

TIGHAR TRACKS

THE JOURNAL OF THE INTERNATIONAL GROUP FOR HISTORIC AIRCRAFT RECOVERY





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

— JOHN AUBREY
STONEHENGE MANUSCRIPTS
1660

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, responsibility, 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.

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COVER:

Amelia Earhart in the cockpit of her Lockheed Electra. Both are still missing—but maybe not for long. See “The NIKU III Preliminary Expedition,” p. 4, “Part Number 40552,” p. 12, and “The Solomon Islands Expedition,” p. 14.

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History In The Attic

Dear TIGHAR



Our publication of excerpts from the wartime journal of B-17 Radio Operator Paul Jones ("I'm learning to curse the Wright brothers...", *TIGHAR Tracks* Vol. 11 No. 4) not only brought many favorable comments from the TIGHAR membership but also brought to light another diary kept by the Flight Engineer/Top Turret Gunner on the same crew. Richard Lawrence bunked with Paul Jones during their combat tour with the Eighth Air Force's 447th Bomb Group, 708th Squadron based at Rattlesden, England. Each kept a written record of his experiences and would often check his recollections of the day's events with his buddy. Lawrence's diary is far more extensive and detailed, with an entry for virtually every day he was in Britain, while Jones' journal is more a record of significant events. Together they provide a rare and personal perspective on how the war looked to two members of the same aircrew.

It is interesting to note that, in later years, neither diary was apparently regarded as an historical record which might be of interest to anyone but its author. Paul Jones' journal was found by his wife after his death, and Richard Lawrence only mentioned his after learning that Jones' had come to light and was considered important. How many other priceless glimpses into the past lie tucked away in attic trunks? Old papers are just old papers until and unless somebody starts calling them historical papers, and we all know what eventually happens to old papers. Any old papers in your attic?

Correction – absolutely.



In the last TIGHAR Tracks ("Correction—maybe," Vol. 11 No. 4) we acknowledged the possibility that our statement in the previous TIGHAR Tracks ("Aviation In American History: A Preservation Perspective," Vol. 11 No. 3) that "No American-designed aircraft saw action in World War One" may have been in error. The question hinged on the word "action" and we wondered, specifically, if any of the Curtiss flying boats used by the Royal Naval Air Service ever fired shots in anger or were ever on the receiving end of same. Our mailbox was soon blessed with letters and documentation not only from our original critic, Robert Taylor of the Antique Airplane Association, but also from the National Museum of Naval Aviation, and TIGHAR members Francis G. Cain, Jr. (#1961) and Robert E. Gillespie (#0009).

No question about it. We were wrong. As penance we offer Mr. Cain's letter:

TIGHAR! TIGHAR! burning bright, hope that this will make it right! The following from *The Sky Their Battlefield*, compiled by Trevor Henshaw, lists the combat record of Curtiss planes in WWI.

RNAS Curtiss H12 #8677 shot Zeppelin L.43 down in flames off Vlieland on 14 June, 1917.

RNAS Curtiss H12 #8693 on sub patrol. Engines failed, forced to land on water, rescued by Dutch and interned (plane burned by crew). 24 October 1917.

RNAS Curtiss H12 #8677 in combat with 7 enemy planes over North Hinder; was shot down and crew killed (3 Brits and 1 American) 24 April 1918.

RNAS Curtiss H12 #8660 on recon. Had engine trouble, landed on sea. Was then shot up by 3 enemy seaplanes. Part of crew, including 1 American, killed, others captured. 30 May 1918.

RNAS Curtiss H12 #8689 on Zeppelin patrol. Was shot down and crew, including 1 American, interned in Holland. 4 June 1918.

RNAS Curtiss H12B #N4345 was in combat with 4 enemy seaplanes and was shot down. 6 June, 1918.

RNAS Curtiss F (civilian, was requisitioned by Brits in Africa, and its pilot commissioned in the RNAS). Found the German cruiser *Königsberg* in November 1914. Engine trouble, forced to land, pilot captured 10 December 1915.

Re H-16s sent to Brits: Peter Bower notes in *Curtiss Aircraft 1907—1947* that 60 (RAF serials N4890 through N4949), not 69, were delivered with no engines, and that 345 hp Rolls-Royce Eagles were installed in them in the U.K.

Sincerely,
Francis G. Cain, Jr.,
TIGHAR #1961.



THE NIKU III PRELIMINARY EXPEDITION

January 27 to February 10, 1996



During the closing months of 1995, in the process of preparing for TIGHAR's third major research trip to Nikumaroro in September of 1996, new information came to light which made apparent the need for a short preliminary expedition to the island.

Metallic Objects

Shortly after the 1991 trip (Niku II) we became interested in an anomalous vegetation-free area which appeared along the atoll's remote northeastern beachfront in early aerial photography of the island. In December 1995, digital analysis of copy negatives obtained from archives in New Zealand was carried out by Jeff Glickman at Photek in Champaign, Illinois. Glickman's application of state-of-the-art forensic imaging techniques disclosed the presence of one or more large metallic objects in a photo of the cleared area taken by the U.S. Navy on June 20, 1941. Possible corroboration in an overhead mapping photo taken by the USN on April 30, 1939 led to the identification of two specific features—designated “Candidate #1” and “Candidate #2”—which might be aircraft or aircraft debris. Far from the known inhabited sections of the atoll, the area matched the general location where former U.S. Coastguardsmen reported seeing a “water collection device” and other objects in 1944.

Signs Of Recent Habitation

Enhancement of an aerial view taken in December 1938 (at a time of severe drought and prior to the arrival of the first official inhabitants) disclosed the presence of what appear to be trails criss-crossing the area. The features appear very much like footpaths visible in later aerial photography of the village and suggest purposeful routes which have been used over a period of weeks, if not months. With no wildlife on the atoll large enough to create trails, the paths are difficult to explain. A visit by turtle or bird hunters from another island group is a possibility, but in 1938 inter-island canoe travel by indigenous peoples had been vigorously discouraged by the British Colonial Service for many years. The location of the area on the atoll's dangerous windward shore also argues against a landing there by anyone arriving by sea. In an aerial photo taken six months later, after normal rainfall had returned to the island, the trails are no longer apparent.

Because the site is discernible in a July 9, 1937 aerial photo of the island taken during the

U.S. Navy's search for Earhart, the possibility had to be considered that the "...signs of recent habitation" which were "clearly visible" to flight leader Lt. John Lambrecht were seen in this location. Also, the only credible post-disappearance radio message from the lost aircraft which includes position information (received by the USN radio station at Wailupe, Hawaii on July 4, 1937) contains the cryptic phrase "...281 north." From this site on Nikumaroro the equator is exactly 281 nautical miles north.

The Responsible Course Of Action

The possibility that this was the place where Earhart's aircraft had landed, and where its crew had made an unsuccessful bid for survival, presented a quandary. If the aircraft was really there—and more or less intact—it would be imperative that the September expedition go equipped with both the clearances and the assets required to effect a recovery. The only way to know for sure was to go and look. However, public disclosure of the aircraft's existence and location would present an unacceptable security risk. The responsible course of action was clearly to restrict advance knowledge of the evaluative expedition to individuals who had a need to know. Sponsorship was solicited and obtained for the trip and a seven-person team was assembled from qualified TIGHAR members. These were:

