of
The International Group for Historic Aircraft Recovery

Winter 1985 © TIGHAR Vol. 1 No. 1

THE AGALAMBO E

OPERATION BARNSTORMER

There were two more issues of *TIGHAR Tracks* that first year. Volume 1, Number 2 was on slightly heavier paper and Number 3 was a double Summer/Fall issue with eight pages. The first photo appeared on the cover of Volume 2, Number 1 in January of 1986. It was a Japanese "Betty" bomber overgrown with tropical vines and it accompanied an editorial statement of TIGHAR's philosophy and purpose to save historic aircraft from "the teeth of time and the hands of mistaken zeal." But *TIGHAR Tracks* was still an eight-page photocopied newsletter.

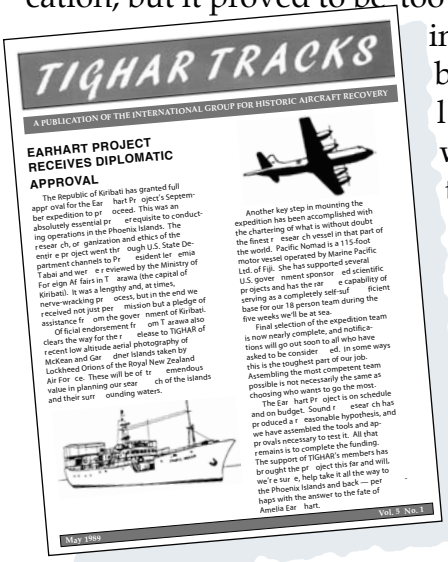

TIGHAR TRACKS

newsletter of
The International Group for Historic Aircraft Recovery

Winter 1986 © TIGHAR Vol. 2 No. 1

...THAT THEY MIGHT ESCAPE THE TEETH OF TIME AND THE HANDS OF MISTAKEN ZEAL.
John Aubrey
1660

By Volume 2, Number 3—the Summer/Fall issue of 1986—TIGHAR *Tracks* had become a 12 page booklet, still photocopied, but stapled and with a heavier cover on colored paper. An experiment with a real magazine format came with Volume 3, Number 2 in the summer of 1987. Sixteen type-set pages with two-color printing and high quality photos and graphics made for an attractive publication, but it proved to be too expensive and in 1989 we went back to newsletter format while retaining the magazine-style lay out. Every issue featured a different second color (brown, green, blue, etc.) until Volume 8, Number 1

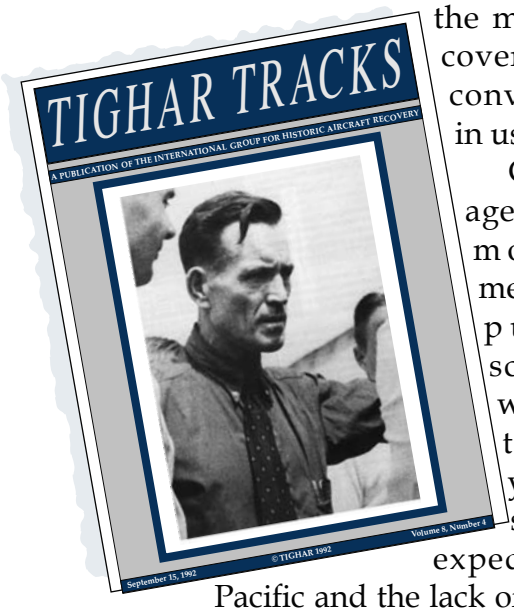

TIGHAR TRACKS

A PUBLICATION OF THE INTERNATIONAL GROUP FOR HISTORIC AIRCRAFT RECOVERY

EARHART PROJECT RECEIVES DIPLOMATIC APPROVAL

May 1989 Vol. 5 No. 1

& 2 in March of 1992 when we first used the blue and silver format which has become a TIGHAR trademark. By 1992 the length of the "shorter" newsletter was up to a dozen pages and with Volume 8, Number 4 we adopted the magazine-style cover and lay out conventions now in use.



