

TIGHAR TRACKS

A PUBLICATION 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:

François Coli, master mariner, decorated WWI aviator, famous long distance flyer, and navigator of l’Oiseau Blanc.
Photo courtesy A. Guillot-Coli.

Written by Richard Gillespie & Patricia Thrasher.

Research by The members of TIGHAR.

Design by Patricia Thrasher.

Special thanks to –

Jim Tierney, Pasadena, California, TIGHAR #0821 – Proofreading.

Media Management Services, Inc., Yardley, Pennsylvania – Design consultation and mailing.

Alma Offset Co., Inc., Lawrenceville, New Jersey – Printing.

TIGHAR Tracks, published four times each year, is the official publication of The International Group for Historic Aircraft Recovery. A subscription to **TIGHAR Tracks** is included as part of membership in the foundation (minimum donation \$35.00 per year). The editors welcome contributions of written material and artwork. Materials should be addressed to: Editors, **TIGHAR Tracks**, 2812 Fawkes Drive, Wilmington, DE 19808 USA; telephone (302) 994-4410, fax (302) 994-7945. Photographs and artwork will be returned on request.

AGAINST THE WIND

Our cover this quarter honors one of the most neglected and misunderstood heroes of aviation's Golden Age. As navigator of l'Oiseau Blanc (the White Bird), François Coli vanished along with pilot Charles Nungesser during their attempted east to west crossing of the Atlantic in 1927. His decision to fly against the prevailing wind has often been blamed for the flight's failure and the disappearance of l'Oiseau Blanc became primarily remembered for the demise of its famous pilot.* Whatever it was that went wrong over the North Atlantic on May 9, 1927 remains shrouded in mystery, but the reasons for Coli's determination to make the trip in the "wrong" direction are well documented.

The mood in Paris was tense that coiled spring of 1927. Some of the world's most famous aviators, including Richard Byrd, Clarence Chamberlain, Bert Acosta and, of course, the redoubtable combination of Nungesser and Coli, were jostling in the starting gate to see who would be the first to link New York and Paris by air. (There was also an unknown named, according to one press account, "Lindenberg.") Among all the competitors only l'Oiseau Blanc would try the crossing from east to west, departing from Le Bourget Field near Paris, dropping the plane's jettisonable wheels after take off, and landing on its watertight hull in New York harbor an estimated 40 hours later. When a journalist asked Coli why, he replied with a wry smile, "Because we are French! If we go there to come here it would appear that we were coming to visit ourselves." The real reasons were less flip-pant.

Coli had studied the problems of transatlantic flight for many years and had, in 1925, been the first registrant for the Orteig Prize — \$25,000 for the first nonstop flight between New York and Paris in either direction. Forty-

five years old in 1927, Coli had earned a Superior Diploma as "Captain of Long Distance" in 1905 and had been a sea captain until the outbreak of the Great War. With no ship to command he had volunteered for the infantry and frozen his feet in the trenches of 1914. Transferring to the air service, he rose to command the Spads of the Escadrille des Coqs (Squadron of Roosters) and finished the war with many decorations but without his right eye. Although his black monocle and reputation for fearlessness earned him the nickname "The One-Eyed Devil" he was, in fact, a consummate professional, witty, a bit mischievous, and utterly devoted to his wife and three daughters.

After the war he stayed in aviation and set many long distance records around Europe and the Mediterranean as both pilot and navigator. A convoluted (and still rather fuzzy) series of alliances, crashes and disputes resulted in his partnership with Charles Nungesser and the Levasseur company for the great Paris — New York attempt of 1927. Coli saw the navigation problem this way:



The one-eyed devil. Photo courtesy Musée de l'Air.

While it is true that the wind usually blows from west to east across the Atlantic, that is the only advantage in making the flight in that direction. The disadvantages are many. The Great Circle route between Paris and New York passes over Newfoundland, a place Coli knew well from his seafaring days. It is a place of storms, of fog, and of ice. An airplane departing from New York encounters this region only 27% into its flight and must deal with turbulence and ice while still heavily loaded. In addition, a west to east crossing

* Ten years later the phenomenon would be repeated on the other side of the world when another great aerial navigator would be blamed for the loss of another famous pilot.

THE WAY IT WAS

relies upon good weather in Newfoundland for a last visual position check before setting out across the ocean. And yet at 1927 speeds Newfoundland is about eleven hours from New York, making weather forecasting a roll of the dice. As it turned out, Lindbergh's success was due, in part, to his being able to find St. John's – Lucky Lindy indeed! The other side of the same problem is that an airplane coming toward Europe does not strike land until relatively close to its destination, leaving little chance for mid-course correction.

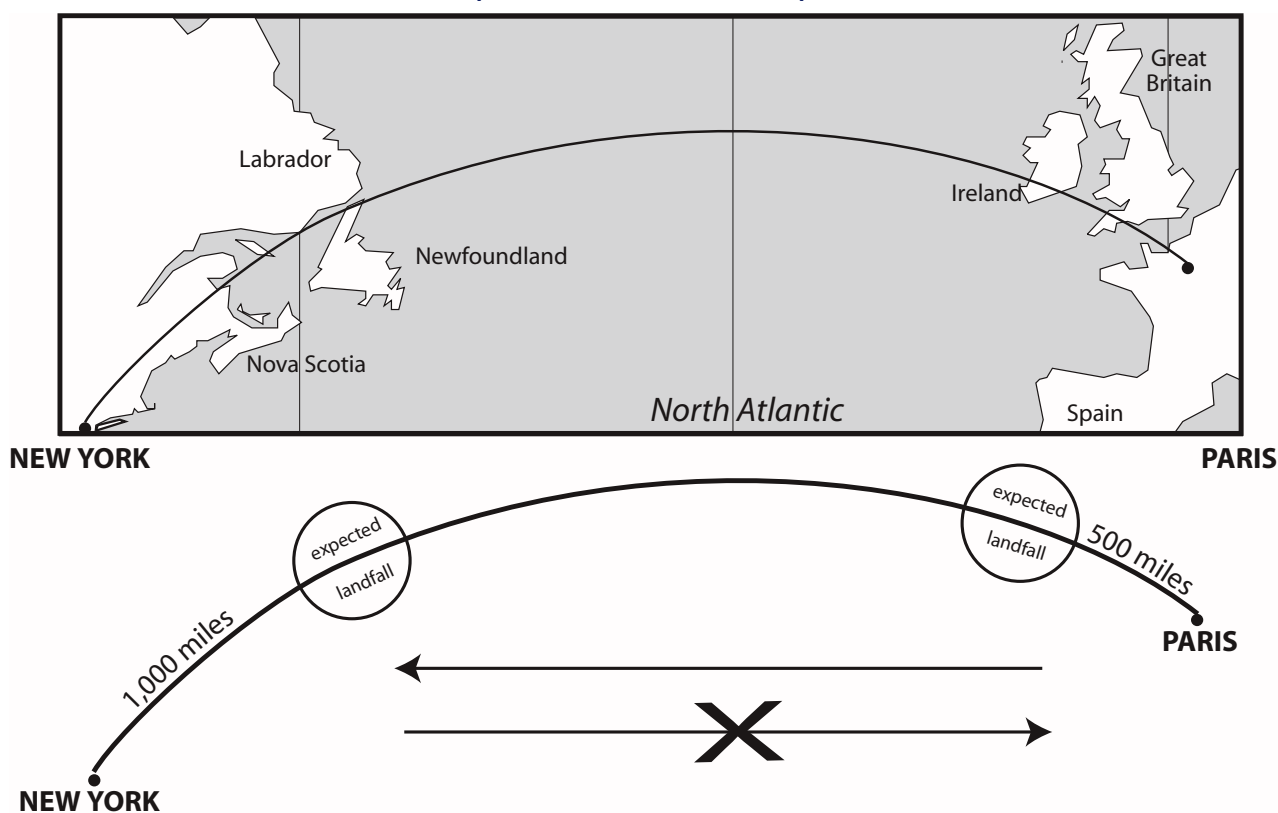
All of these minuses become pluses when the route is reversed. Western Ireland comes only about five hours after takeoff from Paris so that good weather and an accurate position check can be assured before takeoff. Any difficulties in Newfoundland are encountered with a relatively light airplane, and the whole issue of what Coli called “finding the Earth” is dealt with when the flight is still about 1,000 miles from New York, so that the final third of the flight is conducted in relative safety. The beauty of François's plan, of course, is that the wind does not always blow the wrong way across the Atlantic. Coli reasoned that

