

TIGHAR TRACKS

A Publication of The International Group for Historic Aircraft Recovery
TIGHAR • 2812 Fawkes Drive • Wilmington, DE 19808 • USA • www.tighar.org

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TIGHAR'S NEW PROJECT

In the first two weeks of May a TIGHAR team will conduct an underwater archaeological survey of World War Two aircraft on the bottom of the lagoon at Jaluit Atoll in the Marshall Islands. The purpose of the survey is to assess and document the condition of the wrecks in order to provide the government of the Republic of the Marshall Islands with information and recommendations for their management and interpretation as historic properties and tourist attractions.

The team will also be shooting underwater and onshore videotape footage for the production of a documentary film about the airplane wrecks in Jaluit lagoon and their historical significance.

The known aircraft in the lagoon include the wreckage of three aircraft – two Kawanishi H8K flying boats and a North American B-25 – that came to grief during action in 1944.

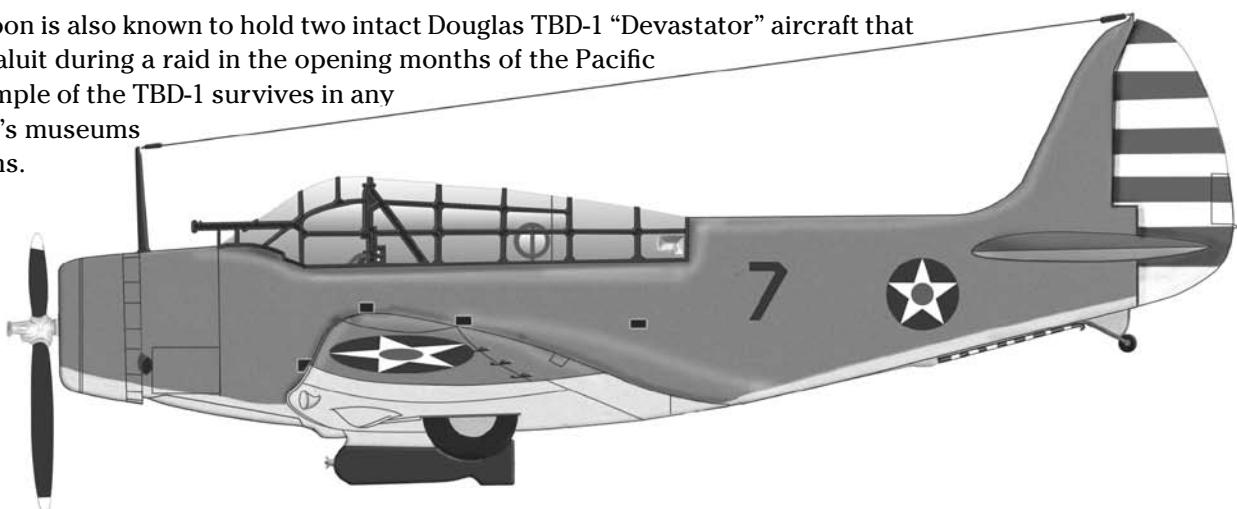


Three Kawanishi H8K (Allied codename "Emily") flying boats of the Yokohama Kokutai (Air Group) were based at Jaluit. Two of the immense aircraft are known to be on the bottom of the lagoon, probably sunk while at anchor by strafing American aircraft in 1944. TIGHAR photo collection..



On January 2, 1944 nine North American B-25Gs made a low level, line abreast attack on Japanese military installations at Jaluit. Aircraft 42-54893 flown by 1 Lt. Gerard J. Galvin was hit by anti-aircraft fire and reportedly lost part of its right wing, rolled inverted, and crashed into the lagoon. All six crewmen were killed. USAAF photo..

The lagoon is also known to hold two intact Douglas TBD-1 "Devastator" aircraft that ditched at Jaluit during a raid in the opening months of the Pacific war. No example of the TBD-1 survives in any of the world's museums or collections.



The Significance of the Devastator

When the “Devastator” torpedo bomber made its maiden flight in April 1935 the decks of the U.S. Navy’s four aircraft carriers were crowded with the cloth-covered wings of slow, squat biplanes. The TBD (Torpedo Bomber Douglas), with its all metal construction, 200 mph-plus speed, and folding monoplane wings heralded a new era in naval aviation.



