

TIGHAR TRACKS

A PUBLICATION OF THE INTERNATIONAL GROUP FOR HISTORIC AIRCRAFT RECOVERY

This never-before-published photograph was taken by a youth named Dustin Carter at Burbank Airport on the morning of May 21, 1937. It shows Amelia Earhart's Electra being loaded for the unpublicised departure of her second world flight attempt. AE stands near the tail in conference with an unidentified person while Fred Noonan unloads gear from the trunk of his wife's convertible. Mary Bea Noonan watches from beside the front fender. She will never see her husband again.

DEPARTURE

Whatever drama occurs during the expedition that is departing as this *TIGHAR Tracks* goes to press, it will be hard-pressed to match the cliffhanger of the final fund-raising.

Friday night, September 13 (Departure minus 14)

Fax arrives from Oceaneering International. They will start mobilizing their personnel and equipment on Wednesday the 18th. TIGHAR's contract calls for payment in full 48 hours before mobilization. Please wire \$146,970 Monday morning. We're still about \$200,000 short of the expedition's total budget. There's no way we can meet that payment.

Monday morning, September 16 (departure minus 11)

Call to Oceaneering. We don't have the money. Can you do the job on spec?

Monday night, September 16 (departure minus 10.5)

Call from Oceaneering. Disaster. The boss says no. No money, no sonar, no ROV, no chance to find the airplane.

Tuesday, September 17 (departure minus 10)

Defiance. We'll go anyway and do just the onshore search. Do our best with what we have. Some counsel postponement. That would be death to TIGHAR's credibility. We go as scheduled if we have to swim to Nikumaroro.

Wednesday, September 18 (departure minus 9)

Grim determination. We're not going to give up without a fight. Call to Oceaneering. How long will you hold everything ready to go? One week, until Wednesday the 25th. Okay, we've got one week to raise \$200,000.

Monday, September 23 (departure minus 3)

Desperation. Despite burning up the phone and fax lines and singlehandedly supporting Federal Express, we've only been able to scare up a few more thousand from the faithful. Those who have the capability to do more won't.

Tuesday morning, September 24 (departure minus 2)

Oceaneering calls. They're under pressure to release our equipment for other jobs. Tomorrow is definitely the last day. *Hoping against hope.*



From an original negative in the Carter/Johnson collection acquired by TIGHAR courtesy of John T. Johnson (TIGHAR)

Tuesday afternoon, September 24 (departure minus 1.75)

An old friend has gone to his friends. He and they will lend TIGHAR the money knowing full well that this is not what you'd call a secure loan. That kind of faith is really humbling. That kind of debt is terrifying. But The Earhart Project is fully funded.

Wednesday, September 25 (departure minus 1)

Jubilation. The biggest check (and the biggest obligation) in TIGHAR's history arrives by FedEx. Oceaneering is paid and mobilized. Trucks will roll, airplanes will fly, and the ship will sail – all as planned.

While all of this was going on there were a hundred other crises, minor only by comparison, which had to be resolved. Only a heroic effort by White's Electronics of Sweet Home, Oregon overcame technical difficulties to specially modify ten PI3000 metal detectors in time for the expedition. Robbins Engineering Instruments of Gloucester, New Jersey went to great lengths to equip the expedition with hi-tech surveying gear and to train us in its use. Pacific Stihl of Chico, California arranged for the donation of power equipment for use on the island and United Airlines efficiently handled the complex travel arrangements.

The expedition sails from Honolulu on September 30 and is scheduled to return October 30. No press announcements will be made during the expedition or afterward until we've had time to analyze the results. At present we anticipate holding a press conference on November 15. It is very important that TIGHAR members continue to support the project while the expedition is in progress. TIGHAR headquarters will remain open and staffed during the entire month of October (see "While We Are Out," page 5). TIGHAR has gone into significant debt to complete the funding for this expedition but, as Amelia said, "The future is mortgaged, but what are futures for?"



