

TIGHAR Tracks



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

EXPEDITION REPORT

A circular logo for the TIGHAR Earhart Project, featuring the word "TIGHAR" at the top and "EARHART PROJECT" at the bottom, with a stylized aircraft in the center.

Dateline: Nikumaroro, 6 a.m. Monday, September 3 local time (1 p.m. Sunday, September 2, EDT.)



Every now and then the Pacific simply astounds you with its beauty. At 0555, to the west a full moon hovered above a deck of scattered cloud as if suspended on thread; to the east, the first glow of dawn reflected off the ocean and cloud deck as boobies and frigate birds stirred to life on the island.... Auroros rhodos dactylos, the rosy-fingered dawn.

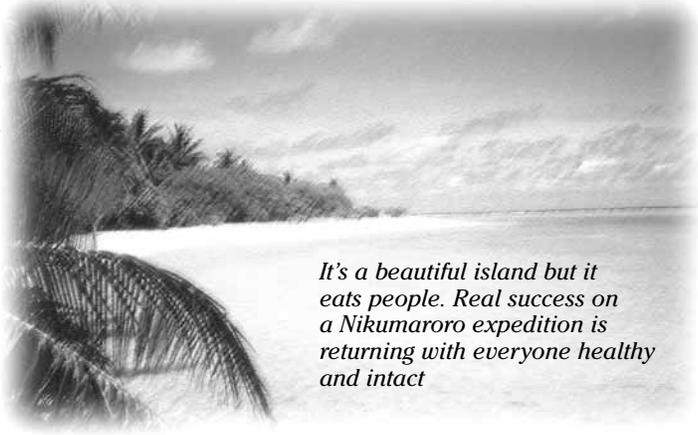
Yesterday the Dive team finished diving north of the *Norwich City* with no results.

The Grave team got to the one meter level, and began to see a stain consistent with some sort of interment. But the "gravestone" is aligned lengthwise along this stain, like a marker rather than a headstone. Until the excavation is finished we won't know what this signifies, but it is certainly rather odd.

The Seven site team cleared a swath from the tip of the seven closest to the lagoon to the water tank. The swath is about 10 meters wide and 100 meters long – brutal work in the heat and sun. Several more artifacts were found, including a rusted out metal box of some kind and a piece of clear broken glass the right thickness for a bottle that was very weathered, as if it had been in the beach for some time before it was found, and then brought to the site. One possibility is that the castaway found it beachcombing and used it for a knife, but other explanations are possible too. None of the artifacts have been collected; they are left in situ until they can be recorded correctly. The Seven Site artifacts are in the NW corner of ER29.

Yesterday there were problems with the propellor on the outboard on the aluminum boat which slowed movement down considerably, and the work itself was difficult and frustrating – quite typical, in other words.

There is a consensus that the sensible thing to do today is to stand down and rest. Predictably, “resting” means going ashore and taking care of a myriad of small personal projects for the entire team. A “spring” tide is predicted for today — high highs and low lows — and at low tide, Skeet, Gary and Ric are planning to go out on the reef flat north of the *Norwich City* and look at it as a landing area. They plan to collect data including measurements, smoothness, water puddling, and so on, to see just how feasible a landing would be in that area.



Any search area planned will be at the juncture of two or more maps of different scale.

It's a beautiful island but it eats people. Real success on a Nikumaroro expedition is returning with everyone healthy and intact

Dateline: Nikumaroro, 6 a.m. Tuesday, September 4 local time (1 p.m. Monday, September 3, EDT).

Yesterday was supposed to be a day off, but – predictably – that only meant everyone worked harder than ever on projects of their own.

Skeet, Gary, and Ric (with the camera man, Mark) went out on the reef north of the *Norwich City*. They were planning to catch the very low tide predicted for 1133 and examine the reef surface with an eye to landing an airplane there. The tide actually went out and turned at 1240. The surface of the reef was not completely dry, but there was about a two hour period when there was less than one inch of water on the reef.

The entire stretch of reef from the wreck to the point, out near the reef edge, showed as a decent landable area, approximately 2400 feet long by 100 feet wide – about three times what you actually would need to land an Electra. The tide would have to be within one hour either side of low water, and there could not be any surf running past the engine of the *Norwich City*, because the surface is not nearly as good farther in towards the shore, but land an airplane there you could. Jim, Chris, Walt and Andrew went exploring in the bush in Taraia, an area we've not covered in the past (WP12 & 13; WQ 12 & 13). They found extremely dense scaevola and not much else. When they emerged, Chris looked like they'd buried him and dug him back up, and Jim looked like an escapee from the latest Survivor episode.

