

III. SUMMARY OF FINDINGS (Attachments with details for each event follow below):

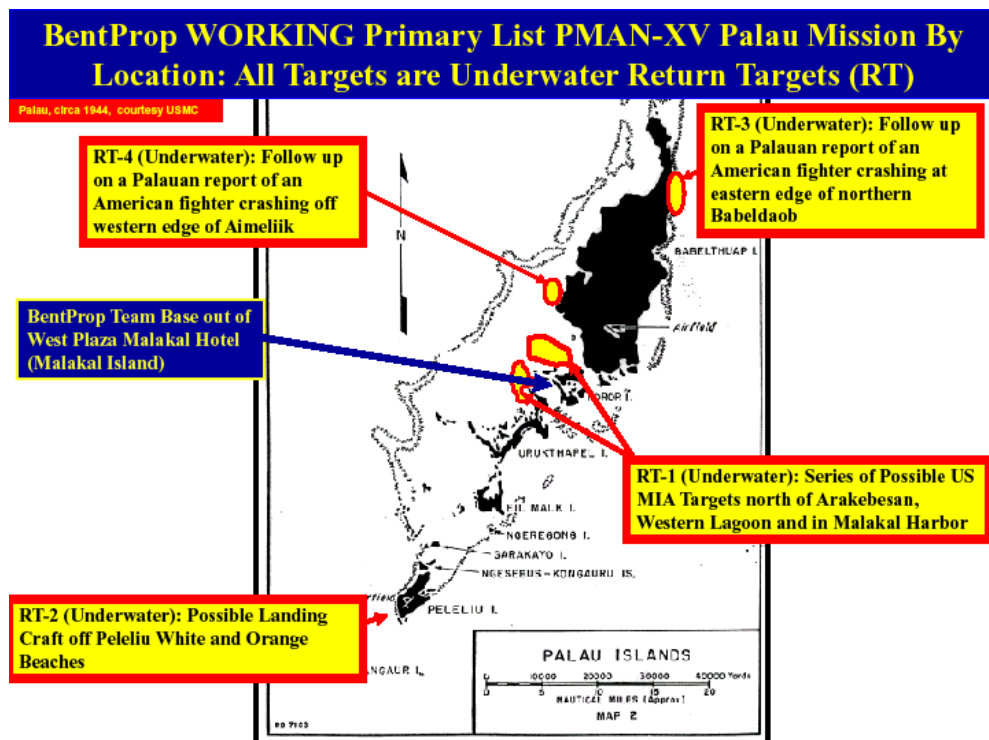
A. PERMITTING PROCESS

1. Permits were obtained for PMAN XV through Bureau of Arts and Culture (BAC), the individual States and the Office of the President. The BAC assisted in arranging the state permits.
2. The team made courtesy calls with President Remengesau, Vice President Bells, President of the Senate Chin, Senator Mason Whipps, members of the BAC including Mr. Dwight Alexander, Ms. Filly Carabit, Dr. Suzanne Finney and Ms. Sylvia Kloulubac, as well as the governors and officials in the target areas that BentProp would be working at the beginning of PMAN XV. Face-to-face meetings with State Governors occurred for Airai State, Aimeliik State and Ngeremlengui State.
3. Ms. Kloulubac assisted the P-MAN XV team in arranging and participating in interviews of Palauan elders in Koror, Airai and Aimeliik.
4. The Scripps Institution of Oceanography (SIO, Dr. Eric Terrill, California, USA), The University of Delaware (UDEL, Dr. Mark Moline, Delaware, USA) and Mr. Robert Richards (Stockbridge High School Advanced robotics Team (SHS), Michigan, USA) participated with the P-MAN XV team and are listed as collaborating contributors to this P-MAN XV mission.

B. OBJECTIVES: This year's mission proposal was submitted prior to arrival to Palauan and JPAC authorities and covered 4 areas.

This year's mission proposal covered 4 underwater areas in search of MIAs and associated crash sites.