Columbia Still Sleeps

The evaluative excavation of a barn foundation suspected of containing relics of the W.B.2 Columbia, announced in the last *TIGHAR Tracks*, didn't happen. The dig was set for July 19-21 but because of delays in publication many members who wanted to participate just didn't have enough time to arrange their schedules. The excavation has, therefore, been postponed until after this fall's Earhart expeditions. When the dig is rescheduled we'll make sure to leave plenty of lead time. Given the jungle of poison ivy on-site in July the postponement was merciful.



Photo courtesy Frank Strnad Collection.

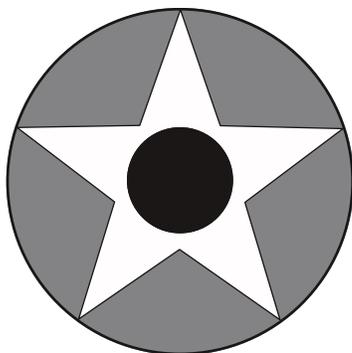
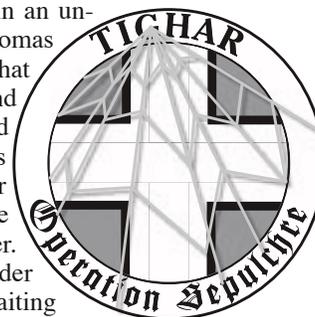
Drawing a l'Oiseau Blanc



TIGHAR's oldest and most difficult project, the search for The White Bird of French transatlantic aviators Charles Nungesser and Francois Coli, is pressing forward thanks to the efforts of Jay Veith (TIGHAR #0767CE), Bill Alexander (TIGHAR #0403E), and Don Ward (TIGHAR #1134CE) who have been trying to track down various reports of television and magazine accounts describing the discovery and removal of the wreckage by hunters. It's the most tedious kind of research, hunched over a stack of old magazines at the Library of Congress or squinting at poorly microfilmed newspaper articles. So far, although they've uncovered a wealth of information, the elusive source of all the rumors has not yet been found – but their search goes on. It's one thing to glory in the chase amid the grandeur of the Maine woods, but it's another to fight boredom and frustration in the solitude of archives and libraries. We salute their commitment.

“Palishaw” Found

Remember the mysterious “Specialist Palishaw” who allegedly took photos of Luftwaffe aircraft in an underground bunker? (see *TIGHAR Tracks* Vol. 7, No. 1) Thanks to Walt Holm (TIGHAR #0980C) Thomas Palshaw (not Palishaw) has been found alive and well and living in Connecticut. It would be great to say that Walt tracked him down through an old parking ticket or something but the real story is sort of dumb and embarrassing. It turns out that Mr. Palshaw visited TIGHAR's booth at an airshow years ago and we had his name and address all nicely written down in an old project file where Walt found it. While Palshaw is familiar with the stories of underground airplanes at Mainz-Finthen he denies being the person who saw or photographed them and, in fact, says he never saw the pictures. However, Walt has tracked down someone who does claim to have seen the photos and is now trying to nail down who really did go into the bunker. For his trouble, Walt Holm has been designated the new Project Director for Operation Sepulchre and, under his direction, the project is moving closer to finding out if there really are WWII German aircraft awaiting discovery in underground hangars.



Doolittle B-25

Plans to determine the precise location and condition of the only Doolittle Tokyo Raider which may reasonably still exist are in the diplomatic permission phase. Colonel Zhang Yongyin, Assistant Air Attache for the embassy of the People's Republic of China, will personally seek approval for TIGHAR's request to investigate the crash site in Chinese coastal waters when he completes his tour of duty and returns to Beijing this fall. Col. Zhang is an enthusiastic supporter of the project and will do his best to clear the rather difficult diplomatic obstacles to an on-site investigation and eventual recovery.