John and Van installed the plaque on Gallagher's grave. They'll do the one on the *Norwich City* in a day or two; that promises to be much more difficult just because of the location.

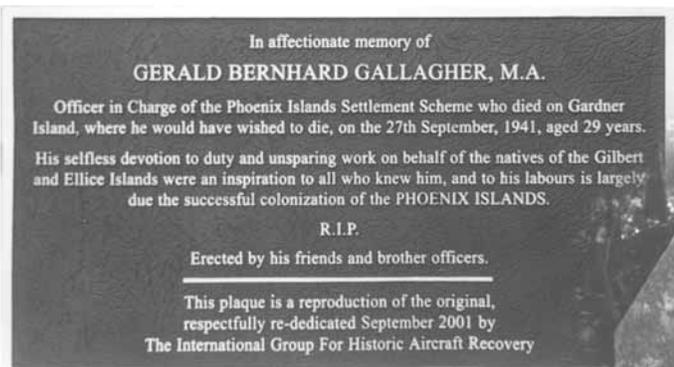
Bill is still fighting his cold and is miserable. No one else has had any symptoms except Andrew, and he

threw it off in a couple of days. Not anyone's idea of a good time...

Today the plan was for the Dive team to stay out of the water and help with the land work. Walt was planning to join Gary and Kar in the grave excavation, and they were hoping to reach the level of the interment and begin the analytical work.

Everyone else was going to the Seven site to finish clearing and begin actual operations. They were taking the pulse laser with them to establish a datum and shoot in the artifacts found in 1996, preparatory to collecting such items as seemed interesting.

Today's weather seemed promising: partial overcast and some showers. The sea is very calm, which helps a lot in the transfer of people to and from the ship. More of the same is in the forecast and the team is hoping it will stay that way.



There has been one schedule change: the day will now begin an hour earlier. The first boatload will go over the side at 7 a.m. local time, and pickups from the landing will begin at four.

The most likely person to find something interesting will be the person who is not looking for anything at all, but who is pursuing business of his/her own.

Dateline: Nikumaroro, 0530 Wednesday, September 5 local time (1230 Tuesday, September 4 EDT).

The new schedule causes some yawning and slow starting... but works out well in the long run. Ric tells me he has not had time to look at a movie, listen to a CD, do anything except focus and work and fall into his rack. The three days' down time on either end of the expedition are, in fact, very welcome.

Yesterday at the Grave site Kar, Gary, and Walt got down to two meters without finding an interment. The dark stain seen the day before petered out without result and the site seems to be a blank. Tomorrow Kar, Gary and Ric will extend the excavation to the north to see if anything is there; however, if another full day of work goes by without result the site will be abandoned. (Site reference is WD10.)

Tomorrow it is also planned that the divers will go back in the water at the channel and work northwards towards the *Norwich City*. One reason for this is that Ric, in flying over the area in the helicopter, saw light colored ... things ... at the base of the reef. Obviously, this could just be sand, but it's worth checking out.

The real news is from the Seven Site.

First, let us recall one of the Laws of Expeditions:

No matter how you set the boundaries of your search area, artifacts will be found just outside of those boundaries, usually in an area which has been used heavily as a footpath by the entire team.

Everyone had been putting all their equipment down in an area which appeared to be uninteresting. Around lunch time, Tom reached for his day pack and found the strap tangled on something. When he dislodged it the "something" came with it.

"What does that look like to you?" he asked.

Ric repressed his first answer (a moose antler) and came up with – "a turtle bone?"

Yup. Skeletal structure of a turtle, no doubt about it.

So the "uninteresting" section was declared interesting, and it was cleared and gridded into two meter sections. The site is near the plate shard and asbestos fragment

(see map below); it's the most seaward face of the "hill" – a storm surge washup – facing the ocean. The area was dirty with turtle bones, bird bones (some blackened by fire), fish bones, some crustacean shells.... exactly as Gallagher described in his messages to headquarters. This is very exciting, but of course the big question is: Is this the castaway, or is this the work party taking a lunch break? One way of finding out is to id. the fish bones. Are they deep water fish – favored by the I-Kiribati – or are they the sort of reef fish that would be readily accessible to a castaway?