Richard Gillespie—Executive Director of TIGHAR and leader of the expedition

Patricia Thrasher—President of TIGHAR and expedition photographer

H. Donald Widdoes—TIGHAR #1033CBE

Joseph Hudson—TIGHAR #1689CE

John Clauss—TIGHAR # 0142CE

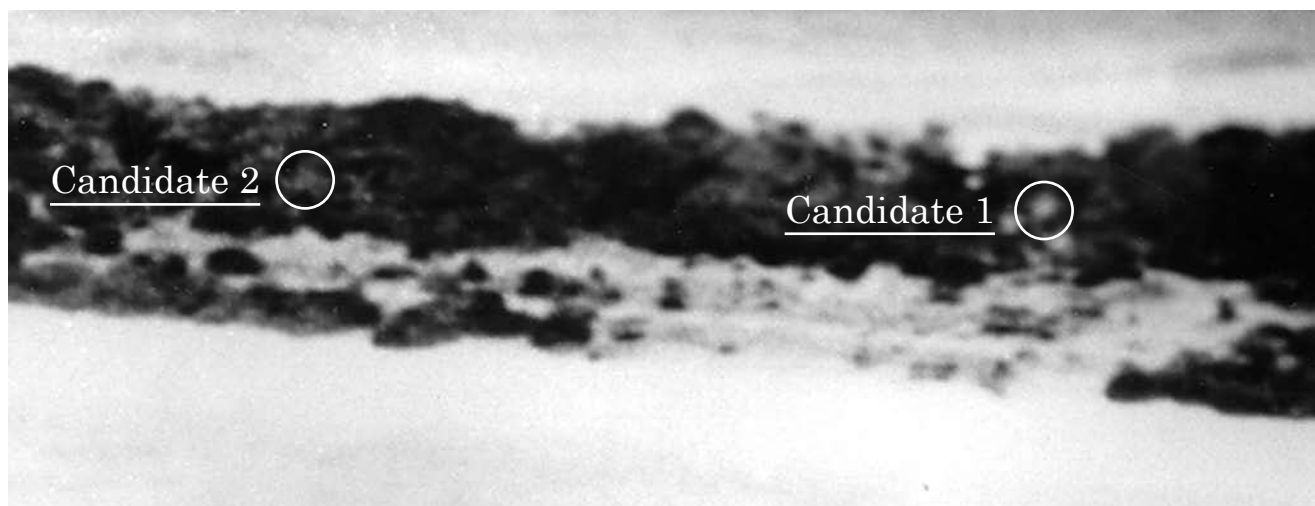
Veryl Fenlason—TIGHAR #0053CE

Russell Matthews—TIGHAR #0509CE

Diplomatic clearance was granted by the Republic of Kiribati and customs official Manikaa Teuatabo (the same representative who accompanied the 1991 expedition) became the eighth member of the team.

Summary Of Results

The expedition succeeded in locating and identifying the features seen in the enhanced aerial photographs. It was found that the objects in this particular location are not associated with the Earhart disappearance. Some searching also was done in the remains of the abandoned settlement at the atoll's west end. As on the two preceding expeditions, a number of interesting artifacts were found in this area and, with the permission of the Kiribati government representative, several objects were recovered for analysis. The expedition also gathered important logistical information about changes in the island environment since our last visit five years ago. Of particular note was the impact of storms on surviving cultural features in the village. Because the expedition did not make discoveries so dramatic as to present a security risk if their location is disclosed, the confidentiality which preceded the trip is no longer necessary.



The Expedition

The TIGHAR team departed Los Angeles on 27 January arriving in Fiji the next day. Mr. Teuatabo joined the team at Nadi, Fiji on 29 January and, after a short commuter flight to the Fijian island of Taveuni, the expedition took ship aboard M/V Matagi Princess II for the four day voyage to Nikumaroro.

The First Day

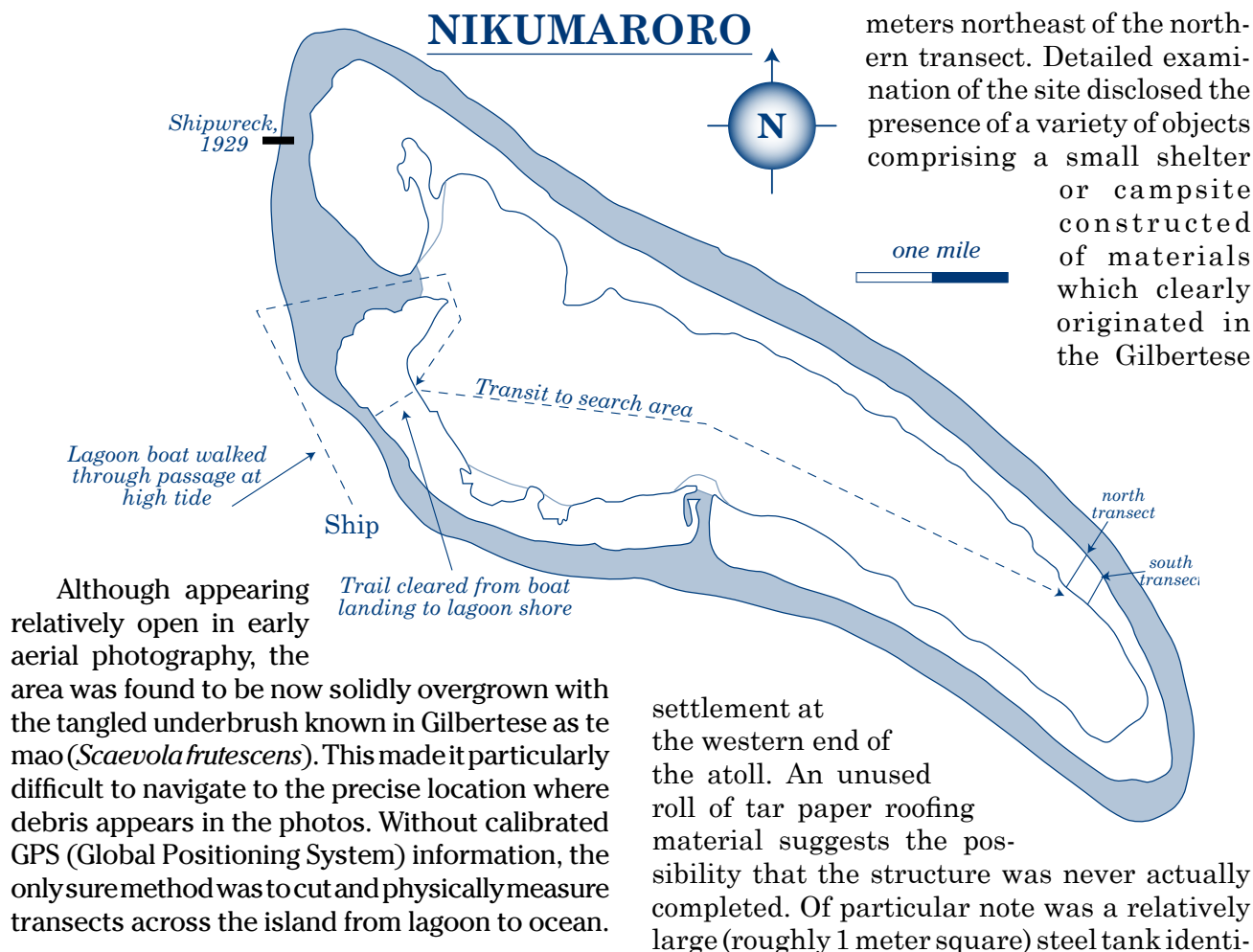
Early on the morning of 2 February the island came up on the ship's radar and by 0700 the first team members were ashore at the landing and clearing a trail across to the lagoon shore. By fortunate coincidence, the tide was high which permitted a launch to be walked through the main passage into the lagoon without delay. The lagoon boat was in place and the trail from the landing completed at 0835. The team then embarked for the trip down the lagoon, arriving at the search area at 0900.

Only by finding the area where the width of the land matched the scaled distance in the photo could we be certain that we were in the right place. This was a frustrating and labor-intensive procedure which involved many hours of machete work in temperatures averaging 106°F. By the end of the day two transects had been cut and measured thus making it possible to define the areas to be searched. The team departed the site at 1635 and was back aboard ship by 1800.

The Second Day

The team was on site at 0755 and began building and searching boxes of terrain. From a known point on a transect a line was cut 90° into the bush 10 meters in length. From this point, another 10 meter line was cut paralleling the original transect, then back again to form a box. Suveyor's flagging was used to create a physical boundary, thus permitting a thorough visual inspection of the boxed area despite the nearly impenetrable vegetation.

At 1012 cultural (man-made) debris was encountered in an area 38.2 meters northeast of the northern transect. Detailed examination of the site disclosed the presence of a variety of objects comprising a small shelter or campsite constructed of materials which clearly originated in the Gilbertese



cal to others seen in the abandoned village and which appears to have served as a cistern. An M-1 carbine shell casing found nearby testifies to the site having been visited by U.S. Coastguardsmen in 1944 or '45. It seems logical that this is the “water collection device” reported and sketched by USCG veteran Richard Evans.

The remains of a steel barrel or drum was found in a location which matches reflections from a large metallic object, designated “Candidate #1” in the 1941 photo.

TIGHAR photo by P. Thrasher.