by waiting for just the right weather conditions he could avoid headwinds and perhaps even find tailwinds for a Paris to New York flight, and that's exactly what he did. Late on the night of May 7th the French Bureau of Meteorology advised him that two low pressure areas over the North Atlantic offered a unique opportunity. By riding the tops of their counterclockwise flow l'Oiseau Blanc should be able to avoid the storms and actually have tailwinds enroute to New York. This was what he had been waiting for and the decision was made to go.

At 5 o'clock the next morning, after saying goodbye to friends and family, Nungesser and Coli settled into the open cockpit of l'Oiseau Blanc. Nungesser's takeoff was flawless and the grossly overloaded biplane staggered into the air at 05:18. As soon as he was satisfied with the aircraft's performance Nungesser jettisoned the landing gear which fell to Earth to be recovered and eventually enshrined at the Musée de l'Air et de l'Espace. Today it is the only relic of l'Oiseau Blanc or its crew whose whereabouts is known for certain.



TROUVER LA TERRE (FINDING THE EARTH)



Project Midnight Ghost



THE GULL POND CHRONOLOGY

Newfoundland is the arm of North America which stretches farthest into the North Atlantic. The Avalon Peninsula, at the island's eastern end, is a hand with outstretched fingers reaching toward Europe. The pinky on that hand is the Cape Shore, a promontory of land fifty miles long by twenty miles wide ending in the cliffs of Cape St. Mary's. A single road, not yet paved for its entire length, girdles the Cape Shore, alternately climbing the fog-shrouded coastal heights and plunging to serve a few seaside settlements such as Gooseberry Cove and Patrick's Cove. Nobody lives inland, known simply as "the country." There the terrain rises to become a wild and barren plateau of high muskeg – a moonscape of boulders and bogs, sprinkled with sodden scrub, criss-crossed with caribou trails, and dotted with shallow lakes. One, among hundreds, is known as the Gull Pond. The name is said to derive from the popularity of its tiny rocky island with seabirds (although we didn't see any there) and, in the local tradition, always includes the article (never "Gull Pond" but always "the Gull Pond"). One of many Gull Ponds in Newfoundland, its obscurity is made complete by the fact that the few maps which show the pond at all label it with an erroneous name.

Today the snowmobile and the ATV have opened the interior of the Cape Shore for recreation. In the old days it was different. Then, only a few hardy "men of the country" ventured inland from the coves to supplement the meager living provided by the sea. They trapped muskrat along the streams in the spring and snowshoed in after "country meat" (caribou) in the winter. And once – long, long ago – some of them

heard things and saw things which gave rise to the legend of "the plane in the pond."

The following chronology has been compiled by comparing the information gathered in numerous interviews with the scant documentary evidence available. To help assess the credibility of various elements of the story we have made distinctions among the several types of sources and labeled each element accordingly:

- ★ Designates a contemporaneous written source.
- ☆ Designates a first-hand anecdote (the later recollections of an eyewitness).
- ☆ Designates a second-hand anecdote (hearsay).

It also helps to know that Patrick's Cove is about 2.5 miles south of Gooseberry Cove on the western coast of the Cape Shore. The Gull Pond is more than 10 miles back in "the country."

Late spring, 1927

Nicholas McGrath (pronounced McGraw), 48 years old, of Patrick's Cove, is trapping muskrat along the Branch River several miles south of the Gull Pond when he hears three explosions in rapid succession off in the distance. He can not imagine the cause. ☆

Winter 1928

While hunting caribou, McGrath takes a short cut across the ice of the frozen Gull Pond and notices metal jammed in the rocks of the pond's small rocky island. He decides it must be airplane wreckage and wonders if it explains the explosions he heard the year before. ☆

Winter 1932

Patrick "Patsy" Judge of Gooseberry Cove, age 20, recovers a piece of metal from the Gull Pond. ★

Winters during 1930s

James Joseph Doyle of Gooseberry Cove, age mid-50s, recovers numerous pieces of metal for use in repairing sled runners. ☆

Winter 1940

Anthony McGrath, age 27, and Ronald McGrath, age 14, (both of Patrick's Cove) see a 4 or 5 foot long piece of lightweight, blue colored metal sticking out of the ice at the Gull Pond. Anthony breaks it off by working it back and forth but decides not to carry it home and "stashes it back in the tuck" (the underbrush) instead. He believes he is the first person to find the metal at the pond. ★

Winter, sometime in the 1940s

Patrick McGrath, the teen-age son of Nicholas McGrath, "finally gets to see the metal at the pond."