THE EARHART PROJECT



NEW EVIDENCE

On the eve of the expedition's departure, new evidence continues to come in. Late developments include:

- **Testimony obtained by Lou Schoonbrood (TIGHAR #1198) of The Netherlands who interviewed Gerson Van Messel, formerly a pilot with KNILM (Dutch East Indies Airlines).**

Captain Van Messel was at Andir Airport, Bandoeng, Java when Earhart and Noonan were there in late June 1937. AE and Fred visited him at his home there and he discussed the Electra's navigation station with Noonan. He remembers that Fred told him that he had recently moved the storage facility for his maps and books because "the original storeplace was in his way." TIGHAR had already determined that the navigator's bookcase found on Nikumaroro in 1989 shows signs of having been removed from its original mounting and reinstalled in a temporary fashion.

- **Corroboration of accounts that bones were found by the first settlers on Nikumaroro in 1938.**

Bauro Tikana, formerly clerk and interpreter to the British magistrate on the island in 1940, reports that he was told by laborers that they had found bones on the southeast end of the atoll when they first arrived in 1938. TIGHAR had long known of a similar tale related by a now deceased Coast Guardsman who was on the island in 1946 (see "Bones" in *TIGHAR Tracks* Vol. 6 No. 1), but that story contained many inaccuracies and had to be considered suspect. This recent corroboration by a living witness, however, lends the basic account much more credibility and indicates, in a general sense, where on the island the discovery was made.

- **Recognition of the possible significance of a grave found by the 1989 TIGHAR expedition.**

Tikana's account of bones being found at the southeast end of the atoll prompted a review of the various island features cataloged by the 1989 expedition. It happens that a small and

isolated grave was found and photographed on that end of the island on October 6, 1989 but was presumed, at the time, to be that of a Gilbertese child. In the light of Tikana's information, the grave seemed oddly distant from the village two miles away. Anthropologists familiar with Gilbertese burial practices agree that it appears unlikely that the grave is that of an island resident and is probably that of an *I-Matang* (EE-matahng), a white outsider. The grave's small size (about 1 m by .5 m) could, of course, be due to the burial of bones rather than a body. The 1991 expedition will examine the grave more closely and take appropriate measures based upon the results.

- **Corroborating documentation from U.S. Naval Intelligence files which indicates an unexplained human presence on Nikumaroro's eastern beachfront immediately following the Earhart disappearance.**

A photograph taken during the U.S. Navy's aerial search of the island on July 9, 1937 (one week after Earhart's disappearance) was found at the National Archives on July 15, 1991.



U.S. Navy photo, National Archives

Recently discovered photograph of Gardner Island taken on July 9, 1937 during the U.S. Navy's search for Amelia Earhart.

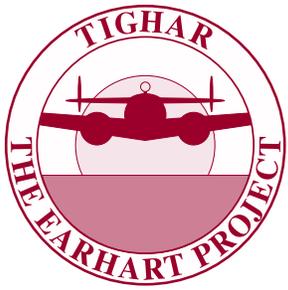
It confirms several suspicions TIGHAR has had about that operation: that the tide was high at the time of the search flight thereby masking the fact that the reef-flat provided an inviting landing area when dry at low tide; that the search was conducted from a relatively high altitude (the photo appears to have been taken from about 1,000 feet) due to concern over possible bird strikes; and that the section of the island considered most interesting by the searchers, and possibly the place where they saw the "signs of recent habitation" described in the official report, is precisely the section of beach where U.S. Coast Guardsmen saw an abandoned campsite in 1944.

- **Confirmation that a November 1939 U.S. Navy survey of Gardner Island by a team from the U.S.S. *Bushnell* did not survey the ocean beachfront on the southeast end.**

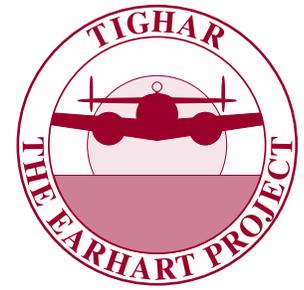
Critics of TIGHAR's hypothesis have cited the *Bushnell* survey as proof that there was no sign of Earhart or Noonan on the island a scant two years after their disappearance. However, the map generated by that survey was recently found by TIGHAR researchers at the

National Archives. The surveyors' notations show very clearly, if ironically, that the one neglected section of beachfront, the one place where no one bothered to go, is the very area where other evidence places the Earhart/ Noonan campsite. That evidence was not available to TIGHAR at the time of the 1989 expedition and, as in 1939, that particular beachfront received little or no attention. Needless to say, that will not be the case on this expedition.