Chronic shortages of time and money have meant a sporadic publication schedule. This was especially true this past year when two simultaneous expeditions in the Pacific and the lack of a sponsor for the magazine's productions costs meant putting all of 1999's work into one giant issue. In 2000 we plan to return to a more normal schedule but we still need to find a sponsor to cover the $5,000 quarterly production costs.

For long-time members who are wondering if their collection of back issues is complete, here's a listing of what has been published:

1985	Volume 1, Number 1	4 pages
	Volume 1, Number 2	4 pages
	Volume 1, Number 3	8 pages
1986	Volume 2, Number 1	8 pages
	Volume 2, Number 2	10 pages
	Volume 2, Number 3	12 pages
1987	Volume 3, Number 1	16 pages
	Volume 3, Number 2	16 pages
1988	Volume 4, Number 1	20 pages
	Volume 4, Number 2	16 pages
1989	Volume 5, Number 1	4 pages
	Volume 5, Number 2	8 pages
	Volume 5, Number 3	4 pages
1989	Volume 5, Number 4	6 pages
	Volume 5, Number 5	6 pages
1990	Volume 6, Number 1	8 pages
	Volume 6, Number 2	6 pages
	Volume 6, Number 3	10 pages
	Volume 6, Number 4	8 pages
	Volume 6, Number 5	10 pages
1991	Volume 7, Number 1	8 pages
	Volume 7, Number 2	12 pages
	Volume 7, Number 3	10 pages
	Volume 7, Number 4	12 pages
	Volume 7, Number 5	10 pages
1992	Volume 8, Number 1 & 2	12 pages
	Volume 8, Number 3	12 pages
	Volume 8, Number 4	16 pages
1993	Volume 9, Number 1	16 pages
	Volume 9, Number 2	16 pages
	Volume 9, Number 3	16 pages
	Volume 9, Number 4	16 pages
1994	Volume 10, Number 1	16 pages
	Volume 10, Number 2	16 pages
1995	Volume 11, Number 1	24 pages
	Volume 11, Number 2	24 pages
	Volume 11, Number 3	24 pages
	Volume 11, Number 4	24 pages
1996	Volume 12, Number 1	24 pages
	Volume 12, Number 2 & 3	48 pages
1997	Volume 13, Number 1 & 2	40 pages
1998	Volume 14, Number 1	24 pages
	Volume 14, Number 2	24 pages
1999	Volume 15, Number 1–4	72 pages

All back issues of *TIGHAR Tracks* are now available as high-quality computer facsimiles (including graphics, photos, and color where originally included) at a cost of $10 per issue. Most issues from Volume 8, Number 4 to the present are available as original magazines at a cost of $5 per issue.

Consolidated Notes From Meeting/Interview With Emily Sikuli

No recording was made of Tom King's interview of Emily Sikuli on July 15, 1999. The transcript reproduced here was compiled from the extensive notes taken by the researchers. Translations to and from the Tuvaluan by Mr. Tofiga have been omitted.

July 15, 1999

Location: Residence of Foua Tofiga

Tom King, Kristin Tague and Barbara Norris met with Mrs. Emily Sikuli, daughter of Temou Samuela (the bone box builder), at 11:00 a.m. for approximately one and a half hours. The purpose of our meeting was to interview Emily regarding time she spent on Nikumaroro, her experiences there, recollections of her father and Gallagher and the discovery/recovery of the bones suspected by Mr. Gallagher of being those of American aviator, Amelia Earhart.

Emily began our meeting by agreeing that Niku was indeed a beautiful place. She gave us an opportunity to view photos of her mother and father and later photograph and photocopy them. A pleasant, spry woman, approximately 72 years old, Emily answered questions posed to her by Dr. King and interpreted by Foua Tofiga.

TK: Your father is kind of a famous man to us, because we're trying to find that box he built.

ES: [smiles, gets photocopies out of a folder] Here is his picture, and a picture of my mother. [we examine, comment, Barb takes a picture]

TK: We are all interested about the bones in the box. Can you tell us something about the circumstances of that day?