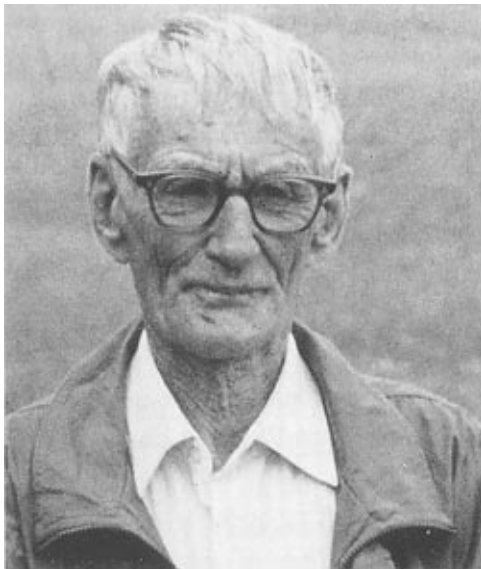
With him are his cousins Leo McGrath, early 20s, and Ignatius McGrath, age unknown.★

1947

Patsy Judge, now 35, gives part of the piece he recovered in 1932 to Ralph Martin, 42, a visitor from England and the first “foreigner” Patsy has ever met. Martin returns to England and gives the piece to people at the Avro Aircraft company plant about five miles from his home in Bradford, Yorkshire. Avro writes to Patsy and says that the piece of metal is, without a doubt, part of the White Bird.★

Summer of 1971

Nicholas McGrath’s son Patrick, now 48, goes to the Gull Pond with Hubert McGrath, age 24, and Father Charlie McCarthy, age unknown, to search for pieces of “the plane in the pond.” The priest swims around the small rocky island with a snorkel and mask but all they find is a badly rusted metal strap attached to a tightening device. The artifact is later lost.★



*Patrick McGrath in September, 1992, in Patrick's Cove, the Avalon Peninsula, Newfoundland, Canada.
TIGHAR photo by P. Thrasher.*

Spring 1974

A Canadian Broadcasting Corporation (CBC) reporter named Rob Parker hears about “the plane in the pond” and tries to collect enough information to do a story. He interviews local residents including Patsy Judge and learns of the Avro letter. He contacts Avro but they tell him that a fire has destroyed much of their old correspondence and they can not verify the story. Parker flies over a pond in a helicopter but sees nothing and he isn’t even sure he has the right pond. Eventually he gives up.★

June 1974

Patsy Judge, now 62, writes to Ralph Martin in England, now 69, saying “there is a group searching in the pond where I found this plane and they are trying to deny that I was the first to find this part (in 1932) and trying to say it was years later. So if you could write me a letter concerning the transaction between you and I in 1947 this would prove that I am right.” Patsy has apparently lost the 1947 letter from Avro and now can’t remember whether they said the airplane was the White Bird or the Blue Bird. He asks Martin if he “can find out which plane they were searching for here in 1928.” Martin writes back confirming the events in 1947 but says he never had a copy of the Avro letter.★ (There was no search in 1928 but in the summer of 1927 the Nungesser/Coli Search Expedition used a Fokker Universal on floats to search the Newfoundland coastal areas for the White Bird.)

October 1992

TIGHAR conducts a metal detector search of the rocky island in the Gull Pond and finds an as yet unidentified metal artifact with blue paint on its surface.

James Joseph Doyle died in 1945.

Nicholas McGrath died in 1971.

Ronald McGrath died in 1980.

Leo McGrath died in 1988.

Patsy Judge died in 1989.

Patrick McGrath, Anthony McGrath, Hubert McGrath, Father McCarthy, Rob Parker and Ralph Martin are still living.

Of all the pieces of the plane in the pond reportedly recovered over the years, only the piece found by TIGHAR is known to still exist. Catalogued as TIGHAR Artifact 1-21-1, the object has been formally loaned to TIGHAR by the Newfoundland Historic Resources Division. We are conducting laboratory tests in cooperation with the Musée de l’Air et de l’Espace in Paris, the National Transportation Safety Board (NTSB), and the Federal Bureau of Investigation (FBI) in Washington in an attempt to learn as much as possible about the artifact. Meanwhile, our friends at the British magazine *Aeroplane Monthly* are trying to locate any former Avro employees who might remember the 1947 incident.

For late-breaking research results and more detailed information on the investigation, you may want to subscribe to the Project Midnight Ghost Bulletins. Just send a check for US\$30 payable to TIGHAR with a note that you’d like to receive the bulletins.



The Earhart Project

COSMIC SIGNIFICANCE

Pick a number – any three digit number. Now, just remember that number until the end of this article.

Subscribers to the Earhart Project Bulletins are aware that, through the archival archaeology of Dr. Randall Jacobson (TIGHAR#1364), we've recently been able to establish that the radio signals heard in the days following the Earhart disappearance were far more credible than was later alleged. It is now clear that one of the messages either contains uncannily specific information about the whereabouts of the missing fliers or represents a coincidence of truly mind-boggling proportions.

Late on the night of July 4, 1937 – two and a half days after Amelia Earhart and Fred Noonan disappeared – three operators at U.S. Navy Radio Station Wailupe, Hawaii heard the following message fragments:

TWO EIGHT ONE NORTH HOWLAND CALL
KHAQQ BEYOND NORTH DON'T HOLD
WITH US MUCH LONGER ABOVE WATER
SHUT OFF

KHAQQ was Earhart's radio call sign and the signals were received on Earhart's nighttime frequency of 3105 KCs. The message was sent in "extremely poor" Morse code and only partial phrases could be understood.

This message was taken very seriously at the time and every available vessel – the USCG *Itasca*, the USS *Swan*, and a British freighter, the S.S. *Moorsby* – was diverted to search the ocean 281 miles north of Howland Island. They got there the next evening but found nothing. Reinforcing their frustration was a message from Lockheed officials stating that the location of the Electra's radio gear would make it impossible for the airplane to transmit if it was floating.

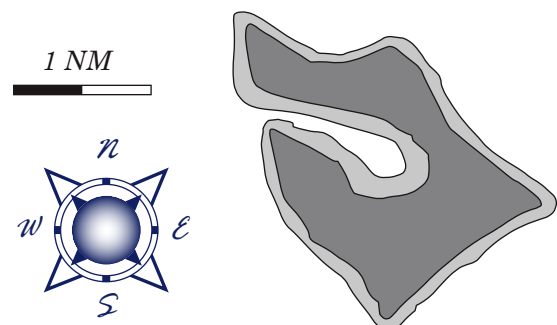
The *Itasca's* captain, Commander Warner K. Thompson, later wrote in his official report, "This ... was probably a faked message originating in

the Hawaiian Islands. However, Howland, on night 4 July, did get a bearing on some signal." But there's more to it than that – much more. When the "281" message is put in the context of the other signals being heard that night (see box p. 9), Thompson's dismissal makes little sense.