This was the look of U. S. aircraft carrier-borne aviation on May 12, 1938, in the year before the start of the Second World War. The U.S. Navy’s newest carrier, USS *Enterprise*, had just been commissioned and the commanders of her (l. to r.) fighter, dive bomber and torpedo bomber squadrons took their personal mounts aloft for the portrait at left. Pride of place went to the sleek new TBD.

Such was the blindingly rapid advance of aviation technology that, by the time of the Battle of Midway just four years later, the once innovative Devastator design had been rendered so obsolete and outclassed that all but four of the forty-one TBDs launched against the Japanese fleet were destroyed in action. As heavily as the Devastators and their crews suffered

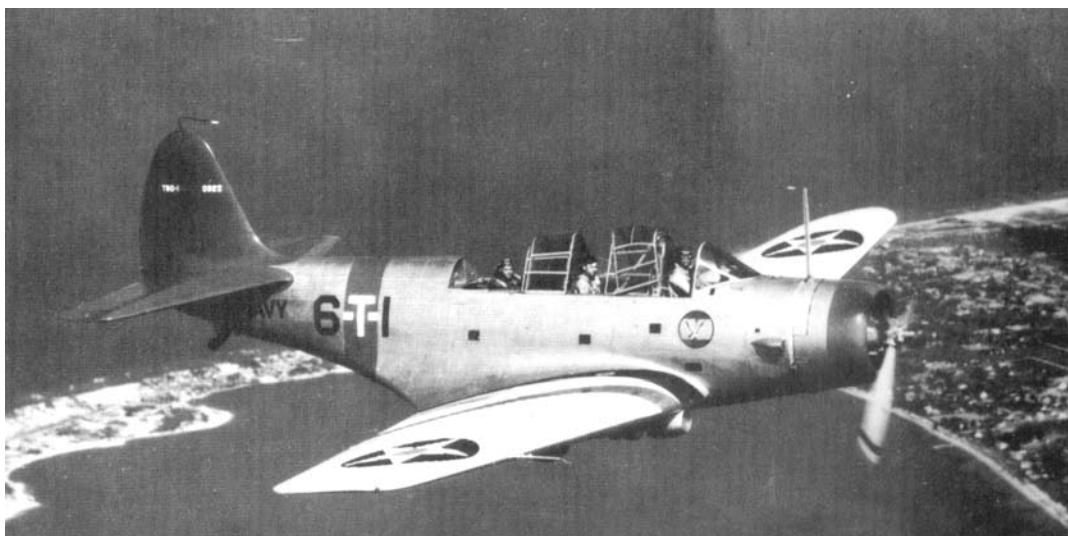
at Midway, their sacrifice played a crucial role in what was arguably the most important American victory of the Pacific war. The Japanese advance in the Pacific and the brief combat career of the TBD had both come to an end.

Preserved examples of aircraft from the transitional prewar period are exceedingly rare.

Today, a single Grumman F3F (right) survives, recovered from the ocean bottom off San Diego and presently in the collection of the National Museum of Naval Aviation in Pensacola, Florida. (U.S. Navy photo.)



The Curtiss SBC (left) – the original “Helldiver” – is extinct. There are none in museums, and no unrecovered examples are known to exist. (U.S. Navy photo.)



The Douglas TBD-1 “Devastator” – the first of the new generation of shipboard warplanes – is gone, but perhaps not forever. (U.S. Navy photo.)

A Devastator at Jaluit

In 1997, as part of a National Park Service-funded survey of WWII wrecks in Jaluit lagoon in the Marshall Islands, a British diver by the name of Matt Harris photographed a Devastator in remarkably good condition in 60 feet of water. The survey describes the TBD this way:

"The aircraft is intact aside from the propeller and engine cowling which is separated and located approximately 15 feet from the main body of the aircraft. The glass canopy is still intact however the forward pilot's window is broken. No weapons were found – these may have already been removed. Due to the position of the plane it is impossible to determine if a torpedo is still present. Considering the plane is on the far western side of the atoll it is possible it was heading in this direction following an attack at Imiej. If this is the case it should have already fired its torpedo before crashing. Most aircraft shot down in the fighting campaigns are badly damaged however this aircraft is in excellent condition. Its shallow depth makes it easily accessible and yet it is well protected from waves caused by the northwest winds that can move an aircraft."

