

TIGHAR TRACKS

A PUBLICATION OF THE INTERNATIONAL GROUP FOR HISTORIC AIRCRAFT RECOVERY



TIGHAR photo by P. Thrasher.

THE HANDS OF MISTAKEN ZEAL

In 1990, the year that marked the 50th anniversary of the Battle of Britain, more World War II aircraft were destroyed in the air (or rather, when they hit the ground) than in any year since 1945. Since 1987 TIGHAR has been leading the call for greater responsibility in the treatment of surviving aircraft of that period and now, in the wake of last year's appalling losses (16 aircraft), there is at last a public consensus that something must be done. But all the talk about pilot proficiency and standards of maintenance misses the point. While those are very important factors in aviation safety, the fact remains that many of the worst crashes of 1990 involved high-time, type-current pilots in well-maintained aircraft. If we really care about hanging on to a few examples of the aircraft that actually fought World War II, we're going to have to look deeper for the root of the problem.

The Myth

Way down at the bottom of it all is a myth: the fiction that repair to airworthy condition constitutes "saving" an old airplane. Not that the repair ("restoration" is a widely misused term) and flying of old airplanes is a bad thing, for when the machines are faithfully and responsibly presented the experience of seeing them fly is inspiring and educational. But somewhere along the way our instinct to preserve got tangled up with our love of flying, and we started preserving airworthiness instead of airplanes. We go to great trouble and expense to retrieve the remains of rare and historic aircraft; then we destroy them piecemeal in the push to cobble together something that looks and flies sort of like an aircraft we wish we had. This misguided focus on airworthiness has filled the air with bogus airplanes – replicas built around data plates and passed off as "original," gutted borate bombers with cosmetic turrets (real turrets are heavy and their internal structures restrict tourist flow at airshows) and a whole

air force of inaccurately engined fighters and bombers. So pervasive is this preference for appearance over substance that even museums fall into the trap. The National Air & Space Museum, charged with preserving the individually distinctive aviation relics of America's past, exhibits a P-51 Mustang named *Willit Run?* which, a close reading of the placard discloses, is actually a generic P-51 that never saw combat and only wears the colors of an ace's mount. So the values of the airshow ramp become the values of the Smithsonian Institution.

Aircraft to Artifact

The underlying fallacy at work is the notion that it's not an airplane if it doesn't fly. The problem seems to be the failure on the part of many aviation history enthusiasts to grasp the most fundamental principle of all historic preservation. When an object, whether it be adz or airplane, achieves a dimension of historic significance, its usefulness to human society changes from that originally intended (to fashion wood or fly through the air) to a different purpose. It becomes a tool to help us, and future generations, understand the past. To do its new job it must be set aside and the physical material that has come down to us from the past carefully preserved, not replaced.

Important historic properties continue to be lost to "the hands of mistaken zeal," and to simply lament flying accidents does not begin to address the issue of how close we are to completing the job begun by the smelters at the end of World War II. TIGHAR is working to promote a better understanding of the principles of historic preservation among air museums, aircraft rebuilders, and the interested public. In the next *TIGHAR Tracks* we'll explore some ways to save surviving aircraft which merit special attention and, at the same time, preserve the property rights of individual owners.





WHERE IS SPECIALIST PALISHAW?