One of the main things the team will be looking for is anything that might be a beachcombed object fashioned into a tool. The shard of glass found September 1 may well fit into this category. It looks, on superficial examination, like it may have been chipped into a degree of sharpness along one edge. The plate shards are being reexamined for similar chipping in case this is incidental to normal wear in this environment.

The team really likes the Seven site at this time. It fits the descriptions, and if all those critter bones are there, well, human bones could have survived too. It really looks like a castaway's campsite.

Plans for today include:

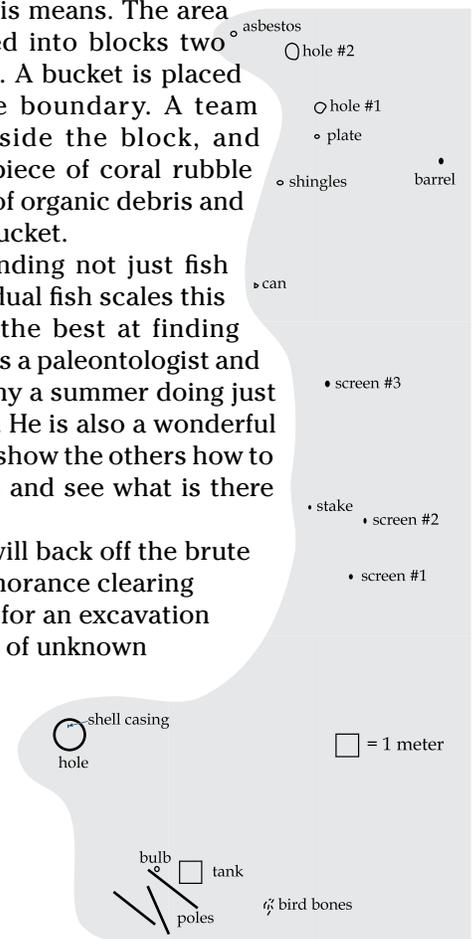
Bill and Chris will be dropped off at Baureke Passage (WW24) to walk down Aukaraime to EO34, which is a site Tom feels is a possibility for Gallagher's references, and then around the tip by the Loran station (EV37) and join up with the rest of the team at the Seven site at ER29.

In extending the search at the Seven site, it's worth detailing what this means. The area chosen is divided into blocks two meters on a side. A bucket is placed just outside the boundary. A team member sits inside the block, and picks up every piece of coral rubble and every piece of organic debris and places it in the bucket.

The team is finding not just fish bones but individual fish scales this way. Andrew is the best at finding stuff – his father is a paleontologist and he has spent many a summer doing just this sort of work. He is also a wonderful teacher, and can show the others how to "tune" their eyes and see what is there to be seen.

Today's work will back off the brute force/massive ignorance clearing effort and set up for an excavation of a complex site of unknown dimensions.

Very exciting stuff.



All important finds are made by accident.

Dateline: Nikumaroro, 0530 Thursday, September 6 local time (1230 Wednesday, September 5 EDT).

The Grave team continued work on Grave Three yesterday without result. Excavating to the two meter level (a square 2 meters by 2 meters by 2 meters) found nothing but dirt. They then extended the northern wall of the excavation an additional meter, and when that also turned up empty they decided to call it off. The hole will be backfilled. The coral slabs could be property markers.

Because of the negative results they were done by noon. The engine on the aluminum skiff is only 20hp, and not very reliable, so rather than attempting to join the Seven site team Kar, Gary and Ric went back aboard *Nai'a* to do paperwork. Ric caught up on his photo log and Kar was able to write up the results of the excavation.

Speaking of engines in poor condition – yesterday morning when Kar, Gary and Ric were heading out in the aluminum boat, Ric went to twist the throttle and the whole thing disintegrated in his hand. Well, Ric isn't a mechanic. Unfortunately, neither is Kar nor Gary... so Ric enlisted the rich vocabulary provided by his Army years and managed to put the thing back together. Make it do or do without at Niku, and anything was better than drifting around that lagoon all day.

Bill and Chris did their walkabout, generating negative results and many jokes about marooning lawyers on a desert isle. Bill's ok now.