ES: The bones were found in the sea on Nikumaroro. There was a boat that was wrecked, but that boat belonged to New Zealand and that part of the island was named for New Zealand. Where the boat was on the reef. Not too far from there, is where the plane came down. [shown map at this point, she indicates area north of Norwich City on reef]

[Up to this point the interviewers had not said a word about an airplane, just the box, the bones, and her father. However, Foua Tofiga had talked with Emily, arranging for the interview, and later recalled that he had mentioned that we were interested in bones and an airplane.]

TK: Where were the parts of the airplane?

ES: Not far from where the ship was. Not toward the village but away from it. The struts were there. [holds up hands in circle, apparently indicating that the struts were round in cross-section, about 20 cm. in diameter] It was around that area were the bones were found. Could be bones from the ship or the airplane. During the westerlies, heavy swells took the rest of the bones away. There were not many that we found. Maybe 10 different people whose bones were found along that area. There were some with leather bottles and a pipe. I used to accompany my father to fish. Some people would not go to that area to fish because they were frightened. You would come up on the reef, then the beach comes up where the island shrubs start to grow. [with gestures and words, she and Foua indicated the storm surge line and first Scaevola line in from the beach] That is where the bones were found.

TK: What kind of things did your father make?

ES: My father made rings and combs, and things with inlaid wood. He made rings out of golden coins. He built things of wood. The box he made for the bones was not as big as a usual coffin size. I don't know what timber was used. [To demonstrate the box size, Tom used his hands to get an approximate measurement of 12—15 inches deep and 24 inches in length.] I didn't see the actual bones. I don't know how many bones, but it must not have been many or the box would have been bigger. Many planks were used. Boards were nailed, stained and varnished. My father often worked with kanawa wood.

[She walked clear around the island three times with her father, a great fisherman. This came out in the context of discussing how important her father was in the community, both as carpenter and a fisherman, and how close she was to him. She said she was raised like a man, because she was the oldest in her sibling set.

TK: Did you see the plane fall?

ES: No, it was already there when I came. I came in 1938-1939, when I was 11 years

old. I left in December 1941. The steel of the plane was there sometime before we got there. [asked specifically about aluminum, she says no] Fishermen found the bones. They were frightened and they brought the story of them to the Onotoa man.

TK: Was that Koata?

ES: [she smiles broadly as in recognition] Yes.

TK: What did Koata do?

ES: He sent people to bring the bones. People were frightened. Only people working for the government received the bones. My father had to look at the bones. Mr. Gallagher asked my father to make the box.

TK: What other kinds of things did your father make?

ES: My father had ceased making rings at that time [not done in the Phoenix Islands]. He was working for the government. He constructed houses, maintained the European houses, the hospital and he went fishing. He helped with the ministry. He took the lead in the systematic planting of the coconut trees. He brought the coconut seedlings from my uncle from Manra, in 1939.

TK: When did you get to Nikumaroro?

ES: We had not been on Beru Island a year when we were sent to Nikumaroro. Perhaps 1938-39. In less than 3 years, I left Nikumaroro.

TK: What caused your family to move to Nikumaroro?

ES: Instructions from the government to build houses and plant coconuts. Uncle Kemo went to Manra to build the hospital building and water tank.

TK: How old were you when your father built the box?

ES: 14 years old, not yet 15. I had been around the island three times with my father. I followed him and sometimes we would turn over turtles.

TK: Where were the turtles mostly?

ES: On the weather side. The government used to send people across the lagoon to pick up the turtles.

[In an unrelated offering at this time, Emily commented that Niku was a pleasant place to live because of knowing Mr. Gallagher and Jack "Uncle Kemo" Pedro, who was also a singer and composer. Jack had three sons in the Gilbertese and Marshall Islands, one son now holding a senior position in the government of the Marshall Islands.]

TK: When your father was building the box was it special?

ES: It was special, but there was no real rush to complete the job quickly. I don't know when the bones were removed from the island.

TK: Please clarify about the bones. Were the 10 skeletons/bodies separate from the bones that were put in the box?

ES: The bones of the 10 people were toward the shoreline, but these bones [the bones in the box her father made] were found on the reef near the remaining parts of the plane. People decided these bones were from the people from the plane. When I used to go to the place, the bones of the 10 people were still there. People who found the bones near the plane were frightened to touch them. They told Teng Koata of the bones and he told Gallagher. Koata had them collect the bones for Gallagher. Until I left the island, I hadn't heard anything about what had happened to those bones. The government put restrictions that children were not to frequent that area.