It was quickly determined that the airplane located and photographed by Harris could only be one of two TBDs – Bu. Nos. 0298 or 1515 – that ditched together in Jaluit lagoon during a raid on February 1, 1942. The second TBD was later confirmed to be nearby but at a greater depth. Subsequent research indicates that, for the Jaluit raid, the aircraft were armed with bombs – not torpedos – and that the bombs were jettisoned prior to

the ditching. The TBDs were not shot down but made water landings because they didn't have enough fuel to return to the carrier. At this time we don't know who removed the guns.

Matt Harris's photos of the TBD he found in the lagoon were published in the British magazine *FlyPast* and generated considerable interest. However, repeated attempts by warbird salvagers to obtain permission to recover the aircraft were unsuccessful. The Republic of the Marshall Islands has strict historic preservation regulations that are very effective in safeguarding historic properties. Until a detailed examination is made of both aircraft it is impossible to say whether recovery is a reasonable option for either. There are also local private sector property rights issues to be addressed before any recovery could be undertaken.

Enter TIGHAR

Last year, a grant from the Edward E. and Marie L. Matthews Foundation provided the seed money that has enabled TIGHAR to address the WWII wrecks in Jaluit lagoon. In January, we sent TIGHAR envoy Van Hunn to the Marshall Islands to meet people and gather needed information about legalities and logistics. Van's very successful trip allowed us to make an informed official proposal to the government for permission to do the survey and make a documentary film. TIGHAR's proposal was approved and a contract awarded under the historic preservation laws of the Republic of the Marshall Islands. The survey and filming are now underway and we'll have more to report in the next *TIGHAR Tracks*.

The team consists of:

- Ric Gillespie – Expedition Leader
- Dr. Tommy Love – Dive Master
- Van Hunn – Diver
- Russ Matthews – Field Producer
- Mark Smith – Topside cameraman
- Rob Barrel – Underwater cameraman

It is far too early to say whether recovery of any of the aircraft in Jaluit lagoon is advisable or practical, but a true archaeological survey is the first step in gathering the information needed by the governing authorities to determine how best to manage these important cultural resources.



This photo of the TBD first identified by Matt Harris in 1997 was taken in December 2003.
Photo courtesy T.Praster.

A Brief History of the Jaluit Raid

In the last weeks of 1941, the Japanese swept through the Philippines, Southeast Asia, and the islands of Micronesia. For the U.S. Navy, the new year brought recognition that national morale demanded some kind of offensive action.

In early January planning began for the mission that would become the Doolittle Tokyo Raid in April, but the distinction of launching the first American offensive of World War Two went to USS *Yorktown* (CV-5) and USS *Enterprise* (CV-6). Admirals King and Nimitz decided to send the two carriers and their supporting task forces into the Gilbert and Marshall Island groups as soon as possible to raid enemy shipping and shore installations.



USS *Yorktown* (CV-5) with a TBD rolling for takeoff. U.S. Navy photo.

In the early morning darkness of February 1, 1942, *Enterprise* launched her planes to strike Kwajalein Atoll and to support a naval bombardment of Wotje and Taroa Atolls by the cruisers USS *Northhampton*, USS *Salt Lake City*, and USS *Chester*. Simultaneously, farther south and in poor weather, *Yorktown* launched eleven TBD-1 Devastator torpedo bombers and seventeen SBD-3 Dauntless dive bombers against Jaluit Atoll. For this mission all of the aircraft were armed with bombs. Rain squalls and low cloud thwarted a coordinated attack, and two of the Devastator pilots, Lt. Harlan T. "Dub" Johnson flying Bu. No. 0298, and Ens. Herbert N. Hein Jr., in Bu. No. 1515, became disoriented over the target. Too low on fuel to make it back to the carrier, they ditched together in Jaluit lagoon. The aircraft sank but their three-man crews made it to shore and were captured. Two other TBDs and two SBDs attempted to make it back to the *Yorktown* but were lost at sea.



This TBD is making a water landing in Pensacola Bay in August 1938 after a hydraulic failure prevented the lowering of the landing gear. The aircraft's slow landing speed and flotation bags made for safe ditching. This aircraft was recovered, repaired, and returned to service. U.S. Navy photo.