At the Seven site the process of final clearing and set up as an archeological site was completed. Not a lot of searching was done, but John did some prospecting with a metal detector and found a few M-1 carbine shells (left by the Coast Guardsmen). Tom also found a metal artifact. It is a clip sort of thing, about three inches by two inches, semicircular, a spring-type thing, lightweight and thin. Definitely not ship stuff which tends to be heavy and bronze or brass. Certainly technological, and lends further credence to the idea that the castaway was

not a languishing Polynesian but someone with access to technology. We should be able to get a firm id. on it once it is back here and we can circulate photos.

They also found another plate shard, which tends to make one think that a plate got broken and abandoned, rather than a piece or two being salvaged as a possible tool.

The divers dove the reef edge from the landing channel to the *Norwich City*. Today they are planning to work deeper water and look at the sandy ledge which is down about 20 meters.

At the Seven site today's activities will include further cleanup and careful clearing around the hole. Tonight, John, Tom and Kar will remain ashore and examine the area around the hole with the ultraviolet light brought along for this purpose. Bones and teeth fluoresce in UV, which coral rubble and other non-bone stuff does not. It is hoped that this will help find additional bones (since Gallagher and his crew found only 13). Without the light it would be extremely difficult to find small bones, especially, as coral rubble looks exactly like most of the smaller bones in the human body to the untutored eye.

Stay tuned.

No find which seems important at the moment of discovery turns out to be important upon further analysis. All important finds arrive on a slow freight.



*Ric and Tom confer over a unit excavation in 1997.
Photo courtesy Gary Quigg.*



*Off and on during any working day on Nikumaroro a flight of kiakias (fairy terns), curious about these strange critters, will come down to hover in your face.
TIGHAR photo.*

Dateline: Nikumaroro, 0530 Friday, September 7 local time (1230 Thursday, September 6 EDT).

Yesterday the divers worked about half the distance between the channel and the Norwich City, looking at the sand ledge which runs between about ten and 20 meters deep. There is only about six inches of sand on the ledge — not enough to cover anything important. They still have negative results. They will continue up the reef to the Norwich City today, and tomorrow will begin in the lagoon.

One of the benefits of diving the reef at Nikumaroro is the spectacular underwater scenery. The lagoon is another story – murky, visibility about two feet, and not exactly a recreational experience.



The campers did not camp last night because it poured buckets. That was shifted to tonight instead.

The Seven Site continues to produce Stuff, some of which makes sense in the context of our hypothesis, and some of which does not (so what else is new?).

Item: A piece of very heavy glass, so heavy it looks like it might be from the lens of a ship light (maybe the *Norwich City*?). It has one very sharp edge that looks like it has been fashioned to be sharp. Tom says that, under the poor magnification available in the field, he thinks he sees signs of wear on this sharpened edge. This is an artifact that will take expert analysis back home, but can be defined by the proper expert.

Item: Two .22 caliber long shell casings, stamped on the base with a P. The Forum says that that is the mark of the Peters Co. of Connecticut. Gallagher had a Colt .22 automatic pistol.

Item: More plate shards, and one of them is clearly marked “U.S. Coast Guard.” We suspect the guys were down there doing a little target practice with (it is to be hoped) already broken crockery.

Items: Numerous, that can’t be identified in the field. It is obvious that there are at least three layers of use on this site: the castaway, Gallagher and his team, and the Coast Guard fellows.

One truly odd thing was found by Ric. He was trying to figure out if a particular tree in the Seven Site was the one he could see from the lagoon, so he was casting around towards the lagoon in search of places to take a sighting on the tree. He broke into a clearing that is not part of the Seven site, but is much closer to the lagoon, and found a ... marker? hard to know what to call it ... that someone had made, using white coral harvested from the open area, and laid out on the gray coral rubble pretty much in the shape of a lower case g. A g like this one, as if a typeset letter, two loops with a small connector between them. It was certainly deliberate. It is also the sort of thing that could easily be interpreted to death. Gallagher, by the way, did not make his g’s that way... Who knows what it means?

The plan for the next few days is to grid and map and pick over any concentration of artifacts, and to do metal detector searches for such concentrations. Additionally, the team will be picking through the fill from the hole, which Tom says is as likely to contain teeth as the hole itself.

Everyone is getting tired, and people are going to bed earlier and earlier. Not exactly a Party Boat. But ten hours’ sleep or so sets you up for the next day pretty well.

No truly important find is discovered to be important until at least six months after the expedition, at which time it is realized that the team could have collected/observed/documentated far more thoroughly but did not do so because... it wasn’t very important.

Dateline: Nikumaroro, 0530 Saturday, September 8 local time (1230 Friday, September 7 EDT).