EVIDENCE, CONCLUSIONS, AND EXPECTATIONS



The following is a summary excerpted
from *The Earhart Project, Sixth Edition*.

A realistic assessment of the known facts shows that the loss of Lockheed NR16020 conforms to a general pattern established in countless other (and no less tragic) aviation losses before and since and is, in that regard, unremarkable. Nonetheless, the disappearance of the Earhart World Flight has, through endless sensationalization, entered the realm of folklore and any attempt to establish what really occurred must confront barriers of credibility thrown up by more than half a century of speculation. The only weapon against that formidable obstruction is a rigid adherence to accepted academic standards. Using those criteria TIGHAR has established as unwarranted the supposition that the flight ended with fuel exhaustion and a crash at sea. Likewise, abundant documentary evidence leaves little doubt that the allegations of clandestine government involvement or Japanese culpability are groundless.

To sort out what really did happen requires that we accept as fact only that information which meets the most rigorous criteria for credibility. We must disregard all anecdotal and circumstantial evidence (even, or indeed especially, that which appears to support our own hypothesis) and restrict our assessment to the scant data that meet the test. From the panoply of purported evidence assembled over the years, only four sources of fact qualify for this distinction.

1. USCG *Itasca* Radio Log #2 entry for 08:44 on 2 July 1937. Record of Earhart's last inflight transmission heard by the Coast Guard.
Significance: Establishes Earhart's final course of action to be one which would logically bring her to Nikumaroro.
2. Pan American Airways System Memorandum dated July 10, 1937. Record of post-loss signals received and bearings taken by stations at Oahu, Midway and Wake.
Significance: Establishes the presence of an active transmitter in the vicinity of Nikumaroro from July 2 to July 5, 1937.
3. Weekly Newsletter – Aircraft Search for Earhart Plane, dated 16 July 1937. Description of aerial search of Nikumaroro by aircraft from U.S.S. *Colorado* on July 9, 1937.
Significance: Establishes the presence of unexplained human activity on Nikumaroro one week after the Earhart disappearance.
4. TIGHAR Artifact 2-1 recovered from Nikumaroro on October 6, 1989. Part of a Navigator's Bookcase, Consolidated Aircraft Corp. Part Number 28F 4023.
Significance: Establishes the presence on Nikumaroro of an airplane component consistent with the Earhart aircraft.

This is not a great deal of information but it does, as one would expect of legitimate evidence, provide a clear, if still incomplete, picture of what transpired in the central Pacific in July of 1937. The sequence of events that is indicated by the evidence conforms to aeronautical navigational procedures conventional within the context of the times and is specifically preceded in Earhart's own experience. The

navigational emergency which precipitated the landing at a destination other than that intended was caused by a failure in Earhart's and Noonan's weakest area of expertise – radio. Faced with that failure, and that emergency, the crew appears to have responded rationally and prudently with a course of action that brought the flight to a safe conclusion. In the final analysis, what went wrong was that nobody found them. And yet, the fact that the U.S. Navy's search for the lost flight was ineffectual cannot be laid to any lack of commitment or desire on the part of the searchers. The official records make clear that a best effort was put forward by all involved and if, with the luxury of unrestricted time and access to worldwide resources, we can see in those records vital clues that were invisible to those who wrote them, we must remember that while we are engaged in an historical investigation, they were racing the clock to carry out a rescue.