All six of the men who were captured at Jaluit survived the war as POWs and at least one, Cmdr. Charles A. Fosha USN (ret), is still with us at age 93. TIGHAR was privileged to interview him at his home in Pensacola, Florida on April 6th.

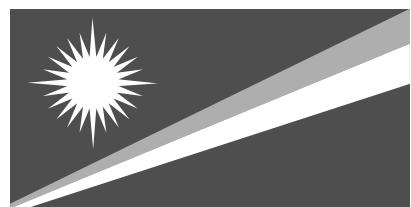
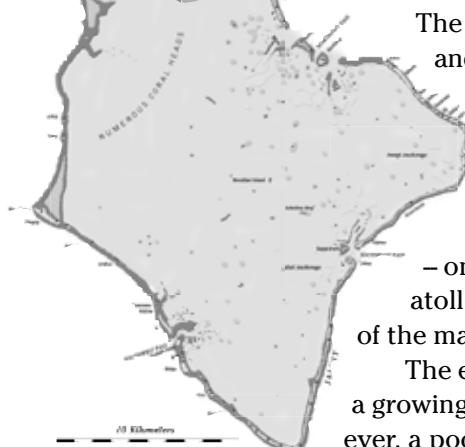
Aircraft Machinist's Mate Charles A. Fosha was the bombardier (middle seat) aboard TBD Bu. No. 0298 when the aircraft landed in Jaluit lagoon on February 1, 1942. He and the other crewmembers spent the rest of the war as POWs.



We'll have more about the aircraft in Jaluit lagoon, their stories, and the prospects for their management, recovery and preservation after the expedition returns. In the meantime, as always, we need your support. Since the original grant was received the project has literally doubled in scope, capability ... and budget. In addition to a greatly expanded survey and filming agenda, we've undertaken to help the community on Jaluit meet some urgent needs identified by Van when he was there in January. A significant grant from the Haas Charitable Trust has made it possible for us to procure over a ton of educational and medical supplies that TIGHAR sponsor FedEx has shipped to the Marshall Islands for us to deliver to the people of Jaluit – but more help is needed. (See "A Pressing Need," page 5.)

Although we have by no means lessened the intensity of our efforts to conclusively solve the Earhart mystery, the Devastator Survey is the first phase of a major new TIGHAR project with unprecedented potential for significant aviation historic preservation.

THE MARSHALL ISLANDS AND JALUIT ATOLL



The Republic of the Marshall Islands has two major atoll chains, the Ratak Chain and the Ralik Chain. Some of the atolls include Bikini, Enewetak, Kwajalein, Majuro, Rongelap, and Utirik, as well as Jaluit. Jaluit Atoll is in the southern part of the Ralik chain. There is no telephone service – long-distance communication is accomplished by radio. There are two commercial flights a week; otherwise, transportation is by boat or canoe. Eighty-four islets are imbedded in the reef which surrounds a large lagoon. Land area is less than 12 square kilometers – only a little more than four square miles. Approximately 1,700 people live on the atoll, mostly concentrated on the eastern side. (You can see a larger, color version of the map at left on the TIGHAR website at www.tighar.org.)

The economy of Jaluit is based on traditional skills (fishing, coconut planting), with a growing tourism trade to help integrate the island into the larger world. It is still, however, a poor and isolated place.

A Pressing Need

In late January TIGHAR Dive Team Leader Van Hunn visited Jaluit in order to meet people and set up logistics for the upcoming lagoon survey. During his visit, he could not help but notice the conditions in the schools and the hospital there. After discussing the situation with the head teacher and the hospital supervisor, he took some photographs and promised to see what he could do to help out.

The Schools

This is a classroom in one of the two elementary schools on Jaluit. The building is a corrugated metal structure salvaged from Bikini Atoll after the A-Bomb tests, and it is radioactive. A movement is already afoot to replace this building with a more suitable one. However, the schools have needs which are even more basic: paper, pencils and pens, notebooks, rulers, crayons, everything that Westerners take for granted as they buy supplies for their children at the beginning of each school year.