But if Earhart and Noonan were on an island and calling for help why were they playing games with cryptic phrases? If they were on

Gardner Island why not transmit, "We're on Gardner Island, Gardner, Gardner, Gardner" or, if they didn't know the island's name, could not Master Navigator Noonan have easily established their latitude and longitude? Yes and no. Noonan could have accurately determined his latitude using just his octant and almanac. Finding longitude, however, requires precision timekeeping and Noonan's chronometer(s) had not been corrected since before he departed Lae, New Guinea. Remember also that Noonan had failed to find Howland and probably wasn't sure why. Following the only logical recourse – running down the Line of Position – had brought them to an island which should be Gardner, but was it? Unfortunately, having a map of the island would have only increased his doubts.

Randy Jacobson has recently established that the only map of Gardner Island available in the U.S. in 1937 was wildly inaccurate. If Fred Noonan had taken the trouble to equip himself with a chart which showed the shape of various Pacific islands near their route of flight he would have expected Gardner Island to look like this:



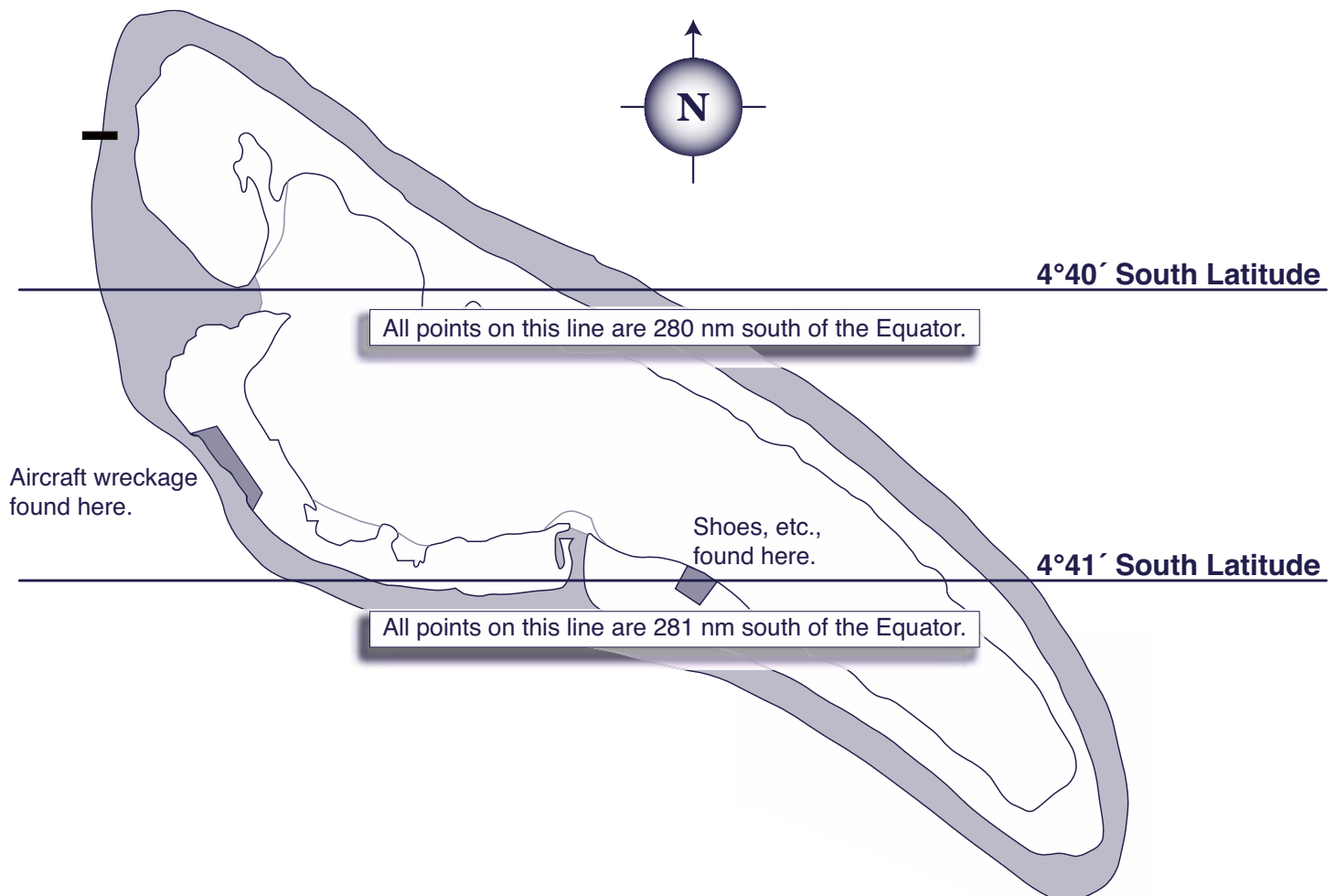
Without faith in the precision of his chronometer, and lacking an accurate depiction of the island's shape, the only position information he could establish with certainty was his latitude. By using his octant to find the sun's highest elevation above the horizon at his location, and looking up that number for that date in his almanac, he could know within very close tolerances that he was somewhere along a line parallel to, and so many nautical miles from, the Equator. If, for example, Fred Noonan was standing on Gardner Island – let's be more specific: if Fred was standing in the very spot where TIGHAR found the remains of what we believe is one of Amelia's shoes and a heel from one of his shoes, he would find that he was standing at exactly $4^{\circ}41'$ South Latitude. (See map below.) A degree of latitude equals 60 nautical miles and a minute of latitude equals one nautical mile. In other words, the only sure position information he could get was that he was 281 miles from the Equator.

Suddenly the message heard by U. S. Navy Radio Waiupe becomes very interesting. We know that the Navy believed the message to be

genuine at the time and, given the various signals being heard that night, it's easy to see why. However, their interpretation of the fragmentary phrases as meaning that the airplane was 281 miles north of Howland Island was based upon the incorrect assumption that the airplane could transmit if afloat. If we are to accept their subsequent conclusion that the message was a hoax we must also accept that it was perpetrated by someone who:

- Knew Earhart's frequency.
- Knew Earhart's call sign.
- Knew that neither she nor Noonan was adept at Morse code.
- Picked the number 281 by chance. (What number did you pick? If it was 281 you should be playing the lottery instead of reading *TIGHAR Tracks*.)

Every place is "281 north" of someplace, but 281 nautical miles north of the "shoe site" on Nikumaroro is the Equator – the only thing to which Noonan could accurately measure a distance. Nikumaroro is also the only place



in the Central Pacific where you can stand on land and be 281 nautical miles north or south of the Equator.