All four of these areas involved proposed use of several search and documentation technologies including autonomous underwater vehicles (AUVs), Underwater Remote Operated Vehicles (ROVs), Unmanned Aerial Vehicles (UAVs) and other supportive detection equipment.



Return Target 1. Underwater area north of Arakabesan and Western Lagoon for possible targeting SIO/UDEL and by Stockbridge Remote Operating Vehicle (ROV) Team

Return Target 2. Sunken American landing craft possibly associated with MIAs off the shore for possible searches for additional sunken American landing craft

Return Target 3. Returning to an area to follow-up on a Palauan elder report (P-MAN XIV) on a witnessed aircraft crash, possibly a fighter, off the eastern edge of Babeldaob

Return Target 4. Returning to a previously known American aircraft crash site in waters just off shore of NW Aimeliik

C. P-MAN XV INDIVIDUAL TARGET DESCRIPTIONS, FINDINGS AND KEY EVENTS:

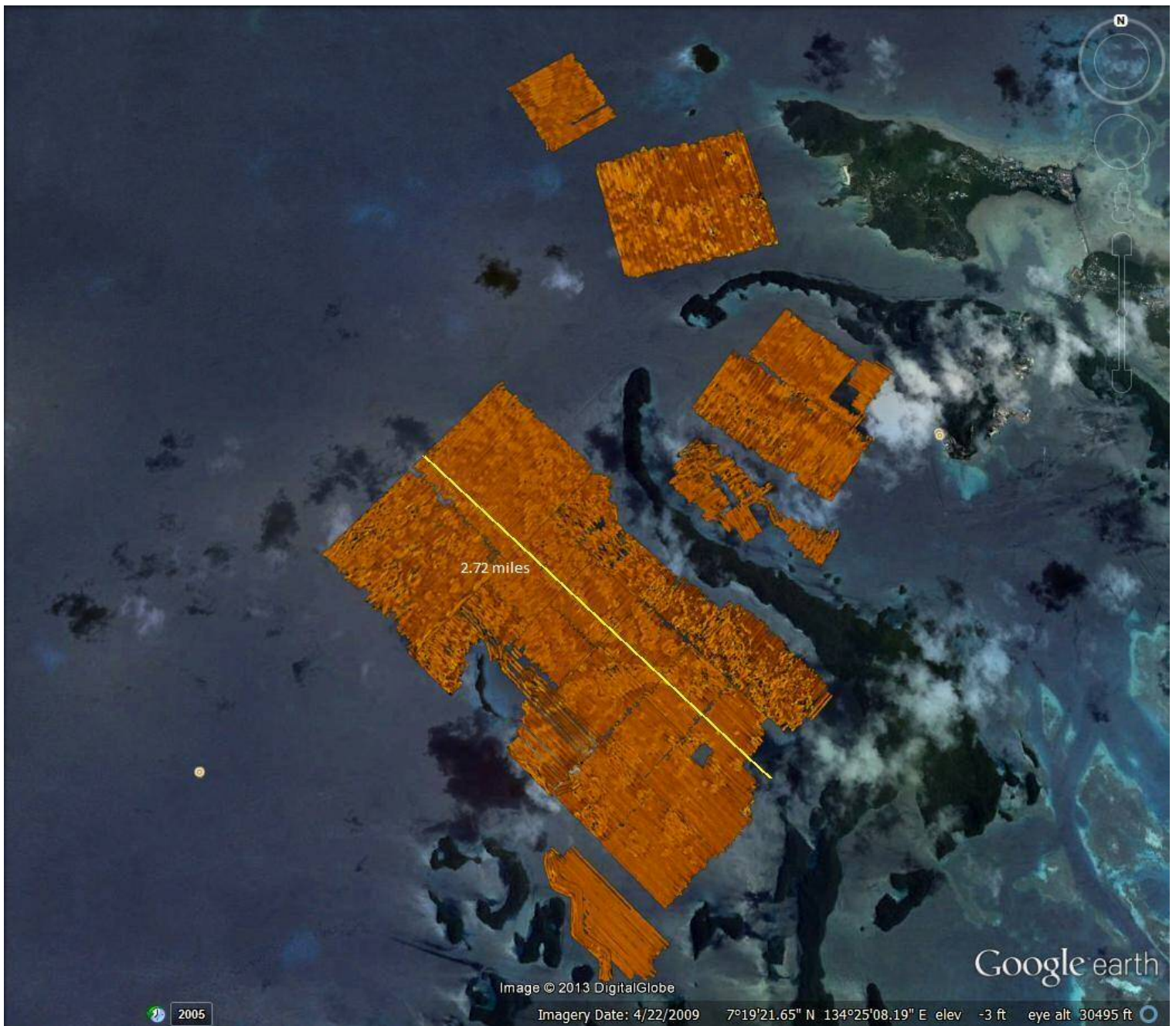
Since a common core team investigated together these four target areas, they are considered together.