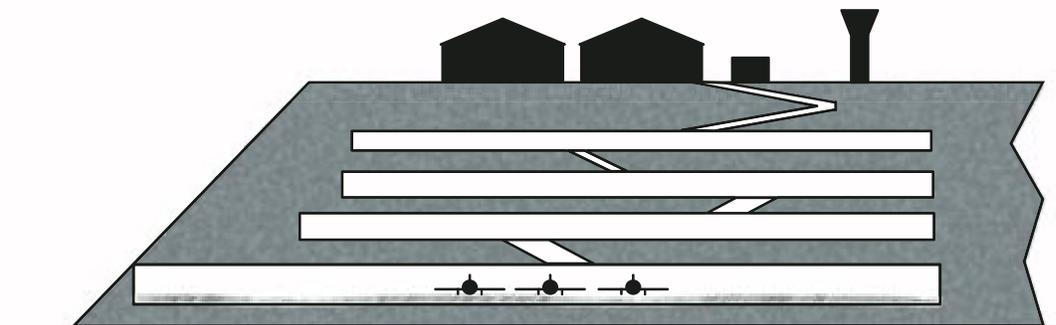
Operation Sepulchre is TIGHAR's on-going investigation of the possibility that World War II Luftwaffe aircraft survive in underground German hangars sealed since 1945. Rumors to that effect have been circulating since the end of the war, but after two research trips to Germany and hundreds of hours of archival research, it is apparent to TIGHAR that there are many more stories than there are undiscovered hangars. Nonetheless, the prospect of Messerschmitts and Focke Wulfs preserved like chariots in a pharaoh's tomb is too enticing to casually dismiss. Original OKW (Nazi High Command) staff notes confirm that such structures were planned and constructed in 1944 as a means of sheltering the dwindling fighter force from Allied bombers, and several facilities were well documented, cleaned out, then destroyed by invading troops in 1945. If anything still survives the most plausible scenario would be that of an underground facility sealed either by retreating Reich forces, or blasted shut rather than investigated by Allied troops for fear of booby traps.

TIGHAR is currently investigating allegations involving the airfield at Mainz-Finthen in the Rhineland district. Once a Luftwaffe night-fighter field, the facility is now a U.S. Army airfield of the 8th Mechanized Infantry Division. Eugene Whitt (TIGHAR #0506) has documented what must be described as a well-established body of rumor concerning underground aircraft at Mainz-Finthen.

His primary source is Conrad Case, a retired U.S. Army Warrant Officer who was stationed there from November 1969 to July 1974. Here is Mr. Case's story:

In 1970, the company commander's crew chief, Specialist Palishaw, went down into the underground hangars and came out with photographs of World War II German aircraft standing in water up to the bottom of their wings. He described four underground levels. Finthen is on a plateau and there were once entrances to the underground areas at its base, but these were blown up in 1945. Specialist Palishaw gained entrance via a sewer/drainage system which he entered "between the hangar and the orderly room" of a CH-47 (Chinook) unit. Somewhere in the drainage system he found the connection to the underground hangars. He got to the very bottom level and photographed three aircraft together standing in water. Because the U.S. Army had long used the airfield's drainage system for dumping fuel, there was concern that the hangars posed a threat of explosion and the story was quashed.

The project's most pressing need at this time is to find "Specialist Palishaw" and his photographs. With photographic evidence in hand we could then begin the task of obtaining Pentagon permission to do an on-site investigation. Members wishing to assist in this research should contact TIGHAR's offices for further details. 



SOLVING THE CASE

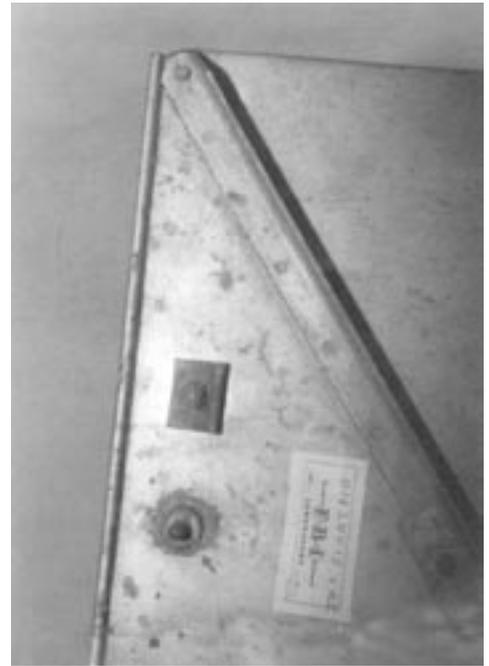


“Our job is to place the accused at the scene of the crime with hard physical evidence.” *Special Agent James E. Corby, FBI Laboratories*