Taken in the context of all the available evidence, it now appears more reasonable to accept the 281 message as probably legitimate than to dismiss it as a hoax. That presents us

with the staggering prospect of a credible, if badly garbled, communication from Earhart and Noonan while they are at Nikumaroro. If we can make reasonable observations about the possible meaning of the rest of the message it may yield clues about what happened to the airplane and help us find the rest of it when we return to the island.



THE FOURTH OF JULY, 1937

All times have been converted to Greenwich Civil Time (as it was known then) to avoid confusion. Locally it is late evening on July 4, 1937. All of the following events are taken directly from official logs recorded at the time. All reported receptions are on Earhart's nighttime frequency of 3105 KC.

06:30 GCT KGMB in Honolulu, the most powerful commercial station in the Pacific, sends out a blind transmission to "Earhart plane" asking for four long dashes in response. Pan American Airways at Mokapu, Oahu immediately hears four dashes and takes a bearing of 213° (which passes near Gardner Island). The four dashes are also heard by U.S. Coast Guard Hawaiian Section. Oahu is 1,830 nm from Gardner Island.

06:38 GCT Pan American Airways at Midway Island (over 2,000 nm from Gardner) hears a very poor quality signal in which a man's voice is "distinctly heard but not of sufficient modulation to be understood or identified." A bearing of 201° (passing far to the west of Gardner Island) is taken but "the signal was of such short duration that it was impossible to narrow it down properly."

06:50 GCT Baker Island hears "NRUI from KHAQQ" ("*Itasca* from Earhart") in voice at Signal Strength 4 (on a scale of 1-5) and Readability 7 (on a scale of 1-9). The reported quality of reception leaves no doubt that this was a strong and clearly intelligible signal. Baker, at 310 nm, is the closest station to Gardner Island.

07:00 GCT KGMB repeats its request for four dashes. U.S. Navy Radio at Tutuila, American Samoa (650 nm from Gardner) immediately hears four sets of four dashes in reply.

09:06 GCT Howland Island hears Earhart calling the *Itasca*. Howland Island is 350 nm from Gardner.

09:07 – 09:23 GCT *Itasca* hears "a man's voice" but cannot make out the words. At this time *Itasca* is at sea about 430 nm from Gardner.

10:10 GCT Upon learning of the dashes heard in Hawaii and that Howland and Baker have been receiving clear signals from Earhart, *Itasca* orders radioman Cipriani on Howland to "get the direction finder in operation."

11:05 GCT Pan Am Midway hears another signal and takes a bearing of 175° (passing near Gardner Island).

11:30 – 12:30 GCT U.S. Navy Radio at Wailupe, Oahu hears the "281" message.

12:05 GCT Cipriani on Howland uses the high-frequency direction finder to take a bearing on "a weak carrier" either NNW or SSE of Howland. He couldn't be more specific than that because the experimental unit could only give him a line, not a direction, and incredible as it sounds, he had only a pocket compass with which to assign that line an azimuth. North-northwest of Howland is nothing but open ocean for thousands of miles. Just 350 nm to the South-southeast lies Gardner Island.

12:23 – 12:36 GCT Pan American Airways at Wake Island takes a "reasonably accurate" bearing of 144° on a signal of which the operator later said in his official report, "While no identification call letters were distinguished ... I was positive at that time that this was KHAQQ ... At this date (July 10, 1937) I am still of this opinion." The bearing passes near Gardner Island.



COMMON LANGUAGE – UNCOMMON PEOPLE

TIGHAR's first European offering of the Introductory Course in Aviation Historic Preservation & Archaeology was hosted by the Militaire Luchtvaart Museum (Military Aviation Museum) in Soesterberg, the Netherlands on June 11-14, 1993. It was quite an experience. Nineteen registrants from nine countries, including representatives from air museums in Brazil, Denmark, Hungary, Malta, the Netherlands and the United Kingdom, not only completed the course of study but used the opportunity to compare experiences, arrange trades, and debate philosophies. All of this was done in a common language which, although basically English, might be more accurately described as Aviation Pidgin.

The setting for the course couldn't have been better. The museum in Soesterberg uses an excellent combination of as-found artifacts, restored or

rebuilt aircraft, and replicas to tell the story of Dutch military aviation. The museum's director, Luitenant-Kolonel Maurits Botma, is forward-thinking and active in the international air museum community. The curator, Sebastian Kreuger, exemplifies a new generation of air museum professionals who have university training in museum science. Guest lecturer on the final day of the course was Gerrit Zwannenburg, architect of the Royal Netherlands Air Force wreck recovery program. His investigations, in the early 1970s, of crashed WWII aircraft found in the "polders", the reclaimed land of the IJsselmeer (formerly the Zuider Zee), were the beginnings of true aviation archeology.

At the conclusion of the course there was universal agreement that this sort of thing should happen more often. We couldn't agree more.



From L to R: Front row, Philipp Hilt, Germany; Ric Gillespie, TIGHAR; Stephen Kirk, Great Britain; our bus driver; Maureen van Goethem, RNLA FM; Maj. Sven Bengt Helldén, Denmark. Back row, Jackson Flores, Brazil; Christiaan Vanhee, Belgium; Jan Jolie, The Netherlands; Robin Zammit, Malta; Tito Aquilino, Malta; Sebastian Kreuger, RNLA FM; Bart Beckers, Belgium; Stephen Gardetto, USA; Bernard Baker, USA; Jennifer Baker, USA; Attila Szabó, Hungary; Bruce James, Great Britain; Gerrit Zwannenburg, Guest Lecturer. Not Shown: Harry van der Meer, The Netherlands; M. H. Odink, The Netherlands; Wally V. Wanrooy, The Netherlands; Wim van Westerop, The Netherlands. TIGHAR Photo by P. Thrasher.