RT-1, 2, 3, 4: Introduction

The SIO/UDEL teams conducted extensive and thorough SSS searches using the AUVs in large areas of Western Lagoon and Malakal Harbor, areas outside the western mouth of Malakal Harbor and areas to the west of Arakabesan (RT-1). Preliminary scanning off White Beach in Peleliu (RT2) and the northeastern end of Babeldaob (RT-3) were also conducted. Preliminary observations were made in Rt-4 but underwater searches were not initiated. Complementary imaging by the boat-mounted echoscope was **conducted in these areas as well. Nightly reviews of each day's** scans were conducted and preliminary targets for further assessment were prioritized. Up to two hundred targets of interest to the P-MAN XV team were identified as candidates for further evaluation by ROV or scuba diving. This did not include at least two newly identified ship wrecks in Malakal Harbor and west of Arakabesan. Preliminary observations were made in RT-4 but underwater searches were not initiated.

Prior to departing from Palau, the P-MAN XV team started systematically diving on targets appearing non-natural. SIO, UDEL and P-MAN XV continued to evaluate the SSS and echoscope imagery for further interpretation throughout 2013 with a final assessment of the ~200 SSS targets in October 2013. In addition, Eric Terrill and Pat Colin (Coral Reef Research Foundation, Malakal) dove on additional sites later in the year. During these dives, some non-natural structures were located although not aviation related. Other targets turned out to be natural objects, such as sunken logs; this resulted in a large number of the targets, preliminarily designated as non-natural being dropped as natural objects. With **this composite information, in October, members of Eric Terrill's team, Mark Moline (UDEL) and** members of the P-MAN XV team met in San Diego at Scripps and reviewed all outstanding SSS targets. All but **two** targets were eliminated as natural objects based on the knowledge we gained from diving on the several SSS targets during 2013. These targets will be investigated by either follow-on dives and/or ROV assessment during the 2014 P-MAN XVI mission. Of importance, the AUV imagery identified previously unknown oceanographic information during this scanning process. This will be reported by SIO/UDEL separately and made available to the government of Palau. As only an example, the belief that Western Lagoon and Malakal Harbor have flat sedimentary ocean floors is incorrect: many coral seamounts, as well as sponge and coral beds were seen in both areas. It is likely much new biological information will ultimately be gained from these AUV searches. The areas surveyed are summarized in the maps below. On 25MAR13, SIO and UDEL briefed President Remengesau on their AUV findings and have made the data available to the Republic of Palau.





Detailed map of key AUV search areas during P-MAN XV. When viewed at more detailed scale, the AUV data map out the detailed ocean floors in these areas. Courtesy SIO and UDEL



SIO and UDEL briefing President Remengesau. (From your left: Shallum Etpison, Mark Moline (UDEL), President Remengesau, Eric Terrill and Pat Colin. With permission

The second group collaborating with the P-MAN XV team was the returning Stockbridge High School **Advanced Robotics Team who brought their Remote Operated Vehicle, much improved from last year's** version. The team consisted of two instructors and ten students (two were returning from last year). The SHS team spent their search time using their improved ROV within the RT-1 area. See below.

1. Target RT-1 (Return Target-1). Search for possible underwater targets around Western Lagoon (and Malakal Harbor), 15 March through 6 April. See also NT-1 below.