The Materials Analysis Unit of the FBI Laboratories in Washington, DC, has completed its examination of TIGHAR’s Earhart Project Artifact 2-1. Special Agent James E. Corby, Unit Chief of what is recognized to be one of the world’s finest forensic laboratories, reports “[N]othing was found which would disqualify this artifact as having come from the Earhart aircraft.” In addition, several substances have been identified on the artifact which actively support the hypothesis that it is, indeed, a component of NR16020. While we hasten to make it clear that the FBI’s findings do not prove that we have a piece of the long-lost Electra, we also note that, for the first time in 54 years, a complex piece of physical evidence has passed the most stringent of expert examinations.

Although quite innocuous in appearance, the bookcase turns out to have an extremely complicated array of substances detectable on its surface. To make matters worse, their identification was greatly hampered by the severity of an environment which had removed all but faint traces of what had once been there. The FBI Labs, however, by the use of spectrographic analysis, X-ray diffraction, SEM (Scanning Electron Microscopy), as well as other state-of-the-art techniques, was ultimately able to sort it all out and the results tell us a great deal about what things were done to this particular navigator’s bookcase, when they were done, and, to a certain extent, by whom. Here’s a summary of what we now know:

- Artifact 2-1 is the top, sides and back of a Bookcase, Navigator’s, Consolidated Aircraft Corp. Part No. 28F 4023 manufactured at San Diego, California, between 1936 and 1939.
- Although designed specifically for the Consolidated Model 28 flying boat, known to the U.S. Navy as the PBY Catalina, Artifact 2-1 left the manufac-



TIGHAR photo by P. Thrasher

turer before screw-holes for installation in a PBY were drilled (and before any coating was applied).

- The bookcase then received non-standard holes and a special bracket for installation in some aircraft.
- The orientation of the restraining strap was reversed.
- A civilian, rather than military, zinc chromate primer was applied. The U.S. military, from 1930 onward, specified a zinc chromate primer with an alkyd resin binder modified with phenolic resin. While it is the FBI’s conclusion that artifact 2-1 received at least some zinc chromate primer, and while “trace amounts of chemicals that are found in alkyd-type resins” [underlined in the original] were present, no trace of phenolic resin could be found.
- A top coat of paint was applied to the entire surface of the case. Remnants of this coating contain titanium dioxide (a common white pigment), and lead chromate (a yellow pigment with corrosion inhibiting properties). Although green to yellowish-green now, the original color of the paint cannot be determined with certainty because extreme environmental factors may have completely removed other pigments.
- A black stripe of residue running diagonally across the back of the case has proven to be the remains of an adhesive substance indicating that a piece of tape or other material was once glued there. The type of adhesive used was a glue based on animal products (horses to the glue factory, etc.) common in the 1930s and earlier.

So we have a civilian airplane part on an island whose well-documented history cannot account for any airplane part unless it is from the only aircraft known to have disappeared in that very area. That’s very good news. 🐾

The Re

NIKUMARORO

September



TIGHAR photo by P. Thrasher

John Clauss

Age 40
Homewood, California
TIGHAR #0142CE
Aviation Archeology Course, San Diego 1989
Earhart Project Survey Expedition 1989
Project Midnight Ghost Expedition XVIII 1990



TIGHAR photo by P. Thrasher

Veryl Fenlason

Age 53
St. Cloud, Minnesota
TIGHAR #0053CE
Project Midnight Ghost Expeditions VIII (1985), IX (1986), XI & XIII (1987), XIV & XV (1988)
Aviation Archeology Course, Dayton 1989
Earhart Project Survey Expedition 1989
Project Midnight Ghost Expedition XVIII 1990