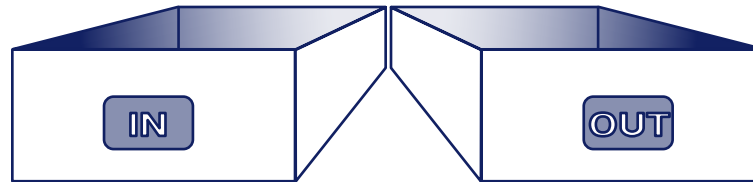
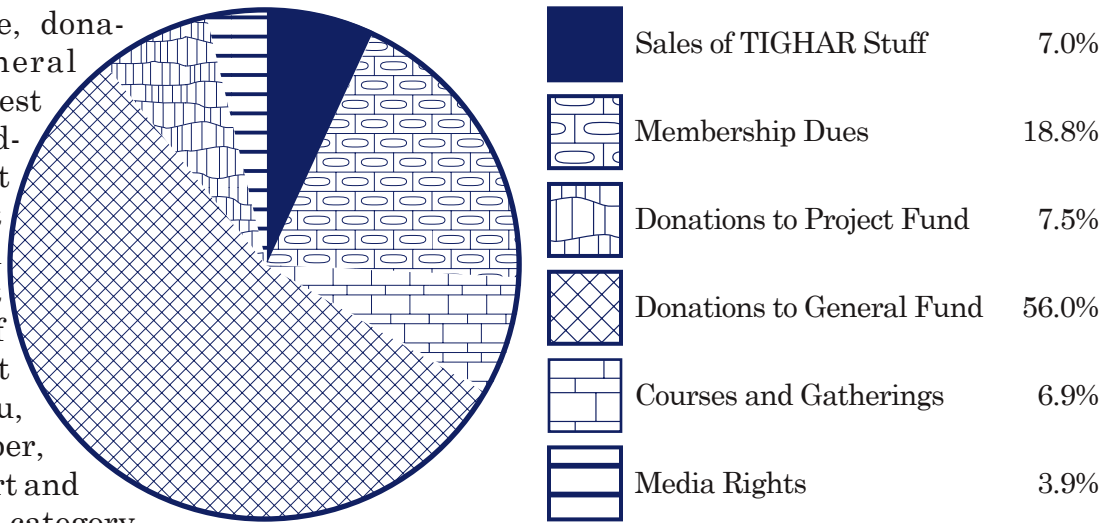
Report to the Members

Fiscal Year 1992-1993

TIGHAR Income Sources, Fiscal 1992

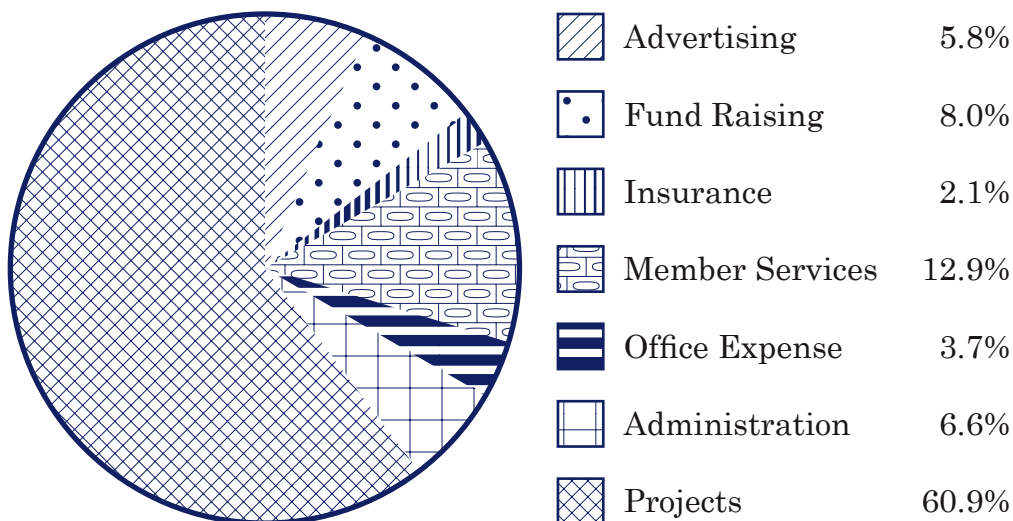
As you can see, donations to the General Fund were our largest single source of funding this year. (Next year, we expect that the largest fund will be the Project Fund because of the Earhart Project Expedition.) But you, the TIGHAR member, can look at this chart and be proud: the only category

which doesn't come directly from the membership is the last one – media rights – a mere 3.9% of TIGHAR's income. The loyalty and generosity of TIGHAR's members are the mortar in the brickwork of this organization. Let's keep up the good work in 1993-'94!



This year was somewhat unusual for TIGHAR in terms of expenses. For the first time in several years, our field work and research involved large investments of time and energy, but not cash. Instead, our big project for 1992 was the TIGHAR Home. The result of this focus was that our fundraising, insurance, office, and administrative expenses were uncharacteristically large in proportion to project expenditure.

TIGHAR Expenses, Fiscal 1992



We are always working to increase our economy and efficiency, and to make the best possible use of our members' donations. Last year the best use was to provide TIGHAR with a secure, efficient physical setting. That accomplished, we look forward now to concentrating once more on research and field work.



TIGHAR MEMO

From: TIGHAR, Wilmington
To: TIGHARs Everywhere
Subject: TIGHAR Hard Drive

The Good News (Part I): Due to:

1. The advice and counsel of various members, most notably Glen Wehe, TIGHAR #0734C, Jon von Neumann, TIGHAR #1358, and Geoff Hurlbut, TIGHAR #0242CEB, and
2. Action taken based on said advice and counsel, to wit:
 - a. Better choices in both hardware and software, and
 - b. Serious shopping around, and
 - c. Hard-nosed bargaining

we (TIGHAR) have arrived at improved figures for the proposed computer upgrade for TIGHAR headquarters of ~~\$21,642~~ ~~\$18,399~~ ~~\$17,527~~ \$16,171. Sorry, it keeps changing. Downward.

The Good News (Part II): Due to the reduction in price (see above), TIGHAR now expects to be able to acquire its computer system and upgrade operations much more quickly than was formerly assumed. At only three weeks into the funding campaign, you have shown once again the generosity that has made TIGHAR possible by donating a total of over \$4,500, honoring a most notable variety of people (see list at right). Many thanks to all of you who have given so freely. Certificates will be made up and sent out as soon as we have the new printer! **If you have not yet made your donation honoring your favorite aviator (or if you've thought of someone else you'd like to honor), we have enclosed a card and envelope to make it easy for you.**