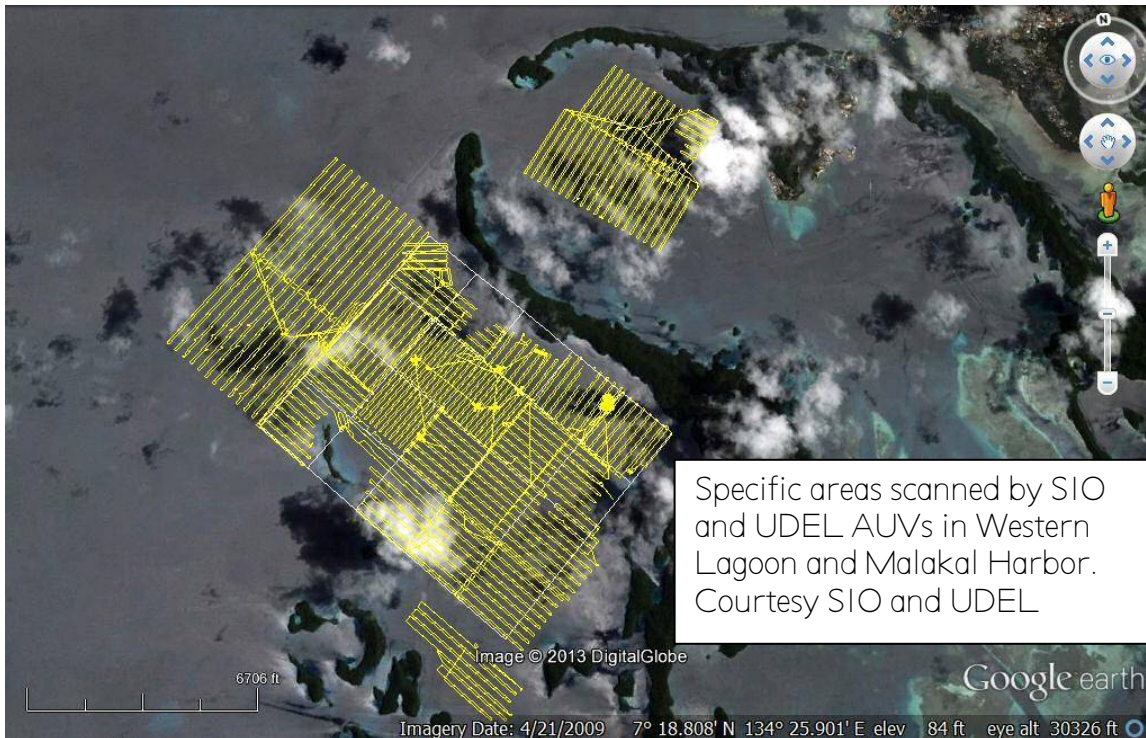
The SIO/UDEL/P-MAN XV collaboration resulted in a series of unique surveys of the ocean floors in the area of Western Lagoon (area just **south of northwestern Ngeruktabel's pincher**), the western half of Malakal Harbor and some preliminary searches west of Arakabesan. As mentioned above, approximately 200 **"targets of interest" (defined as targets for possible future exploration by the BentProp Project)** were identified and prioritized during and after P-MAN XV. One aircraft was discovered in Western Lagoon, and ultimately identified as a Japanese Navy float plane E15K1 Shiun (See NT-1 below and ATTACHMENT 1). Several other targets were interrogated by either ROV (see SHS below) or by scuba diving. No additional aircraft were identified from the searches based on the SSS data; however, time restrictions resulted in only a small number of sites being actually dived on during the P-MAN XV mission.

In addition to discovery of one previously unknown Japanese aircraft, several Daihatsu barges and possibly three new ships (one definite in Malakal Harbor – not from WWII; two possible west of Arakabesan – unknown) were identified but not studied. The SSS data have been finalized and made available to the Palau BAC and other relevant agencies. In certain areas, SIO utilized a boat-mounted

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echoscope, which is particularly useful in select areas of interest, especially along shorelines. This data set has been made available with the SIO/UDEL AUV data.