TK: Did people use parts of the airplane?

ES: I don't know for sure. When we got there only the steel frames were left, only the long pieces were there. We were frightened to go close to the plane. Where the shipwreck was—the remainder of the plane was not very far from there. The waves were washing it in low tide. The 10 people had complete skeletons. Looking at those people, they could be tall people. They were very long. People were afraid of all the bones in both places.

TK: With this map of Niku, can you find where you lived?

ES: We lived at the point at the government station. [She then confirmed the location of the carpenter's house, the European house, the cook boy's house, the police and the hospital.]

TK: Any other parts of the island where people went regularly?

ES: Only where they intended to clear and plant coconut trees. The trees had been cleared to the SE end [gestures over map down past Aukauraime].

TK: Do you know of any graves away from the village?

ES: Only those who died while we were there. [TK: it seemed to me she indicated that she didn't know of any graves not in the village.]

TK: Where you there when Mr. Gallagher died?

ES: No, I wasn't. [she has a brief conversation with Mr. Tofiga] NO! I WAS there. When I was picked up [to go to Suva to attend nursing school] he had already died. It was Sunday morning, we were getting ready for church, December 7th, when I left. [Emily traveled to

Suva with Tofiga who remembers that she cried all night long and he felt helpless to comfort her.]

TK: What was it like when Mr. Gallagher died?

ES: The people were very sad. They did a lot to show respect. The people gathered and made funeral arrangements. There was expression of respect because he was a good man. During storms and westerlies, he would go around and check on people's houses. He made sure we had food. My father built his tomb. Fasimata O'Brian was the wireless operator then. He was a ginger-haired man.

[At this point Sarah, Emily's daughter, interjected, "When mum gets homesick she talks about her father. My mother wants my sons to be like my grandfather. He cared about his family, was a good worker, a good provider. When he went fishing he would catch a lot and then share with everyone. My grandmother died when she was 89. My grandfather when he was 72."]

TK: Any other Nikumaroro residents on Fiji?

ES: Nei O'Brian, the wireless operator's wife is still alive. She lives in Suva.

TK: Any special areas the children were not allowed to go to?

ES: I never felt frightened because I always followed my father. Restrictions were placed by Koata.

TK: Did you ever hear about a place on Nikumaroro called Niurabo, or about Nei Manganibuka?

ES: [she gets rather stiff] We all were Christians.

TK: Where did kanawa trees grow?

ES: Here [points out location of Kanawa Point]. They were quite large.

TK: Were there other places where they grew?

ES: [shakes her head]

Emily said that when she left the island a canoe was sent through the surf near Kanawa Point where she was picked up and taken out to the ship.

Present with Mrs. Sikuli were Ric Gillespie, Kris Tague, Russ Matthews, Foua Tofiga, and Emily's daughter Sarah. Emily and Mr. Tofiga,

Transcript of Videotaped Interview With Emily Sikuli

Ric Gillespie's interview with Emily Sikuli on July 27, 1999 was videotaped by team member Russ Matthews and has been transcribed below. Ric, of course, had the benefit of having seen the notes of the earlier interview. Translations to and from the Tuvaluan by Mr. Tofiga have been omitted.

July 27, 1999

At Mrs. Sikuli's home near Suva, Fiji

who served as translator, sat on a sofa facing the video camera operated by Russ. Ric sat on the floor beside the camera. Kris and Sarah sat to the sides. The interview lasted for about an hour and a half from 10:30 a.m. to about noon.

Emily appears to understand English fairly well but is hesitant to speak English herself. She frequently did not wait for Mr. Tofiga to translate short, simple questions but always answered in her native Tuvaluan which was then translated by Mr. Tofiga. (Tuvaluan is the language of the people of the island group formerly known as the Ellice Islands, now the independent nation of Tuvalu. Mr. Tofiga and Mrs. Sikuli were both born in the Ellice Islands.)

RG: What year were you born?

ES: On Funafuti at the company station of an American company run by Mr. Allen. My father was working there, 1923.

RG: What was your father's name?