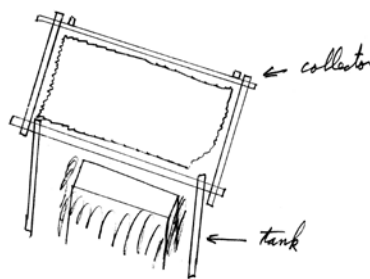


While part of the team examined the shelter site, others continued to progressively search designated sections of bush. By the end of the day no new cultural sites had been found but strips of vegetation-free coral had been encountered and mapped. These appeared to match in location and orientation, although not in overall dimensions, the “cleared” strips visible in the early aerial photography. All team members were back aboard ship by 1750.

The Third Day

Once more on-site by 0755, part of the team began the process of photographing, documenting and mapping the shelter site while the rest of the team took up the search for “Candidate #2.” Having resolved our on-the-ground location with relation to the early aerial photographs, it was a relatively simple matter to navigate to, box off, and examine the suspect area. An exhaustive search turned up no cultural debris. In the spot most closely matching that of Candidate

Cistern sketch



#2, the team encountered a very old buka tree (*Pisonia grandis*)—the only one in that particular area and, in all prob-

ability, the anomaly seen in the photo.

At 1530 the work on this part of the island was judged to be completed and a decision was made to use the remainder of the day to correct an oversight from the Niku II expedition. The map location of the gravesite excavated in 1991, near which the remains of shoes believed to be those belonging to Earhart and Noonan were found, had never been accurately established. The team therefore relocated that site and measured its azimuth and distance from landmarks identifiable on the map. The site exhibited considerably more ground vegetation (specifically, networks of light vines) than had been present in 1991, and looked very much as it had when first noticed in 1989 during Niku I. A severely oxidized ferrous fitting with what appears to be a brass cap was collected near the site in the hope that it will provide some clue about the various types of activity the area has seen over the years. The team departed the area at 1635 and everyone was back aboard the ship an hour later.

The Fourth Day

With the need to begin the return voyage to Fiji that evening, this was to be the last day of work on the island. The team was ashore by 0700 and the decision was made to spend the available time in re-examining locations and features in the village where airplane debris had been found in the past. By 0807 the “carpenter’s shop” had been re-located along the shore of Taziman Passage. It was near this spot that Artifact 2-18, the “dado,” had been found in 1989. Although one wall and some shelving had been standing then, the site was now leveled by subsequent storm activity and identifiable only by the presence of massive objects (the iron

wheel and frame of a cart, a coil of heavy cable). Smaller artifacts were either swept inland or buried under up to 5cm of sand. While some of the team began a partial excavation of the carpenter's shop, others attempted to re-locate another site along the shoreline where a sheet of aircraft-grade aluminum, cataloged as Artifact 2-2, had been found in 1989. Bordered by poles set in the ground which were notched at the top to support cross beams, the site had been littered with glass bottles and other debris prompting the Niku I team to dub this site "Noonan's Tavern." Efforts to re-locate this site were, however, unsuccessful and it is feared that it has been virtually obliterated by storms.

At approximately 1030 the excavation of the carpenter's shop site produced two lengths of shielded electrical cable. On the end of each cable was a single-pin connector surrounded by a knurled tightening ring. The cables were very unlike the other objects which had been found during the excavation (mostly heavy ferrous tools and machine parts) and, while badly deteriorated, appeared to have most of their component parts intact. On-site evaluation was that these were consistent with cables and connectors for an American radio of less than 100 watts output. Because the island radio station had British equipment, and the U.S. Coast Guard station at the other end of the atoll would likely have had a communications radio of more than 100 watts, the cables were judged to be of sufficient interest to merit their collection for further analysis. They were recovered as Artifact 2-3-V-1 (TIGHAR project #2, expedition #3, Village site, object #1). Nothing further was collected from this site.

In the afternoon an effort was made to re-locate a former dwelling site where several aircraft parts were recovered in 1991. By 1340 a spot had been located which was suspected of being that same location. (Later mapping and comparison to 1991 Field Notes, however, established that identification to be incorrect.) The site is sufficiently far inland from the shore to show little or no sign of storm damage. A close examination of the ground surface revealed the presence of several small objects and scraps

of material apparently left over from projects of handiwork. Among these were items which appeared consistent with aircraft materials. These included:

- A roughly 6cm x 12cm (2.5 in. x 4.5 in.) sheet of uncolored transparent plastic 3mm (1/8 or .125 in.) in thickness from which rectangular pieces had been cut. A smaller shard of the same material found nearby fits a break in the bigger piece. Both pieces exhibit a slight but uniform arc over their surface and were apparently once part of a larger sheet. These were collected as Artifact 2-3-V-2. (See "Part #40552," p. 12.)
- A 15cm (6 in.) length of what appears to be thin-gauge high-grade stainless steel wire twisted together in a manner consistent with aircraft safety wire. This was collected as Artifact 2-3-V-3.
- A rectangular object 4.5cm x 4cm (1.75 in. x 1.5 in.) made of non-ferrous metal (lead?) and giving the appearance of being a cast cover plate with indentations in the back. The front features a circular logo with the word "STURDEE." This was collected as Artifact 2-3-V-4.
- A roughly 50cm x 30cm (1.5 ft. x 1 ft.) sheet of apparent stainless steel estimated to be as much as .060 in. in thickness from which rectangular pieces had been cut. Designated Artifact 2-3-V-5, this object was not collected but was left in situ.
- An electrical "cannon plug." This was collected as Artifact 2-3-V-6.
- A very small ferrous object, possibly a fuse holder, collected as Artifact 2-3-V-7.

Work on the island was concluded at 1600 and all were back aboard ship by 1620 at which time Mr. Teuatabo approved the export of the artifacts for research purposes. The return voyage to Suva, Fiji was accomplished in five days and, on February 10, 1996 the TIGHAR team returned by air to Los Angeles. Mr. Teuatabo returned by air to Tarawa on February 11, 1996.



Preliminary Findings

Investigation of Cleared Area

It is apparent that this area was naturally quite open in the late 1930s and that, sometime between April of 1939 and June of 1941, additional clearing occurred, probably through human intervention. The “shelter site” found and surveyed during the expedition may be the structure referenced in the following passage from P.B. Laxton’s article “Nikumaroro” published in the Journal of the Polynesian Society in 1951.

Turning the [southeastern] tip to return along the northern rim, narrow, thundering with surf driven by the north-east trade winds, the path ends in a house built for Gallagher on a strip of land cleared from lagoon to ocean beach so that the fresh winds blow easily through. Beyond this there is no path, save along the steeply sloping, sandy ocean beach.

Gerald B. Gallagher was the island’s only resident British administrator. He fulfilled his duties as Acting Officer-In-Charge, Phoenix Island Settlement Scheme from his headquarters on Nikumaroro from October of 1940 until his death from tuberculosis at age 29 in September of 1941. Laxton does not explain why a house should have been built for Gallagher at such a distance from the village but the reference to “fresh winds” may indicate that this was intended as a sort of sanatorium where he might find some relief from his respiratory affliction.

Although we would have obviously preferred an aircraft in the bush to a house at the shore, we were none the less encouraged by the project’s ability to spot genuine anomalous features in very old photographs and then find and identify them on the ground nearly sixty years later. We were also struck by how well the island’s underbrush can hide large objects from even a determined search. In 1991 a TIGHAR team had spent several days on this part of the island specifically searching for the reported “water-collection device” and found nothing. In 1996, with the advantage of having a specific

target visible in an aerial photograph, it took fully 76 man-hours of active search operations to find what the island had hidden. An intact Lockheed Electra would have been no easier.

The expedition accomplished its purpose of finding a reasonable explanation for the phenomena observed in the aerial photographs—with one exception. If the features visible in the 1938 photo are, indeed, trails or footpaths they present a lingering and disturbing question about who made them. However, unless additional information comes to light, further search operations in this location are not contemplated.

Village Survey

Once again, the abandoned village yielded interesting artifacts. Initial analytical work has yielded the following information on two of the objects recovered.