Finally, the SSS data generated by SIO/UDEL has also provided new data about coral formations in the areas scanned. For example, Western Lagoon has been understood to have a barren sediment/sandy floor, when in fact novel soft and hard coral formations abound throughout the area. Such habitats are now being actively studied by Pat and Lori Colin of the Coral Reef Research Foundation. In general, much more sea life was found than expected.



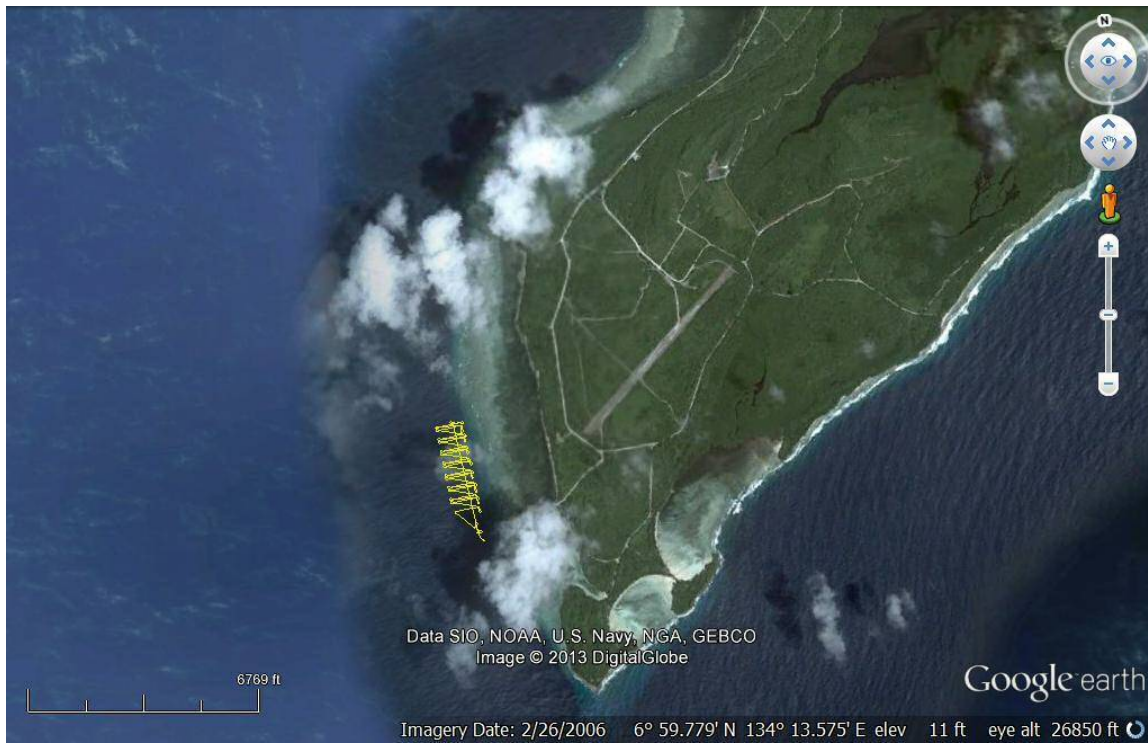
In summary, the capabilities of the SIO/UDEL teams when combined with the BentProp Project have greatly extended the ability to search underwater for missing aircraft and aircrews in Palau. This also has had the added benefits of both locating additional sunken vessels (e.g., possible future safety hazards) and locating new and unique ocean floor biologics. These all will be areas of study over the coming years, directly resulting from this combined scientific effort.