P. S. Particulars as to system configuration, costs, network plans, etc., available on request. Just give us a buzz.

Member	Honoring
William W. Alexander, #0403E	1st Lt. Richard E. Dickey, USAAF
Tadao Amagasa, #0675	*
Robert H. Anderson, #0849	Cdr. Frederick Schrader, USN
William L. Bambrick, #1545	*
Andy Bencsko, #0799	Jacob Daniel Smith
G. Robert Bessett, #1397	Amelia Earhart
Shirley Bonifasi, #1444	Hank Gammell
Peter Boor, #856	Antoine de Saint-Exupéry
Robert N. Boyle, #1473	*
James R. Brandt, #0168	John G. Brandt & James A. Brandt
William Briska, #0471	*
LTC Robert Burns, USAF(Ret), #1669	Charles A. Lindbergh
Raymond L. Cattran, #0281	*
George T. Chandler, #0682C	Col. John W. Mitchell & Col. Rex T. Barber
Richard Cobb, #1059	Arthur J. and Marie D. Cobb
Richard E. Davis, #1490C	*
Jerry Lee Edwards, #0028E	TIGHAR Field Workers
Lt. Brian F. Eggleston, USN, #1104	Clive Cussler
Michael Elmore, #0708C	Charles Everett Elmore
Col. D. Evdokimoff, USAF(Ret), #0239	*
Ron M. Feder, #1008	Nungesser & Coli
Chris Foltz, #0913CE	*
Donna Franz, #1245CE	Amelia Earhart
Clyde H. Freeman, #1738	Raymond B. Freeman
James R. Frison, #1547	*
Grace J. Hale, #982	Amelia Earhart
Frank Hamm, Jr., #0350	TIGHAR volunteers*
Ron Hamm, #0373	*
Ed Harkness, #0465	*
Glen E. Harland, Jr., #1681	*
John R. Hiskes, #0852CE	Roald Amundsen
D. R. Hoffman, #1485	Gen. James H. Doolittle, USAF (Ret.)
David A. Horne, #1651	George Preddy
Michael H. Houston, #0841	My Father
William M. Huegel, #1189	*
Cone Johnson, M.D., #1286	Maj. Kenneth M. Bowen, Jr.
Richard S. Karbo, #0581	Roscoe Turner
George Kastner, #0862C	*
Thomas F. King, #0391CE	Gerald B. Gallagher
Donn B. Kirk, #0882	*
David L. Knutson, #0234	Scott Carpenter
Jeffrey C. Lange, #0748C	*
George LeClercq, #0141	Col. Harold "Pop" Gunn, USAF (Ret.)
Charles F. Lee, #1495	Deborah Anne Lee, MD, PhD & Nancy Ellen Lee, PA, MMS
Ernest A. Lindner, #1409	Ivan M. Lachnit, B-26 pilot
Irving M. Littorin, #0721	Joe Groom
Al LoPresti, #0437	*
James L. Martin, #0656C	Lt. Morey Beller
Charles M. Matlock, #1645	Cheryl Matlock



EVERYBODY WANTS TO GET INTO THE ACT

TIGHAR's discoveries and the controversy surrounding them seem to have stirred up a whole new round of media Ameliamaania (betcha can't say that fast three times). Here's a quick preview of this fall's Earhart lineup:

The September '93 issue of *OMNI* magazine (sort-of-science from the publisher of *Penthouse*) has a short piece in which former Reagan administration speech writer Peggy Noonan presents the views of Bill Prymak, president of The Amelia Earhart Society: "When it all comes out ... 'it's going to be a huge black mark against Franklin Delano Roosevelt, Harry Truman, and Amelia Earhart herself.'" Ms. Noonan seems to have done zero fact checking before quoting Mr. Prymak. Given her name you'd think she'd be worried about Fred's ghost.

The October '93 issue of *Air Classics* magazine features a long article by retired Air Force Colonel Rollin Reineck entitled "The Earhart Flight: Government Conspiracy?" The colonel is quite sure that Amelia "was on a government mission of some sort and that she survived her final flight." Of course, he also thinks that Fred Noonan was an officer in the U.S. Naval Reserve, that there was a runway on Canton Island in 1937, etc., etc. (And they wonder why everybody calls the magazine *Air Comics*.)

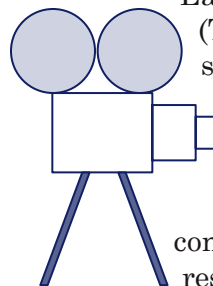
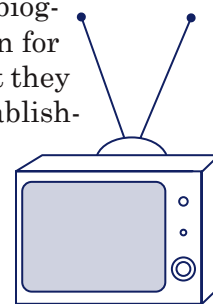
On the brighter side, the reputable PBS series *The American Experience* will air a biography of AE on October 27th in the U.S. Check with your local public television station for times. As we understand it, they're not going to delve deeply into the disappearance but they

did ask for TIGHAR's help in establishing the known facts. In the public interest, we provided the production company with the reams of historical documentation which tell the true story. We'll have to wait until October 27th to find out if they read it.

On November 28th at 9 p.m. (Eastern & Pacific time) the Discovery channel will air the two-hour NBC News Productions documentary *Untold Stories: The Search For Amelia Earhart*. The program will be repeated at midnight. This is the show that was syndicated nationally in April of '92 and has been (still is) available to TIGHAR members on videotape. It tells the story of Amelia's life and TIGHAR's search quite accurately but in a style that is, frankly, too glitzy for our taste.

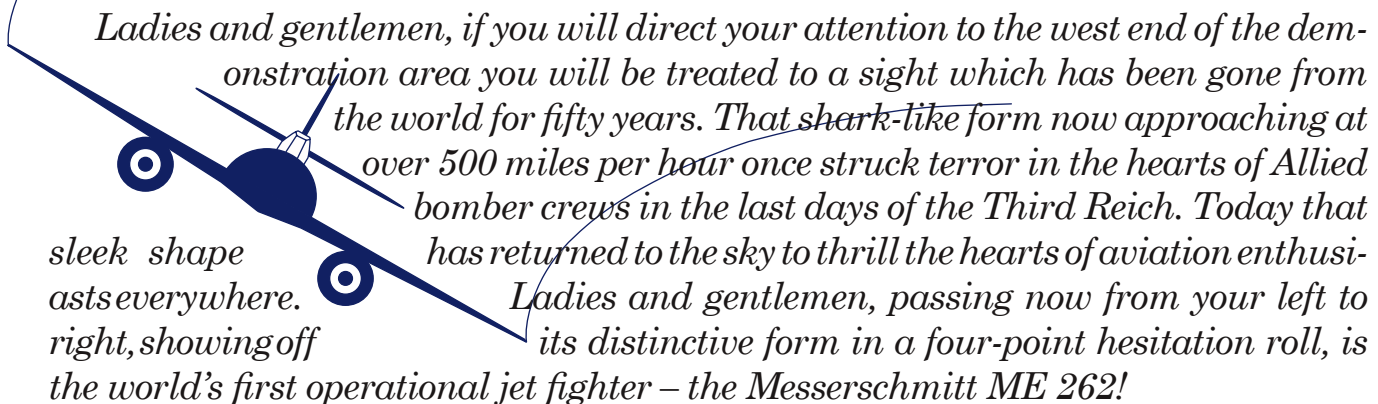
From too-glitzy we move on to too-ditsy with word that Diane Keaton has signed to play Amelia Earhart in a Turner Broadcasting (TNT) mini-series scheduled to start shooting this fall. How about Woody Allen as Fred Noonan?