Yesterday the Dive team concluded their ocean-based search. They have worked the reef face and down to a depth of about 60 feet from the landing channel to the northwest tip of the island, and have found nothing.

Today they were to begin moving their gear to a base on the lagoon shore so they can get started in there. Operations in the lagoon will be more technologically based, because visibility is so poor – for one thing, they will have to place markers that can be seen at the surface and left for some days, so as to know where they’ve been. A challenging environment, to be sure.

They plan to get started diving tomorrow. Map references are WL13, WL14, and WJ15.

By chance, a new member of TIGHAR has been corresponding with me here in Delaware concerning the dynamics and structure of islands such as Nikumaroro. Without going into the technical analysis here (that is a subject for a future Project Bulletin), he feels it is very likely that any debris from an aircraft would, in fact, be swept through Tatiman Passage and into the delta at the head of the lagoon. This is where dive operations will be centered.

Things are moving slowly and methodically at the Seven Site, with no new dramatic discoveries. The entire area is being treated as an archeological site, which necessitates an approach characterized by caution and close observation, rather than dashing about.

The clam shell site (see the daily report for Saturday, September 1) was gridded, mapped, and recovered by Tom King. He found 15 clams, and a good number of them had been opened by being smashed with a rock... not a characteristic of the way I-Kiribati (who have knives) open clams. This tends to make one think of a castaway making do.

The 1996 bird bone site was cleared, mapped, and collected. Kar now has the bones and will be examining them to figure out how many individual birds (one, more than one?) the bones represent.

After lunch Ric and some of the others took a tour up through the buka forest. It is an amazing place, almost cathedral-like. There is some indication of human activity evident – a small glass bottle, some discarded plastic, that sort of thing. They have not done any metal detecting there yet. The map reference is EQ28.

One result of the early work of the expedition is clear: coconut crabs do indeed go off with bones. Very aggressively, in fact. Most of the lamb laid out the first day on the island is gone. Tom King also brought cooked bones (leftovers from dinner) ashore, wrapped in an old shirt and tied up with a belt, and left the bundle out. Within a very short period of time the bundle was a ball of juvenile coconut crabs, with dozens more in the surrounding trees waiting to see how it went. Shortly thereafter the bundle was in shreds and all the food was gone.

Tom, John and Kar stayed ashore last night to do the UV search. There'll be a report on that tomorrow, one way or the other. They were planning to concentrate on the backfill from the hole discovered in 1996, which they had dug and screened yesterday.

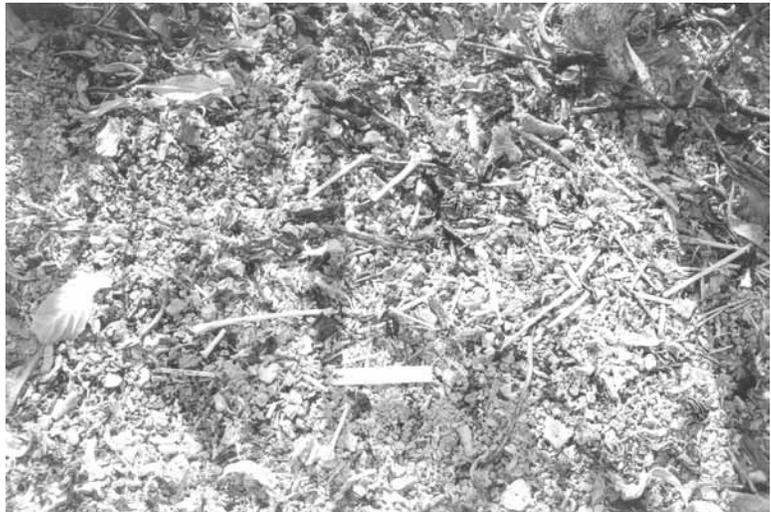
During that process, one of those OH NO incidents came up... "Looks like we've got another can label, guys." Groans all around ... paper labels mean

recent technology. But a little while later they figured out that the label was from the new shovel they'd bought in Pago. Ooops.

Ric had another look at the g feature. It was not only deliberately formed by gathering of white coral to place against the darker gray coral; the materials were gathered right there in that clearing. If the person fashioning this feature had gone out to the beach, there is a lot of white coral that could be gathered very quickly there. Back in the central part of the island, white coral is rare, and gathering it is a tedious and painstaking operation. The difference is clear: the beach coral is much smoother, more eroded. Why would someone expend all that effort?