ES: Temou Samuela [pronounced Tim-Oh-oo Sa-moo-AY-loo]

RG: What were you called?

ES: They called me Emily. That American man called me Emily.

RG: Any brothers or sisters?

ES: Three brothers, I was the only girl.

RG: What did your father do?

ES: He was a carpenter and did some engineering. Also, electrical, taught by Mr. Allen.

RG: How did your family come to Nikumaroro?

ES: My father was then working for the government. The government posted him there to build houses and also because he knew how to plant coconut trees so they would grow fast and bear quickly, in two years.

RG: Did the whole family come to Nikumaroro?

ES: Only three of us. Our eldest brother was at Tarawa.

RG: Did your father ever work at building canoes?

ES: Yes, he used to build canoes.

RG: Was that part of his job on Nikumaroro?

ES: Not while I was there. He did build small model canoes as presents.

RG: Do you remember what ship brought the family to Niku?

ES: It was the government ship, Kiakia. Not a big boat.

RG: Were there many people who came with you?

ES: A policeman and his family came also.

RG: Do you remember what year you arrived at Niku?

ES: The year we came off the island I had already spent two years there.

RG: When you first came to Nikumaroro, were there any Europeans living there?

ES: No.

RG: Who was in charge of things? Who was the boss?

ES: In those days the leader of the Gilbertese was Teng Koata.

RG: What kind of man was Teng Koata?

ES: Tall man, and big.

RG: A happy man? a strict man? A jolly man?

ES: He doesn't speak often. What he wants done must be done.

RG: Oh. A strong leader.

ES: Yes.

RG: Were the people afraid of him?

ES: They obeyed him because, as people worked, he worked along with them.

RG: When Dr. King and Kris talked to you before, you told them about an airplane wreck on Nikumaroro when you got there. I'd like you to tell me what you know about that. I'd like to hear your story.

ES: When we went there, no plane came during that time. Until we came off, no plane had come. We only heard that there was a plane that crashed near that ship.

RG: Let me repeat this back to be sure I understand. No plane arrived or crashed while you were at the island. But, people said that before the people came a plane had crashed there near the ship. And when you refer to the ship you mean the ship that was on the reef, that was aground.

ES: It is true.

RG: Did you ever see any part of that plane?

ES: Only the frame, a piece of steel.

[Mr. Tofiga offers clarification, "Uh, it's not a piece. The term she uses 'afiti', it could be this long or this long." Moves his hands close together then far apart. " But it's steel. Only the framework."]

RG: And where was this piece?

ES: Nearby that wrecked ship. It was not far from there. From about here to that house. [She points to a house across the road.]

RG: OK. That's probably 100 meters. Was it on land or in the water?

ES: On the rocky part. It was not far from where the waves break.

RG: Let's look at a map. If you could show us the shipwreck?

ES: Is this the part called Nutiran? [points to northwestern end of island] Maybe this is the place. [points to the small ship symbol on the map] It was not very far from that place.

RG: [explaining map] This part here is the rock. The waves of the ocean break out here. The beach with the sand is here.

ES: That means this is where that plane was. It was not very far from the ocean where the waves break. That's why the parts of the plane got carried away quickly. That frame was also very rusty.

RG: Could you put a mark on the map where the plane was?

ES: [marks the map] It was here.

RG: And on the back of the map could you draw a picture of what you saw?

ES: It was a long steel. [draws a line] There was a round part of it. [adds a small solid circle at the end of the line] I do not know what part of the plane it was. We were forbidden to go there. I was following my father. When I went there my father stopped me.

RG: Did you go out on the rock or did you only see it from where the sand is?

ES: Only from the sandy part.

RG: How big was this piece?

ES: About four arm spans. [holds her arms out]

RG: So it might fit in this room?

ES: Yes, barely. It was a big plane. [the room

was perhaps twelve feet long]

RG: How did you know that this was part of an airplane?

ES: I heard it from those who were there before us that it was part of an airplane.

RG: So the people on the island said that this was part of an airplane.

ES: Yes.

RG: Did the people know anything about the people who were in the airplane?

ES: I didn't hear a story in connection with that.

RG: Were there ever any bones found on Nikumaroro?