The overall picture of what was intended, and of what went wrong, is now clear and the issue of where and how the flight ended would appear, in an academic sense, to be adequately resolved. It would, however, be folly to suppose that fact will replace folklore in the public consciousness without dramatic, intuitive proof that Earhart and Noonan landed and perished at Nikumaroro. Fortunately, there is every reason to believe that such proof is extant and discoverable at the site. The anticipated physical proof can be divided into three categories.

THE AIRCRAFT

The Lockheed can be expected to lie in the deep water immediately adjacent to the atoll. Its distance from the fringing reef, and therefore its depth, will depend entirely upon how long it floated and drifted before sinking. From the standpoint of preservation it is to be hoped that it is below 500 feet. There the effects of corrosion and coral encrustation should be minimal and the aircraft structure can be expected to be much as it was when it arrived there in 1937. A realistic picture might be that of an airplane with a somewhat crumpled nose

*Grave on
Niku-
maroro
discovered
by 1989
TIGHAR
expedition.*

*TIGHAR
Photo by
John Clauss.*



(from impact with the bottom) and considerable skin damage to its under-surfaces, wings and empennage from being washed off the reef. Damage to the interior could be severe due to the breaking free of fuel tanks which would pile up in the aft fuselage, then crush from water pressure as the airplane sank. Any organic material (cloth headliner, leather seats, etc.) will almost certainly be long since devoured by various marine organisms but the aluminum airframe, the cockpit glass and cabin windows (if not shattered earlier), instruments and radios, the rubber tires, the engines and propellers should be essentially intact. All of the metal will, however, be impregnated with chlorides from the seawater and highly unstable if disturbed without proper preservation materials and procedures being applied immediately upon recovery. It is important to remember that the recovery of any artifacts from Nikumaroro or its surrounding waters is conditional upon the approval of the government of the Republic of Kiribati which exercises ownership control over them.

ARTIFACTS ONSHORE

Anecdotal accounts of an unexplained "old campsite" on the eastern beachfront and documentary evidence of an unexplained human presence in the same area immediately following the Earhart disappearance indicate a high probability for the discovery on the island of further artifacts associated with the Earhart flight. The navigator's bookcase found in the abandoned village in 1989 exhibits surprisingly little corrosion (as did aluminum objects in the debris of the island's 1944 USCG Loran station) giving reason to expect that other aluminum artifacts associated with Earhart and Noonan still survive in relatively good condition. Ferrous objects fare much worse in the island environment and can be expected to be heavily rusted and in poor condition. Possible opportunities for positive identification of Earhart/Noonan artifacts include specifically identifiable items catalogued in the inventory of the aircraft done following the March 20, 1937 crash at Luke Field., such as:

- Bausch & Lomb field glasses, 6X30, serial no. 221939
- One quart fire extinguisher, Pyrene, serial no. Q-990198
- One and one half quart fire extinguisher, Pyrene, serial no. 116610
- Kodak Duo 6-20 camera, lens no. 865715, shutter housing no. 5116031
- Bone handle, double blade jackknife, no. 22309
- High pressure hand pump, serial no. 799

Also known to be aboard the aircraft in March of '37 was a Pioneer bubble octant borrowed from the U.S. Navy, serial no. 12-36. Other unique objects, such as the 149 gallon fuel tank possibly used as a water collection device, may be positively identifiable by comparison with photographs.

HUMAN REMAINS

Anecdotal accounts indicate that the skeletal remains of Earhart, Noonan, or both may have been discovered by Gilbertese laborers in the early days of the island's colonial period. From what is known of Gilbertese tradition it is virtually certain that if that happened, the bones were buried and the grave marked in the customary fashion (an outline of coral slabs – see photo at left). Such a site was found by TIGHAR in 1989 in a location that does not seem consistent with the burial of a colonist. During the 1991 Expedition, the grave will be examined. Identification of Earhart's or Noonan's remains should not be difficult given the state of the art of forensic pathology. If identification is made disposition will, of course, be at the discretion of next of kin.