2-3-V-1 Cables

The shielded cables are consistent with those used on American aircraft radio receivers. Whether they meet military specifications or are more likely to have been in a civilian aircraft is still being researched. The connectors have been identified as products of the Howard P. Jones Company of Chicago, Illinois. Known as

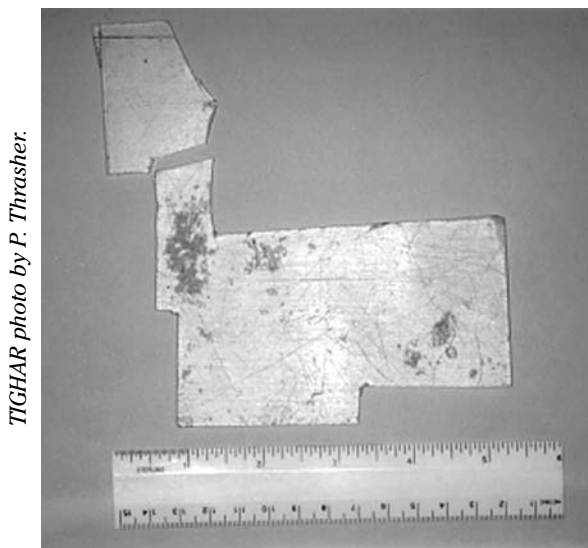


TIGHAR photo by P. Thrasher

“Part Number 101”, they were first produced in the mid-to-late 1930s (exact date not yet determined) and remained in use through World War II. This type of connector was used for certain Bendix, Western Electric, and Sperry receivers. Earhart used Bendix and Western Electric receivers. Further research is in progress.

2-3-V-2 Transparent Sheet

Compositional analysis of this material by the Winterthur Museum Analytical Laboratory has shown it to be polymethyl methacrylate. First marketed in Germany in 1927, polymethyl methacrylate first saw large scale production by Rohm & Haas and DuPont in the United States in 1936 under the trade name Plexiglas. In Britain it was produced by ICI, Ltd under the tradename Perspex. According to sources at Rohm & Haas, pre-war use of Plexiglas was limited to aviation and, in colors, for the manufacture of jukeboxes. During the war the material was, of course, widely used in aircraft.



TIGHAR photo by P. Thrasher.

Two aspects of the collected artifact provide clues to its origin. First, it is $\frac{1}{8}$ inch (.125) in thickness. Second, it has a uniform curvature which appears to be original to the sheet. Research to date has established that the thickness and curvature precisely match the specifications for the cabin windows of the Lockheed Model 10 at the time these windows were replaced in NR16020 (February 1937). Neither the thickness nor the curvature matches windows used in B-24 aircraft. (See “Part #40552,” p. 12, for a complete discussion of this artifact.)

Conclusions

1. Pending new evidence, further on-the-ground search operations along the island's northeastern “windward” shoreline are not warranted.
2. There is no doubt that the inhabitants of the village at Nikumaroro used aircraft parts and materials for local decorative and utilitarian purposes. The extent of this activity, the source or sources of the parts, and the specific period during which this activity took place are not well understood. Information available at this time indicates that this activity was limited rather than common; that all of the aircraft parts used can be traced to two distinct sources; and that little or no such activity was taking place during the time covered by the resident British administrator Gerald B. Gallagher's quarterly reports (October 1940 to March 1941).
3. It is known from the identification of part numbers that one of the source aircraft was a Consolidated B-24C or B-24D within a particular block of serial numbers encompassing some 1,653 individual aircraft. It is also known that no such airplane ever crashed at Nikumaroro. A “large four-engined” aircraft is reported to have crashed late in the war at Sydney Island (now Manra) some 200 miles to the east. This wreck is said to have been extensively used as a local source of metal for decorative objects. We know there was post-war traffic between Manra and Nikumaroro and former residents of Nikumaroro now living in the Solomon Islands identify the Manra wreck as the source of airplane material found on Nikumaroro. (See “Solomon Islands Expedition,” p. 14.)
4. A significant number, possibly as many as half, of the aircraft-related artifacts found in the village are not consistent with a B-24 nor any other known World War II aircraft. They are, instead, entirely consistent with archival documents describing Amelia Earhart's Lockheed Electra. The nature and condition of the components suggests that they were removed from a relatively intact aircraft which was on land and standing on its landing gear.
5. Clearly, additional archaeological survey work in the village is warranted. Recent comparison of historical photographs of the village with areas searched on the three TIGHAR expeditions has pointed up several relatively untouched and potentially fruitful sectors.

6. The question of where the aircraft was, or is, remains. Because the B-24 parts were clearly imported from elsewhere, it is certainly possible that the same is true of the Electra parts. However, the wealth of archival documentation which supports Nikumaroro as the most likely site of the Earhart flight's end; the repeatedly corroborated anecdotal accounts which describe the discovery of the skeletons, clothing and shoes of man and a woman by the island's first settlers; and the well-demonstrated ability of the island's environment to conceal large objects for many years, mandate a thorough inspection of Nikumaroro's remaining unsearched regions before giving serious consideration to an alternative hypothesis.

7. Experience has shown the advantage of having specific targets to inspect, and the deployment of reliable remote-sensing technology over those areas of Nikumaroro's dense vegetation is a high priority. Exactly how this might be best accomplished is presently under investigation while preparations move forward toward the Niku III expedition in September 1996.



The Crash At Sydney Island



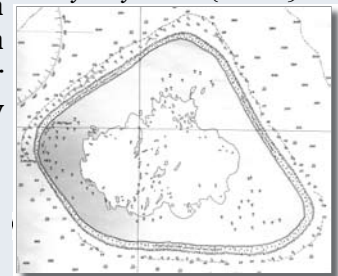
Our current working hypothesis is that the aircraft debris found on Nikumaroro (formerly Gardner Island) originated from two distinct aircraft. One was a B-24. The other was Earhart's Lockheed. To test that theory it is essential that we make a conclusive identification of the only aircraft known to have crashed and been salvaged for metal by the Phoenix Island colonists. The only written mention of this crash found so far appears in a scholarly report entitled *Titiana* written in the late '60s by anthropologist Kenneth Knudson. According to Knudson,

During the late war years, a large four-engined aircraft from Canton Island crashed on Sydney (an island about 200 miles east of Nikumaroro). Apparently low on fuel or with one engine on fire, it circled the island once before attempting to ditch in the lagoon. The approach was made too low, however, and the airplane sheared off a palm tree and crashed just inland from the village. ...[T]he wreck became the chief source of aluminum for the islanders, who had learned on Canton Island to make women's combs and other ornaments from this material. Eventually almost nothing remained of the aircraft.

The Niku II expedition recovered just such an aluminum comb from Nikumaroro in 1991 and the island's former residents now living in the Solomons recently told a TIGHAR researcher that such objects were made from pieces of the wreck on Sydney (see "Solomon Islands Expedition," page 14). Part numbers on two other artifacts found on Nikumaroro confirm that they are from a B-24 aircraft. We can pin it down even further. At least one of the parts came from either a B-24C (not likely, because only nine were built) or one of 1,559 B-24Ds. If the Sydney crash was one of those B-24s that would handily explain the origin of all the non-Electra parts on Niku. If it was not one of those airplanes then the Liberator parts had to come from somewhere else and our working hypothesis needs changing.

To date, we've been unable to find any other record of the Sydney crash. Knudson does not specify the nationality but, coming from Canton Island, the airplane was almost certainly either American or British. Both, of course, operated the Liberator, and Canton was a hub of ferry activity. "During the late war years" is vague but PBY pilot John Mims remembers no such wreck as of the time he left Canton in the spring of 1945. We'd like to hear from anyone who can help identify and document this loss.

Sydney Island (Manra)



PART NUMBER 40552

An irregularly shaped piece of transparent plastic, cataloged as TIGHAR Artifact 2-3-V-2, is an object found on Nikumaroro to which a standard Lockheed Model 10 part number can be assigned. Here's a review of the investigative process by which that determination was made.

DISCOVERY

On the afternoon of the fourth day of the NIKU III Preliminary Expedition, team member Veryl Fenlason (#0053CE) noticed an object lying on the jungle floor in the "old village" and thought it might be a piece of Plexiglas.