ES: Yes.

RG: What can you tell us about the bones that were found?

ES: Some Gilbertese went to fish, they saw in the shallows some pools, at the place where the plane crashed, some bones, and they knew these were human bones because of the skull bone. They went and reported to Teng Koata, there were bones. So from that they assumed that these must have been the bones of those who were in the plane when it crashed. These were under the plane, near the plane. This was near the top end of the steel.

RG: Did you see the bones?

ES: I didn't see them. We were forbidden, but my father told us.

RG: Were the bones found while you were on the island or did this happen before?

ES: These bones were found when we had already arrived on the island. These Gilbertese came and found bones and reported to Teng Koata. Then Teng Koata took them to the European. So it was arranged for a box to be made for the bones and the bones were brought. There were not many bones.

RG: And your father made the box?

ES: Yes, it was he who built the box.

RG: What kind of wood did he use?

ES: That I do not know because it was made out of timber belonging to the government.

RG: Do you remember when the European magistrate, Mr. Gallagher—Mr. Kela—

ES: Yes, it was his time.

RG: Do you remember when he first came to the island?

ES: I do not know.

RG: Was there ever a time when there were Europeans who came to the island to do things?

ES: No.

RG: But you do remember that Gallagher—Kela— came to the island.

ES: We had not been there one year when Kela arrived. These were the war years. That's when the European came. We heard the news about the war.

RG: When you lived on Nikumaroro did the people have any animals with them?

ES: No.

RG: No animals?

ES: No.

RG: No dogs?

ES: No.

RG: No pigs?

ES: No.

RG: No chickens?

ES: No.

RG: You know Mrs. O'Brian.

ES: Yes.

RG: Have you ever talked to her about Niku and living there?

ES: Yes. Those years when Fasimata was still alive we would talk about the good things of Nikumaroro. Very difficult times, too.

RG: Did you ever talk to Mrs. O'Brian about the airplane wreck on Niku?

ES: No. We did not discuss about the crashed airplane but we all have heard, knew about this. We also all knew about these bones.

RG: Were any other bones ever found on Niku?

ES: Only these few bones they found. They do a search around that area but they found no other bones. Only these big bones that they found. I do not know how many. My father knew.

RG: Do you know of any other people who are now alive who were there and may also know these stories?

ES: I don't believe so. Otiria is still alive. I don't know of anyone who is still alive and living in Fiji.

RG: Anywhere else?

ES: The majority of the people were moved to the Solomon Islands.

RG: Did you ever know a man named Bauro Tikana?

ES: He worked for the government?

RG: Yes.

ES: I knew him. He was a clerk. They did not have any children.

RG: Did you know of a man named Kima Petro?

ES: [big smile] Our uncle. He married my auntie.

RG: Was there a wireless on the island?

ES: Yes, there was. Fasimata O'Brian operated it. Right inside the European's house was the wireless.

RG: Tell me about when you left Niku, when you went away. How did that happen?

ES: That was the year we came away. It was the government that made that decision. Because we sat a test and it was decided that it was not practical to send us to Tarawa but to bring us to Suva.

RG: Was it your whole family or just you?

ES: It was I only.

RG: So there was a test and you were selected because of this test?

ES: Yes. That is why I came.

RG: Mr. Tofiga, I understand that you remember this. You were there at that time. Is that right?

FT: I was aboard the Viti. We travelled from here in the late November or early December of 1941. I never forget the date because we were at Nikumaroro when the Japanese bombed Pearl Harbor.

RG: Do you remember hearing about the bombing of Pearl Harbor?

ES: Yes.

RG: So you left Nikumaroro at that time, the time the war in the Pacific began. Is that right?

ES: Yes.

RG: Did you ever go back to Niku?

ES: No.

RG: Do you know of a kind of wood called kanawa?

ES: Yes, that is the one my father was seeking after.

RG: Did this kind of wood grow on Nikumaroro?

ES: There were many of the species called buka bai and also the other tree called nonou, the fruit of which is edible. And also kanawa and naisou and towsoon. These are the trees that grow on the beach.

RG: And your father was especially interested in one kind of wood?