While We Are Out —

When you call TIGHAR these days, you may hear an unfamiliar voice. Meet Suzanne Hayes, TIGHAR's new part-time employee, TIGHAR member #672C. Sue comes to us via the Old Rhinebeck Aerodrome where she worked for several years, before moving on to the Smithsonian Institution and then (for a real step up) to us. If you notice you're getting your orders and receipts a lot

| | | | |
|--|--------------------|-----------------|-------------------------------------|
| IMPORTANT MESSAGE | | | |
| TO <u>All TIGHAR Members</u> | | | |
| DATE <u>October</u> | TIME _____ | A.M. P.M. | |
| WHILE YOU WERE OUT | | | |
| M <u>TIGHAR</u> | | | |
| OF _____ | | | |
| Area Code & Exchange <u>(302) 994-4410</u> | | | |
| TELEPHONED | | PLEASE CALL | <input checked="" type="checkbox"/> |
| CALLED TO SEE YOU | | WILL CALL AGAIN | <input type="checkbox"/> |
| WANTS TO SEE YOU | | URGENT | <input type="checkbox"/> |
| | RETURNED YOUR CALL | | |
| Message <u>Will be in all month.</u> | | | |
| Operator _____ | | | |

faster than you used to, Sue's the reason. An artist and writer, as well as an experienced office worker and a good airplane mechanic, she's just the kind of all-rounder we need our members and employees to be. Welcome aboard, Sue!

One very important consequence of having Sue come to work for us is that TIGHAR's office will be open every business day during the upcoming Earhart Expedition. Mail will be opened, messages taken, calls returned, orders filled, renewals acknowledged, bills paid, and plants watered. So keep those cards and letters coming, folks — we always want to hear from you, and now we won't go deaf while we're in the Pacific.

FOUR TIGHARS AND A MARTIN



Until the morning of August 10, 1991 there was one Martin B-10 known to exist in the world. Now there are two: an example repatriated from Argentina, rebuilt and painted in Army Air Corps colors, and displayed at the United States Air Force Museum, Wright-Patterson AFB, Ohio, and the decrepit corroded remains of an original B-10B researched, tracked down, found, and evaluated by a special TIGHAR team on the west coast of the United States. Its exact location will, for now, remain confidential.

Like almost all TIGHAR projects, this one started with a rumor. On February 8, 1991 a historical researcher at a USAF base called TIGHAR for advice on how to follow up on a local story that a B-10 had once crash landed somewhere on a nearby tidal mudflat. We said we'd try to help and, as a first step, enlisted a qualified TIGHAR member to act as liaison. Kris Tague of San Mateo, California (TIGHAR #0905CE) did some preliminary research and it soon became apparent that the possibilities and the work called for a full TIGHAR team. Kris was made Director of Special Project #1, and three other highly qualified TIGHARs, John Clauss of Homewood, California (#0142CE), Asya Usvitsky of Oakland, California (#1100CE), and Russ Matthews of Princeton, New Jersey (#0509CE), were assigned to the job. It was also clear that the project would have to be kept quiet because the mud flat was not far from a major metropolitan area and if it turned out there really was an airplane out there public knowledge of its location would guarantee its piecemeal destruction by souvenir hunters.

The team went to work gathering information from dozens of original sources: Army Air Corps and U.S. Navy records, maps, and newspaper accounts. Yes, a B-10B had gone down on the mudflat. They knew exactly what airplane, where it came from, where it was going, who was aboard and what went wrong. And no, there had been no successful salvage of the airplane and there appeared to be no reason why it shouldn't still be there. But the reports were far from precise in describing just where the airplane had ended up. It should be there somewhere, if anything was left. But where? Modern detailed maps were studied and a specific suspect target identified. Interviews with local people confirmed

that the target was, indeed, some sort of old airplane wreck. Carefully coordinating the field work with tide tables, and using a hovercraft to traverse the mudflat, the inspection was carried out on August 10. It was the B-10. Six months of hard work had paid off with the positive identification of an extremely rare aircraft which had hidden in plain sight for many years.