TIGHAR photo by P. Thrasher

Richard Gillespie

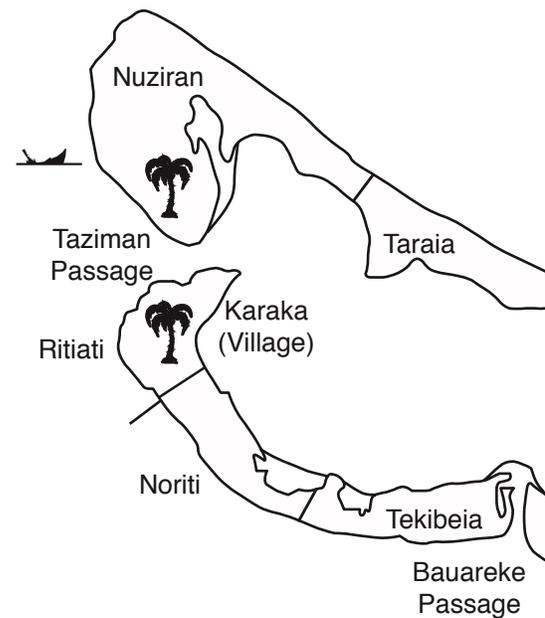
Age 43
Wilmington, Delaware
Executive Director, TIGHAR



TIGHAR photo by m. DeWitt

LeRoy Knoll

Age 41
Garden City, Kansas
TIGHAR #0750CE
Aviation Archeology Course, Wilmington 1989
Earhart Project Survey Expedition 1989
European Research Trip 1990
Project Midnight Ghost Expedition XVIII 1990



Districts and features as named by Gilbertese settlers of Nikumaroro, 1938 – 1963

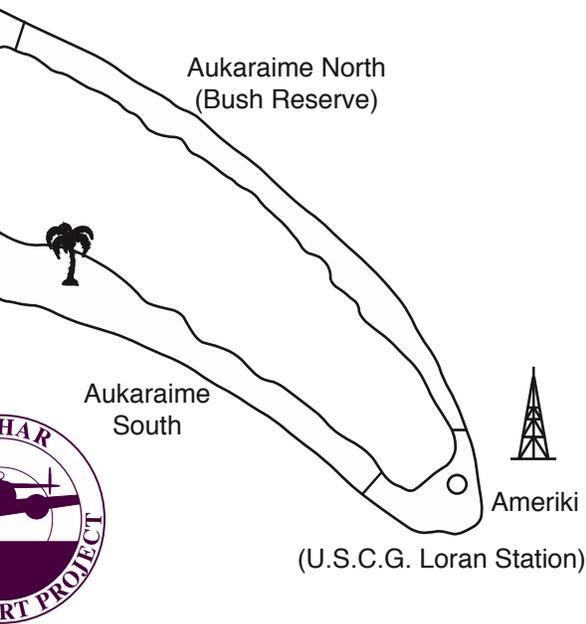


Expedition

These primary team members have a strong commitment to the foundation and for the success of this expedition. In some circumstances forces one or more of these team members from among applicants who qualify. To alternate for this expedition you must complete the Introductory Course in Aviation Archeology and 30 days of field experience on a TIGHAR expedition for the entire 35 day expedition. 🐾

Return to ARORO

ber 1991



on Team

been selected for their demonstrated
their outstanding performance during
Alternates, in the event unforeseen
the above to cancel, will be selected
To be considered for a position as an
t be a TIGHAR member, complete the
ology, have at least seven consecutive
R expedition, and be able to commit to

Dr. Tommy Love, D.O.

Age 43
Fort Worth, Texas
TIGHAR #0457CE
Aviation Archeology Course, Wilmington 1989
Earhart Project Survey Expedition 1989



TIGHAR photo by m. DeWitt

Russ Matthews

Age 22
Princeton, New Jersey
TIGHAR #0509CE
Project Midnight Ghost Expedition XV 1988
Aviation Archeology Course, Dayton 1989
Earhart Project Survey Expedition 1989
Project Midnight Ghost Expeditions XVII (1989)
and XVIII (1990)



TIGHAR photo by m. DeWitt

Kristin Tague

Age 37
San Mateo, California
TIGHAR #0905CE
Aviation Archeology Course, San Diego 1991
Project Midnight Ghost Expeditions XVIII
and XIX 1990