ON-SITE CONSIDERATION

Veryl brought the artifact to the attention of the expedition leader and other team members in the area and it was discussed as a candidate for collection. It was clear that this was part of a larger object made of fairly sophisticated 20th century material from which pieces had been crudely cut and broken. Its surface exhibited a slight but uniform curvature. No source of such material had been encountered elsewhere in the village and the location was too far inland for it to have washed in from the sea. Other debris in the same location exhibited similar evidence of having been cut apart, suggesting that whoever lived here was something of a craftsman or tinkerer. A further search of the spot turned up another smaller shard of the same material which fit a break in the first piece. Because known aircraft parts had been found in the vicinity it seemed reasonable to speculate that this might indeed be plexiglas and to have come from an aircraft. The expedition leader made the decision to collect the two pieces for testing and cleared their recovery with the Kiribati government representative as Artifact 2-3-V-2 (see photo p. 10).

INITIAL TESTING

Upon our return to the United States the first step was to conclusively identify the material. This was accomplished by contracting with a reputable conservation laboratory for a compositional analysis. A series of tests confirmed that the material is polymethyl methacrylate (PMMA), also known by the trade name Plexiglas. So far so good, but that didn't make it an airplane component, much less part of the Electra.

We next contacted Rohm & Haas, the company which produced Plexiglas in the U.S., and got some history on the product. Polymethyl methacrylate was first produced in Germany by the Rohm company in 1927. In 1936, Rohm & Haas began producing it in the U.S. under the name "Plexiglas." DuPont also made PMMA and called it "Lucite," while in Britain, ICI Ltd offered the same product under the name "Perspex." The new material was superior to earlier cellulose-based products (Pyral and Platicel) used in airplanes where a curved transparent surface was needed, and by 1937 aviation maintenance manuals included instruction on how to work with plexiglas. Because it was relatively expensive, the use of PMMA was limited to aviation applications and the manufacture of jukeboxes. During and immediately after the war it was almost exclusively an aviation product and didn't come into common civilian use until the early 1950s. Because the "old village" on Nikumaroro was abandoned in 1949 and (as far as we know) had no jukeboxes, we concluded that the artifact had probably come from an airplane. But what airplane?

MATCHING THE WINDOWS

All of the airplane parts found on Nikumaroro seem to fall into two categories, B-24 and Lockheed Electra. Since both aircraft could have had Plexiglas windows, the next step was to look at the artifact's curvature and thickness. Plexiglas, to be formed, must be heated to a minimum of 90°C—a far higher temperature than could be reached just lying on the ground (even on Nikumaroro), so the curvature of the artifact is almost certainly original. To see if it is the same curvature as a Lockheed Electra window we asked our friends at the New England Air Museum in Windsor Locks, Connecticut to send us a piece from their under-restoration Electra c/n 1052 (Earl's was c/n 1055). The exterior surface curve of the aircraft window and the window appeared to be identical. The glass of the 1052, however, was tinted and twice as thick as the artifact (1/4 inch versus 1/8 inch). Early photos of 1052 show



SOLOMON ISLANDS

EXPEDITION

December 1995

At the time of the Earhart disappearance, July 1937, Gardner Island (now Nikumaroro) was uninhabited. A year and a half later, in December 1938, a small colony of Gilbert Islanders was established on the atoll by the British Colonial Service as part of the Phoenix Islands Settlement Scheme. The program was never an economic success and, in 1963, the colony was abandoned and the people were re-located to the Solomon Islands nearly 2,000 miles away.

THE OTHER NIKUMARORO

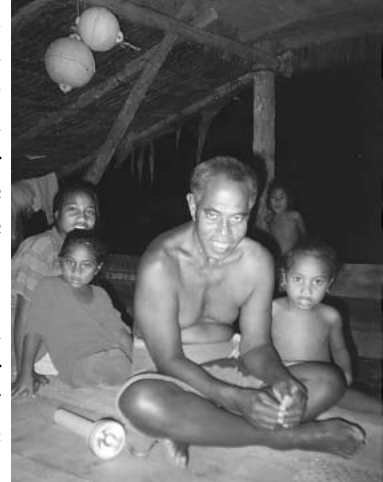
In December of 1995 TIGHAR sent Professor Dirk Ballendorf (TIGHAR #0838) of the Micronesian Research Center at the University of Guam on an expedition to the Solomons to seek out and interview the surviving former-residents of Nikumaroro.* They live on Waghena (sometimes Vaghena, Vagena or Wagena), an island in Choiseul Province seldom visited by Westerners. About three or four hundred people, mostly under the age of 25, live in the village which is named Nikumaroro. They had never heard of TIGHAR or Amelia Earhart and only a few senior citizens remember the old island. Those who do are the children of the original Phoenix Islands Settlement Scheme pioneers of 1938 and '39, all of whom are now dead.

ISLAND STORIES

Dr. Teinamati Mereki was born in 1934 and his parents were among the first Gilbertese immigrants to Gardner Island. He attended el-

** When we say "TIGHAR sent" we mean that Dirk donated his time and expertise, and a TIGHAR member donated the \$5,000 it took to pay for the trip.*

ementary school on Gardner but left there in 1945 to attend school at Tarawa, the headquarters for the Gilbert & Ellice Islands Colony. He then attended medical school in Suva, Fiji before returning to Gardner sometime before 1960.



Dr. Teinamati Mereki

Dr. Mereki said that many people who remember Gardner know the story of the skeletons that were found there by the first settlers. Some say the skeletons were found lying side by side, others say they were not side by side. Some people think they came from the shipwreck (S.S. Norwich City went aground on Gardner's reef in 1929 with the loss of eleven lives). They were white people because they were wearing shoes. (Another interviewee, Rev. Aberaam Abera, says that they had not only shoes but remnants of clothing that islanders didn't wear.) One of the skeletons was judged to be that of a woman because it was smaller than the other. Dr. Mereki indicated on a map the general area where the skeletons were said to have been found. Nobody now alive knows what happened to the bones.

The following is an excerpt from the videotaped portion of the interview. Mereki = Dr. Teinamati Mereki; DB = Dirk Ballendorf.

Mereki: But, this aluminium, they make a comb (gestures toward photo of TIGHAR Artifact 2-2-V-5, a comb fashioned from aircraft

aluminum) they said from plane crashed on Sydney.

DB: Sydney Island.

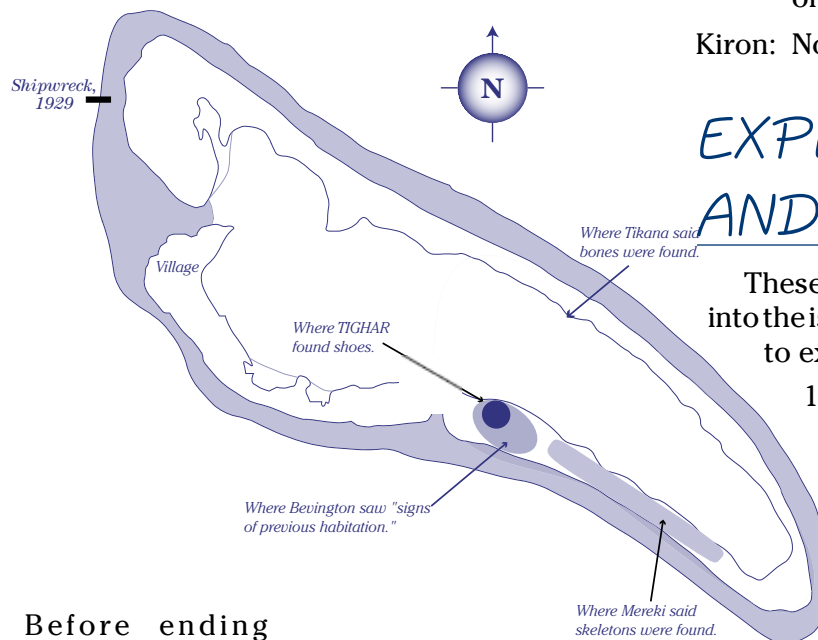
Mereki: During the war.

DB: So they never heard of any crash on Gardner.

Mereki: No. They tried to look for anything to... from which these bones could come... but didn't find a trace of it.

DB: Some Coast Guards say that local boys told them of a plane wreck away from the village.

Mereki: Maybe these two people who died knew the story but these one generation [nods to his friends], no. [smiling]



Before ending the interview Prof. Bal-lendorf asked whether anybody has any souvenirs from Gardner. The answer was “no.”

He also interviewed Enerite Kiron, a woman “more than sixty years old” who does not speak English. Everything she said was summarized by a translator. Dirk was under the impression that this woman knew the bone story, but she didn't. She had two other stories, neither related to bones or airplanes. One of her stories, about a ghost, is familiar to us from other sources.