This was a landmark project for TIGHAR, not so much because of what was found (the aircraft is obviously in very poor condition) but because of how it was found. TIGHAR spent its early years developing and honing ethical standards and investigative techniques which now are being passed on to members through the Introductory Course in Aviation Archeology and through their participation in field operations. Here for the first time a team of TIGHARs, with only general guidance from the professional staff, took a project from in-

ception to successful conclusion. High academic standards were maintained, the investigation was conducted intelligently, the field work was carried out safely, and the aircraft was found. The total cost to the foundation was \$125. This is the future of historic aircraft research and recovery; trained enthusiasts doing professional quality work at minimal cost under the umbrella of a coordinating international foundation. For those who ask, "Where is TIGHAR going?" here is your answer. 



The barnacle-encrusted rear canopy lies beside the remains of the rear cockpit it once covered.

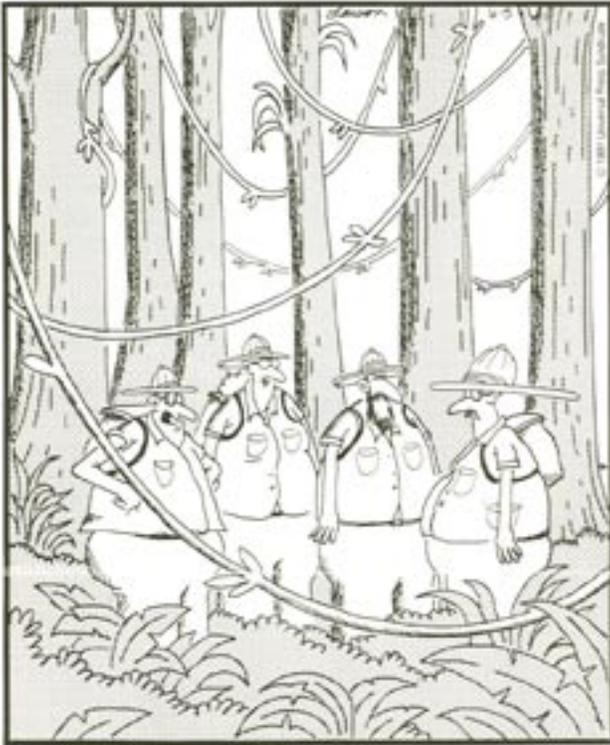
The two 775 HP Wright R-1820-25 Cyclones lie where they came to rest 55 years ago.



TIGHAR photos by John Clauss.

THE FAR SIDE

By GARY LARSON



"Well, we're lost. I knew from the start that it was just plain idiotic to choose a leader based simply on the size of his or her respective pith helmet. Sorry, Cromwell."

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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.

TIGHAR Tracks, published seven 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 \$35.00 per year). The editors welcome contributions of written material and artwork. Materials should be addressed to: Editors, **TIGHAR Tracks**, 1121 Arundel Drive, Wilmington, DE 19808 USA, Telephone 302/994-4410. Photographs and artwork will be returned on request.



MEMBERSHIP FORM

I would like to join TIGHAR. Enclosed is my donation of

\$35 for a one year membership

\$60 for a two year membership

\$125 for a five year membership

\$1,000 for a life membership

Please send me —

TIGHAR Tracks seven times a year, and a membership patch and decals
Invitations to participate in expeditions, courses, seminars, and Gatherings
Opportunities to subscribe to special internal TIGHAR project publications
Opportunities to do research, interviews, and reports for aviation historical projects

Name

Address

Telephone

Please return this form with your membership dues in U.S. funds only, to TIGHAR, 1121 Arundel Drive, Wilmington, DE 19808 USA; Telephone (302) 994-4410, 9 a.m. to 5 p.m. EST/EDT, M-F. ALL DONATIONS TAX-DEDUCTIBLE WITHIN THE LIMITS OF THE LAW.