TIGHAR photo by P. Thrasher

Patricia Thrasher

Age 36
Wilmington, Delaware
President, TIGHAR



TIGHAR photo by m. DeWitt



RUMOR CONTROL

THE NAVY, THE MACON, AND THE LAW

Ever since June 24, 1990 when the research submersible Seaciff discovered the wreck of the airship *Macon* and two of its Grumman Sparrowhawk fighters off the coast of California, there has been a flood of rumor about plans to recover the aircraft. Here's the real story:

The U.S. Navy, as is its custom, claims title to the aircraft with reasoning that goes something like, "We bought 'em back then and they're still ours." Initial expectations were that the Sparrowhawks would be recovered for the National Museum of Naval Aviation in Pensacola, Florida, just as was a Grumman F3F-2 hauled up last January and now under restoration at the San Diego Aerospace Museum. However, two recent discoveries have somewhat altered the picture. The Navy, it turns out, has been recovering historic aircraft in violation of federal law. The Historic Preservation Act of 1966 mandates that federal agencies satisfy a watchdog Advisory Council on Historic Preservation before engaging in any undertaking that could effect historic properties and the Navy has not been doing that with regard to aircraft. The other surprise is that the *Macon* came down within the newly designated Monterey Bay National Marine Sanctuary administered by the National Oceanographic & Atmospheric Administration (NOAA). So while the airplanes may belong to the Navy, another federal agency, NOAA, also has a responsibility to see that they are properly managed as historic properties. And lest anyone think that NOAA takes unauthorized treasure-hunting visits to its sanctuaries lightly, a Department of Commerce Administrative Law Judge recently nailed seven Los Angeles-area scuba divers for a total of \$132,000 in fines, plus the confiscation of artifacts they looted from shipwrecks within the Channel Islands National Marine Sanctuary.

TIGHAR has been working with the Naval Aviation Museum in Pensacola and, in Washington, D.C., with the Navy Historical Center, the Advisory Council for Historic Preservation, and NOAA's staff archeologist, to encourage interagency coordination. The Navy's Head Curator, Dr. William Dudley, recently told TIGHAR, "We're putting our historic preservation house in order with a comprehensive plan now before the Secretary of the Navy. We'll welcome your help with regard to aircraft." TIGHAR will, of course, do all we can to help the U.S. Navy comply with federal law and to effect the *Macon* Sparrowhawk and other historic aircraft recoveries according to the highest standards of preservation procedures. 🐾