DB: Does she know any other stories about Gardner?

Kiron: No.

DB: Does she have any souvenirs from Gardner?

Kiron: No.

DB: How did the men on Gardner fish? Where did they get their fish hooks and lures? [This question was prompted by the recollection of a USN wartime pilot that he saw an airplane control cable used as a fishing line leader at Gardner.]

Kiron: [makes an amused face] The feathers for the lures came from roosters and the fish hooks came from the store.

DB: Did she ever hear of an airplane wreck on Gardner?

Kiron: No.

EXPLANATIONS AND ASSUMPTIONS

These exchanges provide interesting insights into the island folklore and the peoples' attempts to explain it.

1. No one interviewed was aware of a story about an airplane on Gardner, but neither did everyone know the bone story. Some people know some stories. Other people know others. That is hardly surprising. It is certainly possible that there was an airplane story that simply didn't get passed along to anyone now living on Vaghena.
2. It is apparently part of the bone story that the people who found the skeletons tried to find some explanation for them (i.e. searched the immediate area) but were unsuccessful. There was some speculation that the skeletons might be those of victims of the Norwich City disaster.
3. Mereki is aware of the Sydney crash and attributes to that source objects on Gardner, such as the comb, made from airplane debris.

CONCLUSIONS

The version of the bone story told to Prof. Ballendorf is the third time we've heard this tale from totally different sources. It's essentially the same story told to a San Diego newspaper reporter in 1960 by retired Coast Guardsman Floyd Kilts who said he heard it from a "native" on Gardner Island in 1946. In 1991 Bauro Tikana, now living in Tarawa, said that when he arrived on Gardner in 1940 he was told by laborers there that bones had been found both near the shipwreck and on the "other end" of the island. Clearly, this is a well-established bit of island folklore—but is it true and, if so, whose bones were found?

To establish that an anecdote is true requires supporting evidence which is not anecdotal. This could be a contemporaneous written or photographic record, or it could be the discovery of physical evidence. There are many, many stories about Amelia Earhart being seen on Saipan, etc. but no supporting evidence has ever come to light. In the case of the Nikumaroro bone story we at least have some non-anecdotal support. British Colonial Service officer Eric Bevington toured the island three months after Earhart disappeared. His diary (a contemporaneous written source) confirms that he saw "signs of previous habitation" but doesn't say where. When queried in 1992 he indicated (anecdote) the same general area where Mereki says the

bones were found. It was from that same part of the island that, in 1991, TIGHAR recovered the remains of shoes (physical evidence). Shoes are specifically mentioned in two of the three versions of the bone story. There is, we conclude, reason to think that the bone story is fundamentally true. Were they the bones of men lost in the wreck of the *Norwich City*? If so, it means that two bodies (one of which was later misidentified as a woman) washed ashore together and intact (including shoes) two shark-infested miles from the wreck. If the shoes found by TIGHAR are the shoes in the story they did not come from the 1929 shipwreck. The heel is American and dates from the mid-1930s and, along with the other parts found, matches the shoes worn by Earhart on her last flight. There is, we conclude, a significant probability that the Nikumaroro bone story describes the discovery of the bodies of Amelia Earhart and Fred Noonan.

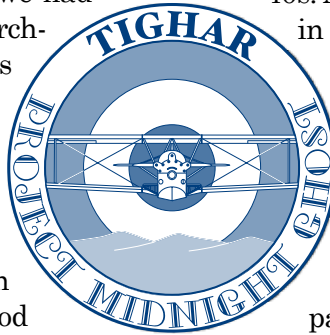
As for the origin of airplanes parts, the assumption that everything came from the wreck on Sydney is understandable but incorrect. Components from two different aircraft have been found on Nikumaroro. One of the aircraft was a Consolidated Model 32, specifically one of 1,653 B-24Cs or Ds. We strongly suspect that this was the Sydney crash. The other airplane appears to have been Lockheed 10E Special NR16020.



The Ghost Re-Appears

It was September 21, 1994 and we had hit a dead end. Ten years of searching for l'Oiseau Blanc had led us from the hills of coastal Maine to the high muskeg of Newfoundland. Now we stood tired, cold and empty-handed on a remote and desolate lakeshore, out of time, out of money, and out of ideas. Our only consolation was the knowledge that we had stood like this in other places at other times (too many places, too many times) and always, eventually, answers had emerged. Sometimes, it seems, a project needs to just sit and simmer for awhile. Keep the heat on and, sooner or later, something new will bubble to the top. Early this year, sixteen months after that bleak day on the muskeg, we heard a tiny but distinct “pop.”

The puzzle which had stumped us was truly perplexing. On May 9, 1927, twelve days before Lindbergh landed in Paris, two French aviators disappeared in an attempt to make the same trip, but in the opposite direction. Although their heralded arrival in New York didn't happen, an airplane fitting the description of their large white biplane, l'Oiseau Blanc (the White Bird), was seen over Newfoundland's Avalon Peninsula by as many as seventeen separate witnesses. The reported track of the aircraft passed northeast to southwest toward the Cape Shore, a coastal peninsula the interior of which is a wilderness plateau dotted with shallow lakes. A strong local tradition holds that one of those lakes holds the wreck of an airplane. That story is supported by archival documents confirming that, in 1948, airplane wreckage on an island in a lake was reported to the Newfoundland authorities. The debris was judged to be 15 to 20 years old and the Civil Aviation Division, after checking its records, dismissed it as probably belonging to one of “a number of aircraft (which) left Europe about twenty years ago of which no trace has since been found.” The exact location—a small rocky island in a lake known locally as the Gull Pond—was pinpointed for TIGHAR by Cape Shore residents who say they saw wreckage there in the early



'40s. An initial TIGHAR search of the island in 1992 recovered a single piece of debris which might be from an aircraft but is too badly deteriorated to be diagnostic. This did, however, seem to confirm the Gull Pond as the point of origin for the plane-in-the-pond stories. If an airplane crashed here the wreckage on the island should logically be part of a larger debris field which would include the all-important engine(s). To test that hypothesis a program of methodical visual and remote-sensing searches of the pond bottom was begun. Two years, six expeditions, and many thousands of dollars later we had covered enough of the submerged real estate surrounding the island to convince ourselves that there just ain't nothin' there. Something was fundamentally wrong with our hypothesis—but what?

The “pop” of new information which might re-open the investigation came in the form of a casual comment by a Newfoundland resident who remembered that early versions of the plane-in-the-pond story mentioned a different pond. The idea that we might be looking in the wrong body of water was one we had considered and rejected many times. The problem, of course, was the credible testimony of eyewitnesses who saw wreckage at the Gull Pond and our own recovery of an artifact there. Mysterious airplane wreckage at two ponds in the same region just didn't make any sense—or did it? Part of the plane-in-the-pond legend holds that an early discoverer of the wreck brought metal parts home to use as sled runners. What if the material seen and found at the Gull Pond was actually a stockpile of salvaged parts brought part way home from a site farther away? That would explain the absence of a debris field. Instead of discovering the crash site, perhaps we only cleaned up the last remaining piece of a salvor's stash. This may turn out to be yet another dead end or it could be the answer to one of aviation history's greatest riddles. Until we know which we're not much inclined to mention the name of the other pond.