The BentProp Project also continued its educational outreach with the Stockbridge High School Advanced Robotics (SHS) team which returned to Palau for the second year. Making numerous **improvements over last year's ROV, the SHS team spent 6 days on the water interrogating several areas** in and around Western Lagoon and Malakal Harbor, while working on continuing field improvements. On their last day, the SHS team successfully located a high priority object found by the SIO AUV at 135 foot depth and determined that the object was a ship ventilation stack (which had looked fuselage-like on the SSS). This saved time searching at this depth (since the ROV can stay down much longer than conventional divers) and increased diver safety by avoiding unnecessary dives. In addition, the SHS team presented a robot to the Koror Elementary science class so that Palauan children can start learning new technologies as well. In summary, the SHS Advanced Robotics Team, under the leadership of Mr. Bob Richards with support from Mr. Josh Nichols, had a second successful mission to Palau, while also helping the efforts of the BentProp Project.



SHS Advanced robotics team at work in the field driving the ROV robot with P-MAN XV members at the ready. Arakabesan is in the center background. © P. Scannon, 2013

2. Target RT-2. Search for additional landing craft off White and Orange Beaches, Peleliu. A joint search off White beach was conducted March 22 by the teams of SIO, UDEL and P-MANXV. The LVT-A4 off the South Dock was relocated and reimaged. The SIO/UDEL teams worked to develop a preferred search pattern for the invasion beaches off Peleliu. An ~east-west pattern (i.e., perpendicular to the beach) was selected for the AUV while the Echoscope was run just off the western side of the coral reef. Later upon review of the results, it was decided a different approach is needed and will be considered for a later mission. Preliminarily, no additional landing craft were located but debris off the landing beach was seen. Orange Beach was not interrogated. Discussion is ongoing about future surveying of this area also.



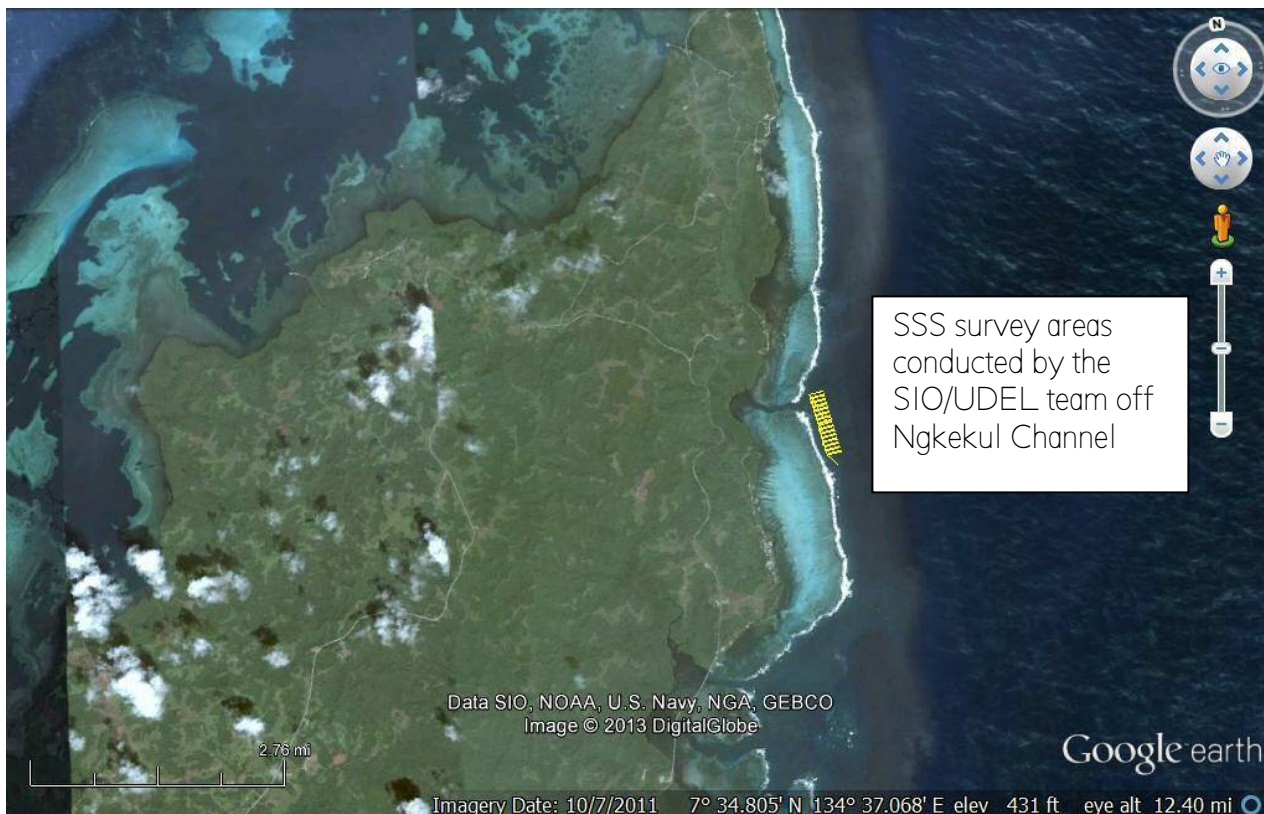
SSS survey areas conducted by the SIO/UDEL team off Peleliu’s White Beach