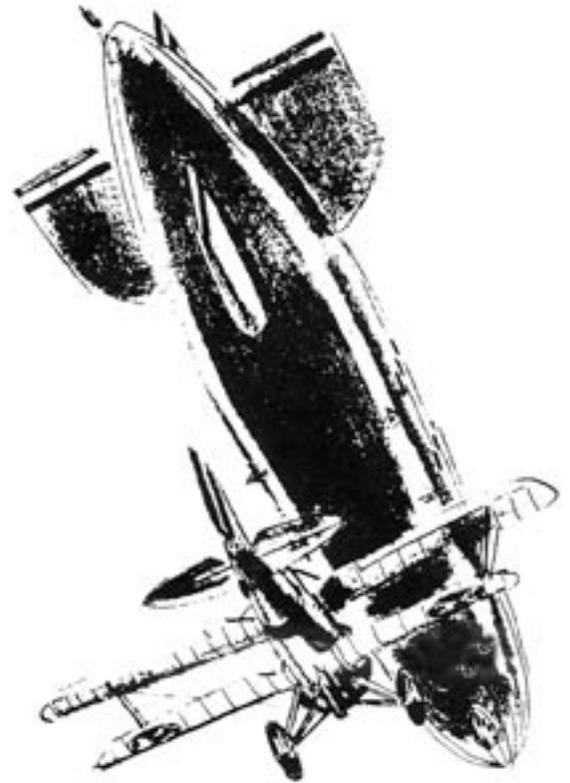


Illustration courtesy of Stan Jones, Aviation Artist

SAME SONG, SECOND VERSE

A relatively intact example of a Douglas TBD Devastator torpedo bomber has been discovered in deep water off the east coast of Florida. The U.S. Navy's first all-metal aircraft, the TBD joined the inventory in 1937 and was obsolete by World War II. At the Battle of Midway, it became very much the "Devastatee" rather than "Devastator" with 36 out of 41 aircraft lost in that one action, including all 15 ships of the ill-fated Torpedo Squadron Eight. The type was thought to be extinct until the accidental discovery of the aircraft off Florida by a civilian research submersible known as Deep See. Like the *Macon* Sparrowhawks, this aircraft was at first assumed to be a candidate for the yank 'em up, fix 'em up treatment that has typified previous recoveries. The advent of the Navy's more reasoned, legal, and professional approach to such opportunities will increase the chances that a genuine TBD will soon join the Pensacola collection. 🐾

TIGHAR PROJECT PROPOSALS

Doolittle B-25 — Serial No. 40-2267, known to have been ditched in Chinese coastal waters following its participation in the Doolittle Tokyo Raid.

Member response to these two Project Proposals, sent to all members in December, has been encouraging. Thirty-one members returned tear-off sheets expressing their willingness to support TIGHAR Projects to recover these aircraft (21 for the B-25 and 10 for the Bellanca). Eleven members put teeth in their commitment with checks totaling \$360.50 of the \$2,000 we need to launch the B-25 project and \$130 of the \$4000 needed to do the survey dig at the "Columbia" site. If you would like to see either of these proposals become full-fledged TIGHAR Projects, but haven't gotten around to expressing your support, now is the time to make your voice heard. Call or write Executive Director Richard Gillespie. Ric can fill you in on details and give you an update on the proposal's status. 🐾

Bellanca WB-2 "Columbia" — Clarence Chamberlain's 1927 transatlantic aircraft, relics of which may be recoverable from the Delaware site where it burned in 1934.

*The aircraft is an island in the grass. It's quiet – a quiet few Americans ever hear. A bird sings from the top of the tail, a butterfly lands on a bent prop tip, a column of ants marches past the top turret. Four feet of crystal clear water glint in the fuselage. Tiny fish swim from the radio room into the bomb bay. Outside, the kunai grass is everywhere, screening, obstructing, carpeting, as the swamp enfolds and swallows the bomber as an anemone does a minnow. Inside it's dark, cool, sterile. Looters have stripped away what they could, but like a proud lady she retains her grandeur despite these indignities. From her unblemished nose to the graceful sweep of her tail, the uncorroded skin returns the lantern's shine. She is clean, not a cobweb, unnatural, and unsettling. (Impressions of Exec. Dir. Richard Gillespie following TIGHAR's initial on-site inspection of B-17E 41-2446, as published in *TIGHAR Tracks*, Vol. 2 No. 2, Spring 1986.)*



B-17E 41-2446

The airplane is, without doubt, the most significant unrecovered WWII aircraft known to exist. The oldest unmodified B-17 anywhere, the only intact example of a B-17E (the Greenland aircraft are crushed), one of only four surviving B-17 combat veterans (the others are the Smithsonian's B-17C/D composite "The Swoose," and the USAF Museum's "Shoo Shoo Baby" and "Memphis Belle") and one of a very few WWII aircraft which still exhibit battle damage (.303 and 20mm holes from attacking Zeros).

It has been 49 years this February since Lt. Fred Eaton landed his fuel-starved Fortress in a New Guinea swamp. Nineteen years since a Royal Australian Air Force survey rediscovered the ship. Five years since TIGHAR first tackled the problem of its recovery and since the government of Papua New Guinea imposed a moratorium on all recovery of World War II relics within its borders. In the last few years a group associated with the Travis Air Force Base Historical Society near San Francisco has repeatedly declared its intention to recover the airplane (the Travis museum is a satellite of the USAF Museum at Wright-Patterson AFB, Ohio). The November/December 1989 issue of Challenge Publications' *Warbirds International* featured a cover story entitled "Let's Save The Swamp Ghost" the opening sentence of which read "The Travis Air Force Base Museum has received the final 'go-ahead' from the government of Papua, [sic] New Guinea ..."