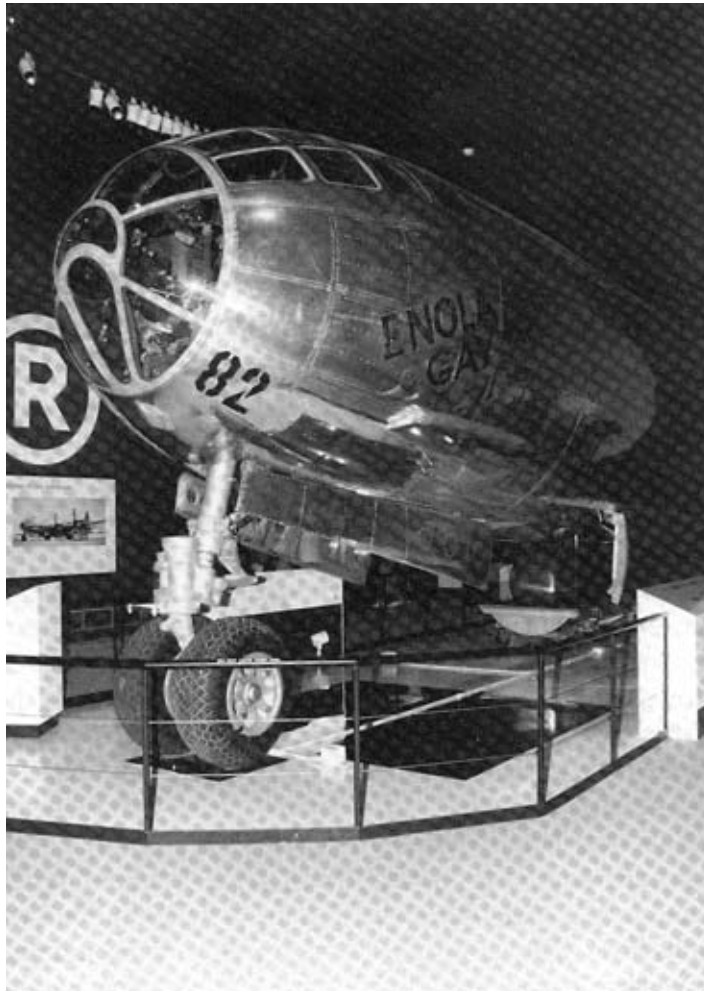
The Museum of Hard Knocks

In the late spring of 1995 Boeing B-29 Superfortress 44-86292, known on August 6, 1945 and forever after as “Enola Gay,” went on display at

the Smithsonian’s National Air & Space Museum in Washington, D.C. In the process, the United States Congress took a

hand in the exhibition of an old airplane, the director of the world’s best-attended museum lost his job, and debates about national pride and national guilt swirled through the pages of the American press. A year later, NASM still operates with an interim Acting Director as scandal and controversy continue to plague the museum. A General Accounting Office (GAO) study published in October 1995 under the title “Better Care Needed for National Air and Space Museum Aircraft” was highly critical of the storage conditions at the museum’s Paul E. Garber Facility in Suitland, Maryland (known to enthusiasts as Silver

Hill). Adding injury to insult, in February of 1996 a 17-year NASM staff member (now former staff member) began serving a federal prison term for the theft and sale of artifacts from the collection.



TIGHAR photo by P. Thrasher

Because the National Air & Space Museum has long been regarded as a standard-setter in the world of aviation historic preservation, TIGHAR feels that a thoughtful review of its recent trials and tribulations might prove instructive. In this and future issues of *TIGHAR Tracks* we’ll examine three issues:

- The Enola Gay Debacle—A collision with the limits of artifact interpretation.
- Too Much on the Plate—The pitfalls of over-acquisition and inadequate aircraft/artifact storage at air museums.
- Conflict of Interest—The tension between employee/volunteer trust and collection security.

We invite and will publish member comments as we explore these difficult topics.

The Exhibit

Hanged, Drawn & Quartered

First to greet visitors is the bomber's towering tail, now less towering, mounted on a lighted wall. Around the corner on another wall hangs a massive engine nacelle looking for all the world like an aluminum rhinoceros head. Turning about brings one face to face with the airplane's lopped-off forward fuselage, its polished skin and flawless plexi looking as perfect as the complexion of the guest of honor at a viewing—except for the words “Enola Gay” on the nose. Later touch-ups here have been carefully removed because the faded letters are thought to be the only markings original to the airplane's moment in history. The streaked and chipping brush strokes add a Dorian Gray touch to the otherwise pristine picture. Through the glassed-over gash where the wing once hung can be seen the restored interior of the bomb bay. Below on the floor rests the bomb itself (just the

shell, we trust) encased in a transparent box. The feel of the exhibit is technical, antiseptic, devoid of any sense of what happened on the ground. Anyone not comfortable in the English language might easily stroll through without realizing what they are looking at. Around the next corner the voices of crew members drone from a darkened theater where a film perpetually tells their story.

In the end, the Enola Gay non-exhibit might be said to offer some measure of satisfaction to both sides of the controversy that ultimately trashed both the planned presentation and museum that prepared it. The veterans' groups and others who wanted a tribute rather than a retrospective have a display which features the machinery and the recollections of the people who used it. Different eyes may see the display's sterility as evidence of the denial that is the deepest expression of shame.

The Facts

The Decision to Use the Atomic Bomb and the Architecture of an American Myth

by Gar Alperovitz

Alfred A. Knopf, New York. 1995

847 pages, no illustrations. \$32.50

This is a deeply disturbing book which should be avoided by anyone who has no wish to upset cherished beliefs about the end of “the last good war.” What makes the book so troubling is not its premise, that the reasons for America's deployment of atomic weapons against Japan were very dif-

ferent from present-day popular perceptions. After all, historical revisionism is a staple of the publishing industry. This book hits home because its shocking allegations are extraordinarily well-documented. Source materials are not only cited but are exhaustively reproduced in the text. The author's credentials are impeccable

and his approach to the subject is scholarly to the point of being tedious. The book is ponderous rather than sensational. It is a book you wade through rather than read, but you come out the other side with information that is terrible to contemplate.

The most common justification of the bomb's use—that it saved untold American and Japanese lives by ending the war without an invasion—is based upon a false premise. By the time the decision was made to use the atomic bomb neither President Truman, nor anyone in a position to influence him, believed that an invasion would be necessary to end the war, bomb or no bomb.

Military leaders who went on record as believing that the war could have, and should have, been won without the bomb included: Admiral Ernest J. King; Admiral William D. Leahy; Admiral Chester W. Nimitz; Admiral William "Bull" Halsey; General Douglas MacArthur; General Dwight D. Eisenhower; General Carl "Tooe" Spaatz; and even General Curtis E. LeMay who commanded the 20th Air Force which flew the missions.

"It wasn't necessary to hit them with that awful thing..."
—Dwight D. Eisenhower

The official U.S. Strategic Bombing Survey (1946) concluded that, by mid-summer of 1945, "The Japanese leaders had decided to surrender and were merely looking for a sufficient pretext to convince the die-hard Army Group that Japan had lost the war and must capitulate to the Allies. The entry of Russia into the war would almost certainly have provided this pretext..." Again, bomb or no bomb, a full invasion of Japan "would not have been necessary" and even the initial Kyushu landings scheduled for November were judged to be only a "remote" possibility.

On July 11, 1945 the U.S. intercepted an "extremely urgent" cable from the Japanese Foreign Minister to the Japanese Ambassador in Moscow stating that "We are now secretly giving consideration to the termination of the war....". The Emperor desired that

the war "be quickly terminated" but "so long as England and the United States insist upon unconditional surrender the Japanese Empire has no alternative but to fight on..."

In the summer of 1945 it was widely recognized that the single greatest impediment to Japanese capitulation was their fear that "unconditional surrender" meant that the Emperor would be tried and hanged as a war criminal. Such action was never seriously contemplated and, indeed, the Allies saw an intact and cooperative Emperor as vital to restoring peace to Japan. As the author points out, "[E]very top presidential civilian and military adviser up to this point in time [July 18, 1945] except [Secretary of State James] Byrnes—as well as Prime Minister Churchill and the top British military leadership—clearly and directly urged a clarification of the unconditional surrender formula." No such clarification was offered.

Of over-riding concern to Truman and Byrnes in the weeks prior to Hiroshima and Nagasaki was the question of whether and when the Soviet Union would declare war on Japan. Prior to the bomb's first successful test at Alamogordo, New Mexico on July 16, Russia's promised entry into the Pacific war was encouraged as the event which would almost certainly bring about an immediate Japanese surrender. Developments in Eastern Europe, however, were making clear the cost of any partnership with Stalin. After Alamogordo, Truman and Byrnes saw the bomb as a way to end the war without Soviet involvement. The trouble was, the combat-deployable bomb wouldn't be ready for at least two weeks. To forestall a Soviet-brokered end to the war the surrender terms were not clarified and the Japanese peace initiative through Moscow died on the vine. An atomic attack on Japan before Stalin's projected mid-August entry into the war became a top priority, both as an instrument for ending the war and as a demonstration to render the post-war Soviets more tractable. As it happened, the Hiroshima bomb was dropped on August 6 and Russia declared war on Japan two days later. The next day Nagasaki was bombed and Japan surrendered on August 14.