On April 22, TIGHAR shipped over one ton of basic school supplies via FedEx (a TIGHAR sponsor; this shipping was free) to Majuro, the closest commercial delivery site to Jaluit. From there,



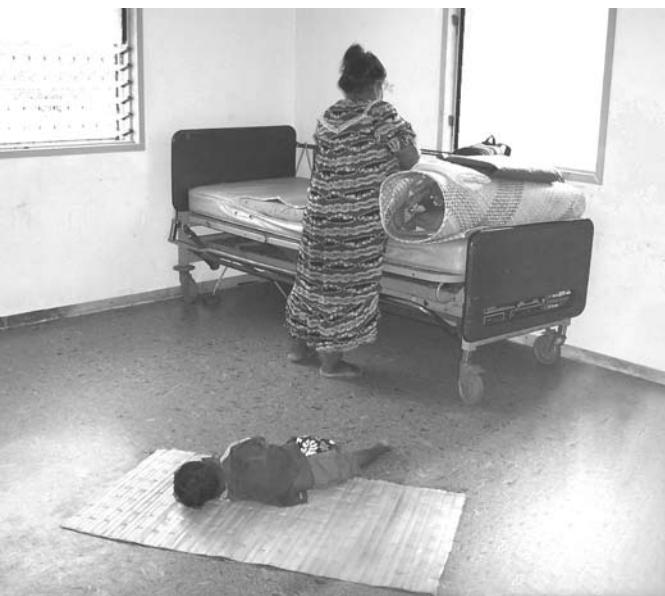
the supplies were loaded on the inter-island freighter and will be delivered for distribution to the three schools (two elementary and one secondary) on Jaluit. This is a gesture of good will to the people of Jaluit Atoll, who have been most welcoming and helpful to us.

The head teacher tells us that one of the most difficult problems they deal with is their worn out chalkboards. The boards are so old that they no longer take chalk well, and chalk is a constant mess and problem in the humid climate. We would like to help replace all the chalkboards with modern whiteboards and a large supply of dry-erase markers. Other supplies are also needed for the coming school year.

The Hospital

The Jaluit hospital is the primary source of health care for everyone on the atoll. There is no M.D. — the doctor is a highly trained medical practitioner, able to manage most illnesses and injuries at least until a patient can be evacuated to Majuro. The conditions in the hospital are, by western standards, primitive; but excellent health care is provided to the best of the practitioner's ability. His most pressing needs are for the simplest consumable items: suture thread and needles, gloves, bandaging materials. He also needed some low-tech equipment such as a suction machine and an oxygen concentrator. His records are kept entirely by hand, and must be transcribed to travel with a patient who is moving to the medical center on Majuro. A laptop computer and a laser printer (inkjet printouts are not much use in a wet environment) would increase his efficiency by a large factor.

On April 28, a shipment of medical equipment and supplies was sent via Federal Express to meet some of these urgent needs. These are the items that have been purchased and sent:



Item	Unit	Quantity	Detail	Total
SCHOOL SUPPLIES				
#2 yellow pencils w/erasers	pack	42	72 pencils per pack	3024 pencils
Elementary pencils w/erasers	box	15	12 pencils per box	180 pencils
Erasers	box	17	36 erasers per box	612 erasers
Personal pencil sharpeners	each	296	various colors	296 sharpeners
Ballpoint pens, blue and black	box	100	12 pens per box	1200 pens
Crayons, boxes of 24 colors	box	247	Flip top boxes	247 boxes
Crayons, boxes of 64 colors	box	50	Flip top boxes, sharpener	50 boxes
12" acrylic rulers	each	400	Various colors	400 rulers
White chalk	box	32	12 pieces per box	384 pieces
Notebooks, college ruled	pack	100	3 notebooks per pack	300 notebooks
Notebooks, wide ruled	pack	50	6 notebooks per pack	300 notebooks
Lined filler paper	case	5	10 reams per case	50 reams of 500 sheets
Plain copy paper	case	20	10 reams per case	200 reams of 500 sheets
MEDICAL SUPPLIES				
Hydrogen peroxide, 16 oz. Bottle	case	1	24 plastic bottles per case	24 bottles
Alcohol, 16 oz. Bottle	case	1	24 plastic bottles per case	24 bottles
Sponge, 2x2	case	2	500 pieces per case	1000 sponges
Sponge, 4x4	case	2	300 pieces per case	600 sponges
Steri-strip suture strips	box	4	150 pieces per case	600 strips
Kerlix gauze rolls	each	100	.4.5 inches x 4 yards	100 rolls
Antibiotic ointment	each	50	.5 ounce tube	50 tubes
Suction machine	each	1		1
Consumables for suction machine	case	1	50 tubes per case	50 tubes
Oxygen concentrator	each	1		1
Tube+canula (consumable) for O2	case	1	50 per case	50 canulae
Combination oto- and ophthalmoscope	each	1		1
C batteries for scope	each	48	two at a time	24 batteries