Today is day ten of the island work, midway. Usually on this day the work is to break down and retrieve and leave. This time the team has the luxury of just getting well started. Everyone is acclimated. The truly hard work (clearing, mostly) is done, and they have a valid archeological site on which they can use their brains. We don't know, of course, if the site is for real, but with a team this good and the time to spend on it we can surely find out.

It takes a sharp eye to see bones, even bones right on the surface, against a background of coral rubble. 1996 TIGHAR photo by P. Thrasher.



Dateline: Nikumaroro, 0730 Sunday, September 9 local time (1430 Saturday, September 8EDT).

There was an adventure aboard *Nai'a* yesterday. A hot water line burst in the engine room and sprayed the port generator with water, causing it to fail. So they switched over to the starboard generator, which promptly quit. After about two hours dead in the water they got the starboard generator going again, and repairs were able to commence on the water line, but such are the joys of a life at sea – something is always breaking. It didn't affect the team's activities, but did lend a slight air of desperation and reality to the whole day.

Tom, Kar and John (with camera man Mark in attendance) also had an adventure during their overnight stay on the island the night before last. It seems that the crabs

on that part of the island are much more aggressive than elsewhere.

They went out to the ocean beach to build a little campfire and have supper. While they were eating, someone heard a noise, and on firing up a flashlight... were surrounded by hundreds of juvenile coconut crabs, creeping and rustling and watching for their chance to claw in on the meal. Coconut crabs (*Birgus latro*) have a lengthy juvenile phase during which they wear found shells, like hermit crabs, until they grow too big for the available stock of shells. Then they grow a hardened carapace of their own and just keep growing – up to 50 pounds, in fact.

Needless to say, the Sand People decided to bed down elsewhere than near the food, which was guaranteed to be a source of noise if nothing else all night. So they went some distance away and prepared for a good night's sleep.

NOT.

All the crabs appeared to say, "Oh, look! These people have died!" and spent all night tromping about and taking nips and fiddling with their hair and just generally being pests.

One crawled up inside Mark's shorts, which caused quite a stir in camp. John was awakened from a brief nap by the feeling of something playing with his hair, and when he reached back to swat the (he supposed) little crab away he was unhappily surprised to meet with considerable resistance and the awareness that this was not a juvenile, but a bruiser of massive proportions. The big guys can nip off your finger without even noticing it, so John found it convenient to hop up and use an implement, rather than tender flesh, to discourage Crabzilla. All in all, it was not what you'd call a restful night and an air-conditioned, crab-free sleeping cabin looked much more attractive than it had previously.

It is a sobering thought, however, to imagine how this scene would play out with a castaway, weak, perhaps incapacitated and unable to move. Would the crabs simply eat a person alive?

Ric has spent the last two days cutting a "tunnel" through scaevola from the top right corner of the "7" to the ocean beach. The scaevola is incredibly dense, and the path measured out to just on 100 feet. That's about 50 feet more than was the distance between the 7 and the beach in 1940 (per photographs), so the beach has built out there almost a foot a year. The path he cut is in the lower right hand corner of ER28.

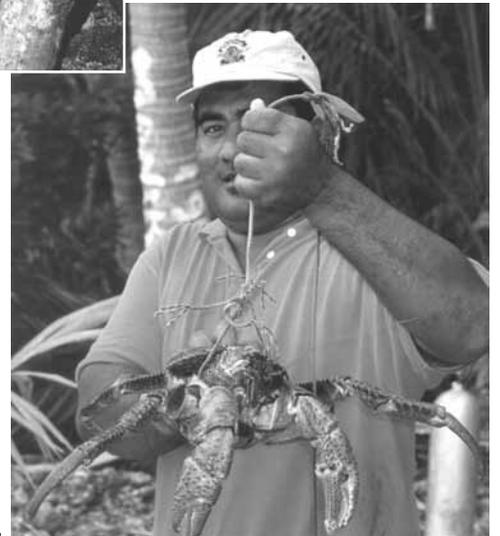
Tonganibeia Tamoia, Customs Officer on Niku III (1997), holds the Catch of the Day – a mature coconut crab. These crabs in their mature form are endangered and hunting them is no longer permitted... too bad, because they are fabulous eating. You do NOT want one of these guys grabbing you with those claws. Photo courtesy Kenton Spading.