And to complete our tinseltown gossip column, the word is that TIGHAR has recently been contacted by a major studio regarding research for a mega-budget feature film about Amelia Earhart. Whether it will come to anything or not, and if it does, whether the story will be based on fact or fantasy, remains to be seen. Ta ta for now!



Member	Honoring
Ralph Mazzella, #1555C	Charles Lindbergh
Lester Menke, #1310	*
Thomas J. Moore, #0532	Amelia Earhart & Fred Noonan
Vincent Nardone, #1073	*
Terry Origer, #1538	*
Albert L. Owl, #1484C	Ozark Airlines
R. P. Papenguth, #0502	Charles A. Lindbergh
Marilyn Pollock, #1238	Henry C. Gammell
Charly Prevost, #1424	Jean Mermoz
Gary Quigg, #1025CE	Francis K. and Ruth T. Quigg
Mark A. Reed, #0490	*
Mlle. Nicole Rey, #0922	Nungesser & Coli
Richard J. Reynolds, #0981CB	Nungesser & Coli
Thomas L. Savalan, #0953	Brett Sinclair & Jack Newman
Walter Schoendorf, #1001CE	Chris Hollinger
Lou Schoonbrood, #1198	H. P. Lovecraft
Robert C. Sherman, #0941	*
Ed Stead, #0100L	*
Mark A. Steeb, #1748	Amelia Earhart
Larry L. Stone, Ph.D., #1693	*
David Tateosian, #0342	*
Jack Thompson, #0762	*
James A. Tierney, #0821	*
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René Todovert, #1684	*
Bonni & Kenn Venit, #1299	Herbert Wapner
Jon von Neumann, #1358	Barbara M. Laurent
Marion Wheeler, #1248	*
Robert M. Widing, #0858C	Chelsea & Ryan Widing
George S. Wojcicki, #0412	SSGTHaroldA.Neville, USAAC, CBI
* Some donors elected not to name someone to honor, or left the choice to us.	

THE ROLE OF THE REPLICA



If all goes according to plan the airshow fantasy described above will come to pass in the not-too-distant future. But nobody is “restoring” a 262 to airworthy condition. Instead, the Messerschmitt 262 will be reincarnated through what might be called aeronautical cloning. A derelict two-place version of the aircraft (Me 262B-1a) which sat outdoors for many years at Willow Grove Naval Air Station near Philadelphia, Pennsylvania, has been disassembled and shipped to the Texas Airplane Factory near Ft. Worth, Texas. There its components are being used as patterns for the construction of five brand new airplanes. These Jurassic Jets will be powered by General Electric J85 engines which will fit inside the original nacelles designed for the notoriously unreliable Jumo 004. According to master-builder Herbert Tischler, delivery is slated for 1996 and the cost of each airplane will not exceed \$1.2 million.

These new old jets are merely the latest and most dramatic manifestations of a growing trend toward the construction of airworthy replicas and reproductions of surprisingly complex vintage aircraft. Tischler’s company has recently completed four Grumman F3F-2 biplane fighters as well as a Curtiss P-6E. Delmar Benjamin’s GeeBee R-2 has been thrilling airshow crowds for over a year. Like the Pterodactyl and Archæopteryx, these birds were gone from the sky, surviving only as exhibits in museums. Their return is cause for both celebration and reflection, and raises some important questions about the nature and the role of replicas.

First let’s get our terms defined. In preparing *The TIGHAR Guide to Aviation Historic Preservation Terminology* we researched the standard language used in the museum world and found that a replica is “An object constructed to represent, to a greater or lesser degree of accuracy, an object which existed at some previous time.” A reproduction, on the other hand, is “A copy of an existing object.” Of course, in practical application, the line gets blurred. Tischler’s Messerschmitts will be “copies of an existing object” and yet will use engines not only more reliable but 51% more powerful than those which drove the original (1,980 lbs. of thrust for the Jumo 004B versus 3,000 lbs. for the GE J85).

Similarly, Tischler used debris from three wrecked aircraft as well as original drawings to plan the construction of the four new F3F-2s (well, actually, he built three single-seat fighters and a two-place civilian version). Again, the new aircraft have more power than did the originals. The Grumman-built airplanes carried Wright Cyclones of (variously) 850 h.p. and 950 h.p., while the Tischler-built aircraft fly with 1,050 h.p. R-1820-50s. In fact, although the popular press regularly describes these aircraft as “authentic in every way,” they are, like most replicas and reproductions, quite a bit better than their namesakes. The landing gear retracts with the flick of a switch rather than through horsing on a hand crank, and the brakes are let’s-stop-the-airplane discs rather than the old which-one’s-gonna-grab-this-time drums. The material from which the machines are built

is also different and better than anything available in 1936 – aluminum skin that is both anodized and chromated, AN470 universal rivets rather than AN430 round heads, Phillips head screws (not used on aircraft prior to 1939), Ceronite® fabric instead of cotton on the control surfaces, and modern lead-free paints. The new aircraft, of course, have current avionics.

All of these changes make the airplanes safer, better and more durable, all of which makes them more useful for doing what replicas and reproductions do: create pleasant illusions. In the flying community the illusion of experiencing the past has

become a multi-million dollar industry in which, happily, scratch-built replicas are playing an increasingly prominent part. Extremely rare original aircraft are still routinely stripped to little more than their data plates, rebuilt with new material, equipped with modern accoutrements and given bogus identities in a process euphemistically (and incorrectly) termed “restoration.” How much less a replica is such an airplane than is a Grumman-by-Tischler?



Tischler-built Grumman F3F-2 reproduction ready for painting. Or, more accurately, a replica of the two-place civilian Grumman G-32A, except the cowling is different and – oh, never mind. It's a neat airplane. TIGHAR photo by P. Thrasher.

BLUE SIDE UP

JEFF DANZIGER/CHRISTIAN SCIENCE MONITOR



Calendar of Events

October 9, 1993 — “Finding Amelia” lecture and slide presentation by TIGHAR Executive Director Richard E. Gillespie for Zonta International, Columbus, Indiana. PUBLIC INVITED. Call TIGHAR for details.

November 13 & 14, 1993 — Niku III team meeting and expedition planning conference, San Francisco, CA.

January 18, 1994 — “Finding Amelia” lecture and slide presentation by TIGHAR Executive Director Richard E. Gillespie at the United States Air Force Museum, Wright-Patterson AFB, Dayton, Ohio. PUBLIC INVITED.

Winter 1994 — Field work in Newfoundland on Project Midnight Ghost. Level III field work. Details and additional information to be announced.

Summer 1994 — Niku III, Earhart Project field work.

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