3. Target RT-3. Search for a possible American Fighter reported by a local Palauan in northeastern Babeldaob.

During the P-MAN XIV (2012), the team interviewed an elder woman in northeastern Babeldaob who recalled seeing what she described as an American aircraft get shot down and crash near the mouth of a nearby channel on the eastern side. Because of the possibility of locating a missing aircraft, the SIO/UDEL teams conducted a preliminary SSS survey in the area of Ngkekul Channel as well as echoscope searching in the channel with no findings of interest. While in-country, we learned that the recent Typhoon Bopha hit this area hard with large wave action, which complicates searching for this aircraft. The description fits with an interview of another elder (who has since passed away) south of Ngkekul. While the P-MAN XV team believes the separate recollections of these two Palauan elders, the recent hurricane wave action in this area **makes locating this aircraft unlikely with today’s technologies.**



Flip interviews a Palauan elder at her home in Ngkekul © Pat Scannon, 2012



4. Target RT-4. Search for a possible American Avenger in the waters and mangroves in northwestern Aimeliik.

A representative of the Joint POW/MIA Accounting Command in Hawaii recently contacted the BentProp Project asking if we had any information about an Avenger from the USS Intrepid which crashed in the ocean off northwestern Aimeliik. The BentProp Project had located and reported on finding an Avenger wing in that exact area in a nearby mangrove swamp during P-MANVII (2005); further we conducted an interview at that time with a Palauan woman who stated her father saw an aviator parachute from an American aircraft shot down in that area who was captured, immediately executed and buried along the Aimeliik shoreline. That airman and two additional crew members from that Avenger remain missing. In later missions, P-MAN teams conducted limited SSS searches and dives without success. Accordingly, we felt an additional survey of the area was warranted to determine if additional aircraft debris in the surrounding mangrove swamps might be located. The SIO and BentProp teams decided to evaluate the use of a hand held Unmanned Aerial Vehicle (UAV), termed a hexacopter (a battery-powered, six motor/propeller-driven platform with GoPro cameras, capable both of flight by an operator or autonomous flight (pre-programmed)). On two days, an SIO team member accompanied the P-MAN XV team to Aimeliik to survey the mangrove areas around the previously found wing for additional debris. Part of the time was spent optimizing the conditions for both flight operations and ground visualization. The videos produced did not immediately show any debris from the air. One suspicious site was seen but subsequent field examination revealed a bleached tree trunk which had given the appearance of a sheet of aluminum. Additional surveying of the mangrove area and the ocean in this area is in planning for P-MAN XVI.

5. Target NT-1(New Target-1). Discovering and Identifying a Japanese crash site, E15K1 Shiun (Violet Cloud), Allied Designation “Norm” in Western Lagoon:

See ATTACHMENT 1 for details. This report was delivered separately to the BAC to the Acting Director on 08APR13 by the P-MAN XV team.