ES: He wanted the kanawa because it is useful. He made tables out of it, and chairs.

RG: Did kanawa grow all over Nikumaroro?

ES: No, not many.

RG: Did it grow in one place or were there just some trees...

ES: [shakes head] [show her map] The kanawa my father found was somewhere around this side. Not many. [pointing to Kanawa Point] Not near the sea but right on the land.

RG: Not near the sea side.

ES: No, on higher land.

RG: When your father built the box for the bones, who asked him to do that?

ES: The European.

RG: Did the European speak the local language?

ES: A few words but he understood the Gilbertese.

RG: What did he look like?

ES: The European?

RG: Yes.

ES: He looked like him [pointing at Russ]. About his size or a little taller but he was slim.

RG: Do you remember when the European died?

ES: Yes, he had an operation before. Not very long thereafter he died.

RG: So, you were still on the island at that time.

ES: Yes.

RG: Do you know if the European knew about the airplane wreck?

ES: In that connection I really no not know. Perhaps.

RG: But Koata knew about it?

ES: Yes. The Gilbertese people because they were there before.

RG: Was there ever a time when Koata left the island?

ES: No. Also, when those people went there the airplane had already crashed before. There were no people there.

RG: Do the Gilbertese people believe in ghosts?

ES: Oh yes [laughs] . They're the ones who make black magic.

RG: Were the Gilbertese afraid of ghosts?

ES: Those who do such are the ones who do not believe. They are frightened. Those who believe are not frightened.

RG: Were there any stories about ghosts on Niku?

ES: I haven't heard any stories about that.

RG: So the people, for example, were not frightened by the bones that were found.

ES: Yes, they were frightened when they saw the skull. They went straight to Koata.

RG: When the European died, were they frightened by that? Did they associate that with any stories about ghosts or bones?

ES: No. They were not frightened. They were sad.

RG: Where was he buried?

ES: Below the flag. It was my father who made the tomb.

RG: What was the tomb made of?

ES: Concrete. Directly under the flag.

RG: Was that done at the time or later?

ES: Later. Maybe about a month or so after that.

RG: Before you talked to Dr. King and to Kris, what did you know about what we're doing, our project? Did you know that we were looking for bones or an airplane on Nikumaroro?

ES: Perhaps he wanted to know the true story of what happened?

FT: May I repeat the question? [repeats question in Tuvaluan]

ES: In connection with that I do not know.

RG: Do you know the name Amelia Earhart?

ES: What kind of person is she? Where does she come from?

RG: America.

ES: Is she alive?

Russ: You said there was a part of the island that was forbidden. Why was it forbidden?

ES: It was forbidden because of the bones of the New Zealanders who died on the shipwreck. They thought the government may send in people to look for the bones.

RG: So there was a place where there were bones from people who died on the ship?

ES: I really don't know that. There were people who used to go on board the wrecked ship. My father also went there. No ordinary people where allowed to go there.

RG: When you saw the piece of steel from the plane wreck, you were with your father?

ES: Yes, I was accompanying my father.

RG: And what was he doing there?

ES: Because he usually goes out to search out the various trees. The government only allows him to go in.

RG: Did you see the plane wreck just one time or many times?

ES: Two times. When we passed that place I saw it. He wouldn't let me go out to the wreck because of the government ban.

Russ: What color was the wreckage that you drew on the map?

ES: It was very rusty.

RG: What color rust?

ES: Very red. When it is seen at low tide. Not observable at high tide. At low tide it could be seen. Very rusty, bad, useless.

RG: Was there other wreckage or debris around it or all by itself?

ES: Nothing.

RG: Did the people in the village have any pieces?

ES: No.

RG: You saw none of the other parts of the plane. The aluminum, the shiny parts?

ES: No, all gone. Nothing.

Kris: Are any of your brothers who lived on Niku still living?

ES: The younger one.

Kris: Where does he live?

ES: Funafuti.

Kris: When did the rest of the family leave Niku?

ES: After the war.

RG: What's his name?

ES: Taete. He is five years younger.

Russ: When did you first see a working airplane?

ES: 1938. The warship Achilles came to Funafuti. Before the ship reached Funafuti the airplane came over.

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