After lunch Ric went on a solo mapping trek up the coastline on the lagoon shore. By capturing waypoints on the GPS that he can spot exactly on the satellite photo, the team can geo-reference the Seven site to the satellite map with great exactness and place a true grid on the area. The shore line he mapped runs through EQ29, EQ28, EO27 and EN26. It's treacherous work. The shore line is lovely, but you have to watch your step very carefully. There is quicksand, the sun is a hammer, the coral ledges on the edge of the lagoon are very sharp, and it's all too easy to get complacent and have blood running down your leg, or be stuck thigh deep.

If you look on your grid map at EQ29, you'll see a light colored area in the lagoon just off shore there. That area is full of clams. In the 1938 photo, there are a number of trails from the Seven site to there, which leads to the idea that the castaway was accessing a good source of food that couldn't run away.



Juvenile coconut crabs attack the remains of lunch during Niku III. It takes approximately two minutes for the first batch to show their shells when food is scented. TIGHAR photos by P. Thrasher.



A dead turtle (natural causes, apparently) was found on the beach, and Kar excavated it carefully, dissecting it and recovering the bones for comparison with bones found at the site. The team estimates that this turtle weighed between 200 and 300 pounds, a good size – and, of course, far larger than a castaway could manage. Probably the largest a single person could hope to deal with would be 100 pounds, and 50 would be more like it. You might possibly be able to kill a large turtle, but without help you wouldn't move it.

The Dive team got set up for the lagoon dive and was planning to begin that today, in the two foot visibility.

The work is brutal. People spend all day shoveling heavy coral rubble and dirt into buckets, carrying the buckets about 50 feet to the screening area, dumping the buckets in small increments into the screen that someone is shaking down and examining for artifacts... repeat, ad lib. The thermometer Ric had stuck in his pocket, soaking wet, in a breeze, read 100°F.

The entire team will stand down tomorrow for a much-needed rest. There is much work to do cleaning, photographing, and cataloging artifacts, and that is a job that must be done aboard ship. Ric and Skeet were going to begin that process today, and it will continue tomorrow.

Dateline: Nikumaroro, 0530 Monday, September 10 local time (1230 Sunday, September 9, EDT).

The Dive team scouted along the edge of the sand bar at the lagoon side of Tatiman Passage to get the lay of the land, through blocks WJ16, WK15, WL14, WL13, and WK12. It's very tough going with visibility at only 2 feet. They are working off manta boards, which have their risks, but are safer than running headlong into coral outcroppings. At least this way the manta board hits the coral first.

They have found that the sand is only soft and permeable in the sand bar for the first couple of feet. After that, it is packed into a solid mass, impenetrable to probes. If there is anything buried there, you'd have to know exactly where it is to have much chance of finding it, and the sand bar has, we know, built out a number of meters since 1940.

Tomorrow they will begin sampling the area at intervals with probes and metal detectors in the hope of picking up a debris trail.

Bill and Jim went to Aukaraima South to take a look at an area Tom was curious about (dubbed Tom's Triangle). They found only one artifact, a .30 caliber shell casing. One interesting thing about this is that finding almost nothing there gives much more credence to the idea that something unusual was going on at the Seven Site.

At the Seven site it was another day of hard work without much result. The team has finished screening the backfill and is about half way down into the hole itself without result – not too surprising, as the assumption has been that anything detached from the skull would be in the bottom of the hole. That is, of course, if we're right

about the hole. Once the work on the hole is finished, the manpower and screens will be turned to the other areas of the site which we know are productive.

Skeet and Ric spent the day aboard *Nai'a* cataloging artifacts, 47 in all so far, some of them bags of little bones from birds and fish. There are odd little objects, obviously technological in origin, parts of assemblies and things that were portable, but nothing clearly identifiable yet. It will take a lot of work to i.d. the things found so far.

Ric also did a site map of the features and metal detector hits at the Seven site so far, while Skeet got everything logged into an Excel spreadsheet, along with all the GPS waypoint data – essential for managing the site and keeping track of where everything came from once we leave.

Today is a day off. The Gallagher plaque rededication was to happen at about 10 a.m., and then back to the boat for R&R.

Tomorrow the team expects to finish screening the hole; to verify clam populations along the lagoon shore; and to move into the already established archeological sites in the Seven site. A small group will also break away and do some exploring between the Seven site and the Loran station to make sure that Laxton's "house built for Gallagher" isn't lurking about down there somewhere. The assumption has been that that "house" is whatever shelter was put up while searching the castaway's campsite at the Seven site, but it would be nice to be sure.