C. FURTHER FINDINGS.

1. Interviews: in each interview, permission was requested to interview, photograph and record with the purpose of discussing experiences from WWII. During P-MAN XV, we interviewed:

a. Elders in Aimeliik, accompanied by Ms. Sylvia Kloulubak, BAC (Elder names withheld for privacy reasons):

- Elder 1: pleasant interview led by Pat Scannon with no new information learned
- Elder 2: Born in 1936, this elder provided a detailed interview led by Casey Doyle. This elder related that as a youth during the Japanese time, he had a Japanese friend who told him that the priests and American POWs were executed and buried in northern Ngatpang. This is a report similar to one we received during our P-MAN VII (2005) mission from a Ngatpang chief (now deceased). In addition, a second elder (Elder 11 below) we interviewed assisted in supplementing information obtained from this elder, supporting the possibility that American or some foreign POWs (possibly Indian or Korean) may have been executed to the north of the areas we have been searching in the past (i.e., Ngatpang/Aimeliik border area). As a result of these **interviews, bearing in mind the Ngatpang chief’s** stridently similar views, the P-MAN XV team conducted two brief hikes (09APR13 and 12APR13) to the north of Police Hill. We found within minutes two Japanese military vehicles, a truck and a partially buried tracked vehicle (and lots of poison tree). The second hike was a result of Joe talking with a hunter who took us on the same road but past the first entry point ~ another km. We found a segment of the old road and, intersecting that, an old vehicle road heading south which led to a hill crest overlooking Police Hill ~ 2.5 km to the SSW from where we stood. We stopped here due to lack of time. These two new interviews, in line with prior interviews, deserve additional consideration in evaluating possible execution sites in Ngatpang.



Casey Doyle and Sylvia Kloulubak interview Aimeliik elder.

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Joe Maldangesang with Palauan hunter who is describing old roads south of new east-west Road. Correct date is actually 2013/04/12 ©P. Scannon, 2014 been made.

b. Elders in Airai, accompanied by Ms. Sylvia Kloulubak, BAC and Remy (last name not obtained) from the Airai State office (all on 09APR13):

- Elder 3 (Clan Chief): a pleasant interview with Flip but no new information learned
- Elder 4 (Clan Chief): a pleasant interview with Flip no new information learned
- Elder 5 (Clan Chief): With a **television playing an episode of “Downton Abbey” in the background**, Dan **O’Brien** interviewed this chief (also videoed). Born in 1926, he described in some detail a large 4 engine airplane flying over his Airai village and crashing into the **waters to the west. He provided a vivid description of the loss of B24 ‘453.**



Dan O’Brien and Sylvia Kloulubak interview Chief Ngotel ©P. Scannon, 2013

- Elder 6 (who spoke little English) was Remy’s **Aunt** (name not obtained): Like Chief **Ngotel, Remy’s Aunt also described the B24 crash. She also became a nurse and helped US military in the post-war setting.**



Remy (in green) translating for her Aunt. Actual interview date 2013/04/09 ©P. Scannon, 2013

c. Elders at Senior Center, Koror, accompanied by Ms. Sylvia Kloulubak, BAC: Although we learned a lot about Palauan history, one of the three interviews (Elders 7–9) we have on video was particularly interesting. This elder lady married a USAF officer and lived in Hawaii for 40 years.

During the Palau war, while moving from Peleliu to Ngaraard, she stopped at Carp Island. Here she witnessed a silver American airplane crash in shallow water nearby. She says she saw the Japanese take four Americans as POWs but knows no more. This deserves additional review.

d. Elders in Ngechesar:

- Elder 10: Joe interviewed this elder lady (born 1928). She stayed in the jungles during WWII and recalled very little from that time.
- Elder 11 (Clan Chief) –96 years old (see above 1.a.)



Joe Maldangesang writing
out Chief's name (Elder 11)
before his interview.
©P. Scannon, 2013

e. Other Interviews (05APR13):

- Palauan citizen (03APR13): She speaks fluent Japanese and said she has been hired in the past to translate in Palauan-Japanese discussions concerning Peleliu and other matters. She has a great-auntie who remembers the war and might be willing to help.
- Elders 12 and 13 (05APR13): We interviewed both elders at the Rock Island Café. We discussed some post-war history but we learned no new information from these interviews.