In the book's second section the author attempts to track the evolution of the popular notion that the atomic attacks prevented an invasion. This proves to be a far more difficult task than documenting the beliefs, concerns and motivations surrounding the weapons' actual use. The very fact that most Americans fully expected and dreaded the coming invasion, only to have that cloud suddenly lifted by a force they hadn't known existed, created an impression of miraculous salvation that would have been inevitable even without outside reinforcement. Alperovitz documents, however, that there was significant and systematic official encouragement of this misconception by the U.S. government. He marvels, somewhat naively, at the reluctance of veterans to accept the overwhelm-

"Time and again, the question ... has become entangled with the quite separate issue of our anger at Japan's sneak attack and the brutality of her military."

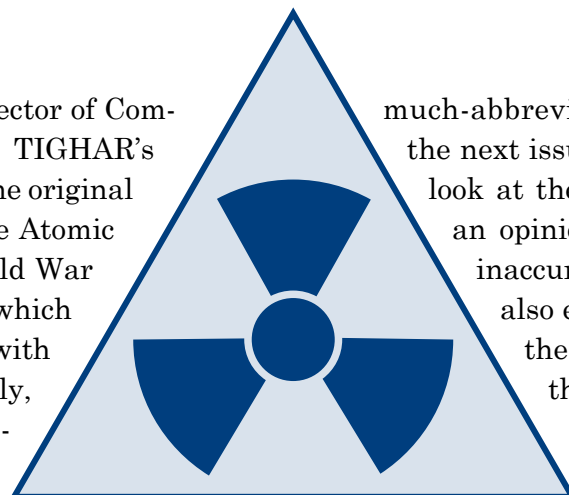
ing evidence that America's use of the atomic bomb in World War II was not militarily justifiable. "Time and again, the question ... has become entangled with the quite separate issue of our anger at Japan's sneak attack and the brutality of her military." He notes that "we have often allowed ourselves to confuse the issue of modern research findings with criticisms of American servicemen. ... The men serving in the Pacific in 1945 were prepared to risk their lives for their nation. By this most fundamental test they can only be called heroes." He's right, of course, but the Smithsonian's experience with the Enola Gay exhibit demonstrates that the difficulties Americans have in dealing with what happened at Hiroshima and Nagasaki cannot be so easily assuaged.

The Enola Gay Debacle, Part Three

The Failure

Hazardous Material

The Smithsonian's Director of Communications has honored TIGHAR's request for copies of both the original draft of "The Last Act: The Atomic Bomb and the End of World War II" and the revised version which resulted from negotiations with veterans' groups. Ultimately, the entire exhibit was cancelled and replaced by the



much-abbreviated present display. In the next issue of *TIGHAR Tracks* we'll look at the aborted scripts and offer an opinion about how accurate, or inaccurate, they really were. We'll also explore the question of how the planned exhibit exceeded the practical limits of artifact interpretation.



State of the TIGHAR

As TIGHAR begins its twelfth year we're pleased and proud to report that the organization is stronger and more fiscally sound than it has ever been. Of course, as Einstein said (sort of), "Everything is relative" and long-time members know well the struggle it has taken through the years to keep the TIGHAR tracking. Being able to reliably meet payroll and basic operating expenses, keep the taxman at bay, make progress against a backlog of old debt, and still move vigorously forward with research and field work is our idea of heaven. These days we can almost feel our wings.

The results of the NIKU III Preliminary and the Solomon Islands expeditions are very encouraging (see articles in this *TIGHAR Tracks*). Fund raising for next fall's NIKU III expedition recently passed the halfway mark with a \$70,000 pledge from a TIGHAR member and we have every expectation of being able to complete the project's million-dollar budget. Media interest in the Earhart Project remains high and negotiations on that front are currently underway. Computer upgrades are both enhancing our research capabilities and permitting us to further improve TIGHAR Tracks. To top it all off, a TIGHAR Home Page will soon appear on the the World Wide Web, opening up a whole new avenue for growth.

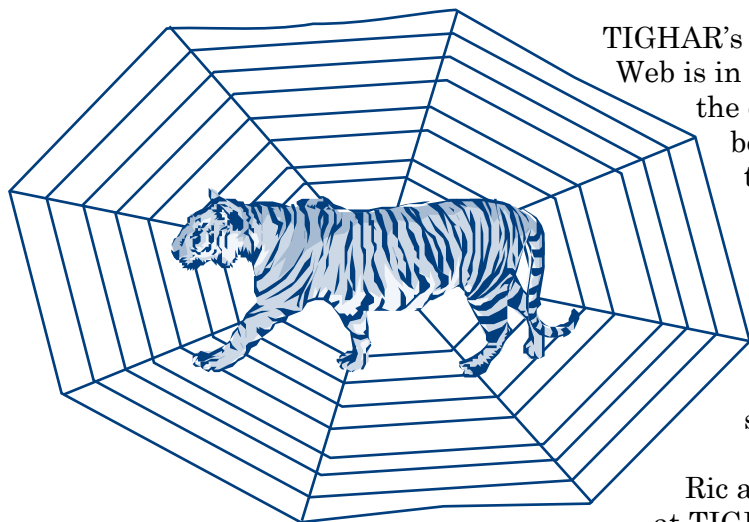
Looking back with 20/20 hindsight at the twisting, often rocky, path that has brought us to this point in our journey, we can see some wrong turns, some hard lessons, and not a few surprises. Through it all, we have been continually amazed and humbled by the loyalty, the intellectual courage, and the unfailing generosity of the TIGHAR membership.

Perhaps the most surprising aspect of TIGHAR's accomplishments is how relatively small the organization is. Despite twelve years of international press coverage and tens of thousands of dollars in paid advertising, the active TIGHAR membership worldwide has never exceeded one thousand individuals. We're not sure why. We do hear repeatedly that *TIGHAR Tracks* is read by far more people than the membership numbers indicate. John Garwood of the Aviation Historical Society of New Zealand recently wrote to say, "There is a pecking order among the [AHSNZ] members as to who gets to read the TIGHAR Journals next after they arrive. Only, of course, after yours truly has thoroughly read them first." Whatever the reason, the TIGHAR member and supporter remains far rarer than the TIGHAR fan. Though small, the organization's work has such impact that the Senior Curator of the Royal Netherlands Military Aviation Museum once said of TIGHAR, "With apologies to Sir Winston Churchill—Never in the field of aviation historic preservation has so much been owed by so many to so few." Of course, being "few" brings more responsibility, and greater credit for accomplishment, to each of us. That concept might best be expressed with another paraphrase of another Englishman. "We few, we happy few, we band of TIGHARS...."

Thank you for your continued support. And for those "closet" TIGHARs now reading this article—there's a membership form on the back cover.



A TIGHAR on the Web



TIGHAR's Home Page on the World Wide Web is in process and should be mounted by the end of April, 1996. A mailing will be sent out to all members when the page activates, giving the exact address and the date of activation. The TIGHAR BBS has been shut down, and the modem lines re-routed to Ric and Pat's office computers. If you have called the TIGHAR BBS and gotten no answer—that's why.

Please continue to send Email to Ric at TIGHAR1@AOL.com, and to Pat at TIGHAR@AOL.com. We will keep

TIGHAR's AOL account active after the Web Page is available for Email, so those addresses will be good indefinitely.

TIGHAR's Web Page will be an exciting place, with links to our current research, the current and back issues of *TIGHAR Tracks*, photos, project reports, and downloadable text files for all the closet TIGHARs out there. We are eager to begin exploring this new aspect of the communications world, and will be relying on our members to tell us what they think of our look and our substance on the Web.



BLUE SIDE UP

Speaking of Internet activity, this issue's Blue Side Up comes to us via Kris Tague, TIGHAR #0905CE of Foster City, California. It was posted on the Internet for general jollies. Since it appears to be a U.S. Government "document" we thought we could risk sharing it without infringing any copyrights.

Actual radio conversation released by the Chief of Naval Operations, October 10, 1995.

- Voice #1: Please divert your course 15 degrees to the North to avoid a collision.
- Voice #2: Recommend you divert YOUR course 15 degrees to South to avoid a collision.
- Voice #1: This is the Captain of a U.S. Navy ship. I say again, divert YOUR course.
- Voice #2: No. I say again, you divert YOUR course.
- Voice #1: **This is the aircraft carrier Enterprise. We are a large warship of the U.S. Navy! Divert your course NOW!**
- Voice #2: This is a lighthouse. Your call.



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