TIGHAR has, until now, voluntarily refrained from actively pursuing the recovery of the aircraft since severing our previous ties with the Travis B-17 committee in 1986. We felt they should have every opportunity to make good on their pledge without any appearance of competition from TIGHAR. Recent correspondence from the USAF Museum and from the National Museum of Papua New Guinea, however, have caused us to change that position.

October 12, 1990:

"The USAF Museum has no official interest in the recovery of the aircraft. This does not mean we are against the recovery, but rather that we are in no way the sponsor of any recovery activity. To the best of my knowledge the same applies to all other USAF Program museums. ...

"The USAF Museum does not currently sanction the efforts of any organization to recover the aircraft. However, we will heartily applaud any professional and well organized effort to recover the machine. I recognize that TIGHAR has a considerable ability to organize the recovery and wish you every success in your efforts."
Jack B. Hilliard, Acting Director, United States Air Force Museum.

November 22, 1990:

"No decision has been made yet on the subject of B-17 41-2446 though the War Museum of Papua New Guinea shares TIGHAR's concern about preservation of the artifact." *C. Wintawa for the Director, National Museum & Art Gallery, Papua New Guinea.*

TIGHAR hereby gives notice to all parties interested in the recovery of this important historic property that:

- The foundation is committed to the preservation of B-17 41-2446 and will henceforth work aggressively toward that end.
- Our concern for the responsible management and conservation of the artifact comes before any nationalistic or nostalgic consideration.
- The objective of TIGHAR's effort is the recovery of the entire machine to a secure and controlled environment, and for the return and replacement of parts original to that specific aircraft. TIGHAR is opposed to any attempt to repair, repaint or otherwise alter the artifact for any purpose other than to arrest further degradation of its physical condition.

The TIGHAR project to recover the airplane will be known as "LADY IN WAITING." This is a project name coined for marketing purposes and is in no way intended to imply a name for the aircraft. The historical truth is that the machine had no name other than its USAAC serial number. Previous references to the aircraft as "THE SWAMP GHOST" are historically in error and, in TIGHAR's opinion, trivialize the artifact's significance.

Watch for much more on this important project.



STRICTLY BUSINESS

T
R
I
C
T
L
Y

B
U
S
I
N
E
S
S

WE'VE GOT YOUR NUMBER

If you've noticed mysterious letters added to your TIGHAR membership number it's because we've implemented some codes to help us keep track of who you are and what you've done. For those of you who do not yet have your secret decoder ring, here's a translation:

B means you are, or at some time have been, on TIGHAR's Board of Directors.

C means you have completed TIGHAR's Introductory Course in Aviation Archeology.

E means you have participated in a TIGHAR expedition for at least seven consecutive days of field work.

L means you are a Life Member.

M means a TIGHAR membership purchased by a museum.

R means a TIGHAR membership purchased by a corporation or business.

Naturally, a member number can include several letters but, if we've done this right, cannot spell out anything rude.



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 cooperation 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; neither does it engage in the restoration or buying and selling of artifacts. Instead, the foundation devotes its energies to the saving of endangered historic aircraft wherever they may be found, and to the education of the international public in the need to responsibly preserve the relics of the history of flight.

TIGHAR Tracks, published nine 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.

Editors: Patricia R. Thrasher, Richard E. Gillespie



MEMBERSHIP FORM

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

\$35.00 for a one year membership

\$60.00 for a two year membership

\$125.00 for a five year membership

\$1,000 for a life membership

As a member of TIGHAR, I will receive the following benefits:

- Annual subscription to TIGHAR Tracks
- Membership patch, directory and catalog
- Expedition and educational opportunities

Name _____

Address _____

Telephone _____

Please return this form with your membership dues 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.