In addition to these items, we have put in a request to Ethicon, Inc., a Johnson and Johnson company which produces suture materials, for a wide range of suture kits. In the meantime, some basic supplies of suture materials have been purchased and are being hand-carried to Jaluit – they didn't make it into the big shipment.

We are waiting on the computer and printer because we have no real grasp of what the computer needs to be and do, nor what repair and technical assistance may be available in the Marshalls. When the team gets back in mid-May, we hope to have a much better idea of what might be most useful; but we are thinking in terms of a PC laptop, with moderate speed and storage, M/S Office, Filemaker Pro, and a small laser printer with a dozen toner cartridges.

Other items that may be useful, but are waiting on further information: emergency lighting; a wide range of latex gloves; cloth items such as sheets and towels; more first aid type consumables; and so on.

We are still in need of funding for this part of the project. The main port at Majuro can handle containers, and a TIGHAR member is looking into possibly getting donations of larger items which could be containerized and shipped surface. Otherwise, anything sent must fit into the cargo hold of a Boeing 737.

TIGHAR would like to thank Van Hunn, TIGHAR Extraordinaire, for making us aware of these needs; The Haas Charitable Trust of Philadelphia, Pennsylvania, for its extremely generous grant to meet these needs; and Federal Express, for shipping it all gratis.

PROJECT SUPPORT



To support The Devastator Survey, including our partnership with Jaluit Atoll to provide school and medical supplies, you can use the enclosed contribution card, or go to our website, www.tighar.org, and click on the Devastator logo. You can buy a t-shirt with a rendering of the logo, and other TIGHAR goods as well, either on line at the TIGHAR Store, or by filling out the paper order form you found tucked in the envelope with your *TIGHAR Tracks*. As always, shipping is free to TIGHAR members. All contributions are tax-deductible, too!

2004 EARHART PROJECT EXPEDITIONS



Niku V, the next trip to Nikumaroro, is scheduled for the summer of 2005. This year we're concentrating on trying to confirm the significance of the artifacts found during last summer's Niku Vp ("p" for preliminary) expedition. As detailed in "Dados Galore" (*TIGHAR Tracks*, September 2003), if we can establish that Lockheed Electras were equipped with components that match the dados we found on the island we'll have our first "smoking gun" evidence that the people who came to Nikumaroro in the years following the Earhart disappearance had access to wreckage from a Lockheed Electra.

Unfortunately, original Lockheed dados have proven to be illusive critters to track. Because they are nonstructural "furnishings" in the cabin, they tend to be replaced when the cabin is refurbished. Electras surviving in museums and collections have either been maintained in service for many years or have been "restored" so that, as far as we know, no example of the original Lockheed interior has survived.

Existing Lockheed engineering drawings for the Model 10 suggest that dados were present at the juncture between the cabin wall and the floor and photos confirm that dados of some kind were present but, maddeningly, we have been unable to find drawings or photos that reveal sufficient detail to confirm or deny that the dados were made just like "our" dados.

To answer the question we've turned to the only Lockheed Electras that still exist in original condition, that is, airplanes that crashed early in their careers, did not burn, and have not been salvaged or looted since. As you might imagine, there aren't very many but we've identified two candidates that will be investigated by TIGHAR research teams this summer.

One of the sites is in the northwestern U.S. and if an initial recon scheduled for July finds the site to be suitable we'll use it for this year's Aviation Archeology Field School in October.



Because the fuel is in the inboard wing sections, post-crash fires often destroyed the cabin area. This is all that is left of c/n 1005 after it nosed over while making an off-airport landing in northern Canada.