Dateline: Nikumaroro, 0530 Tuesday, September 11 local time (1230 Monday, September 10, EDT).

Yesterday was a day off – a real day off. People caught up on their notes and their sleep and their laundry and took it easy, and high time.

The only trip ashore was for the rededication of Gallagher's plaque. It went very well. The area around the tomb was carpeted with freshly cut palm fronds, and a pole lashed between two trees was hung with the Kiribati and U.S. flags. A Union Jack was draped over the tomb, and all hands turned out in "service uniform" – TIGHAR field shirts with the embroidered TIGHAR and Earhart logos. As far as possible, without the religious service, the ceremony duplicated the one offered in 1941:

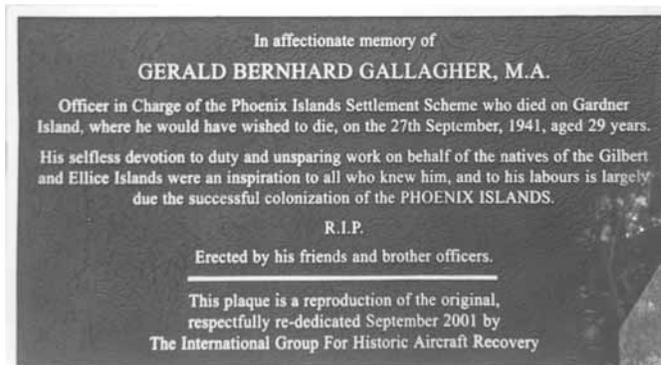
The coffin was draped with a new Union Jack and was carried on the shoulders of representative numbers of Europeans,

Fijians, Ellice Islanders and Gilbertese. At the graveside Lieut-Commander Mullins read the burial service of the Roman Catholic Church and the hymn "Nearer My God to Thee" was sung by the Europeans present. Lieut-Commander Mullins spoke a few simple and appropriate words (a copy of which have already been given to His Excellency). The Protestant natives sang a hymn in Ellice, and subsequently Maheo, an Ellice Islander, and one of the native wireless operators, paid a simple, eloquent and most touching tribute (in English) to Mr. Gallagher's memory. After the grave had been filled in, the native women on the station placed garlands of bush flowers around it.

The TIGHAR group sang two verses of “Nearer My God to Thee,” and Ric sang the second verse of “Danny Boy.”

A similar ceremony is planned for the *Norwich City* plaque installation later this week.

The plan for today was to finish screening the hole and then branch out into the other interesting sites within the Seven site area, and for the Dive team to work in the lagoon.



*And when you come, and all the flow'rs are dying
If I am dead, as dead I well may be,
You'll come and find the place where I am lying,
And kneel and say an Ave there for me.
And I shall hear, though soft you tread above me,
And all my grave will warmer, sweeter be.
For you will bend, and tell me that you love me,
And I shall sleep in peace until you come to me.*

Dateline: Nikumaroro, 0530 Wednesday, September 12 local time (1230 Tuesday, September 11 EDT).

A day like today is the hardest part of an expedition to Nikumaroro.

When Ric calls, it's 5:30 in the morning his time. They don't get a lot of news... not too many NPR stations have enough transmitter power to get Morning Edition to the Phoenix Islands. Whatever news they get comes from me.

Two people aboard the boat – the film crew – live in New York City. Others have relatives and close friends who live there, or who work at the Pentagon. Several others have close ties to the airlines, including United, and know ... everyone.

And there's nothing they can do. Wait, get updates from me or others via satellite phone, wait some more. And try to do the work.

So far, the news is good – those with friends or relatives in New York or at the Pentagon will get reports tomorrow morning that all is well, and no doubt will be energized and ebullient at the news. But for today... they wait.

Yesterday the Dive team worked in Tatiman Passage and towards the mouth of the passage (into the lagoon)

to get more of a feel for how the delta works and what it looks like. They are using metal detectors and probes and trying to acquire a profile view of the sand deposits in order to predict, if that is possible, where stuff might end up.

At the Seven site, the team took the “skull hole” down to 50 cm in a 2 meter square. The excavation was laid out oriented North/South with the apparent hole center at the middle of the square. In the southwest corner of the square, they discovered obvious sign of a much smaller excavated area – white surface rubble down at the 50cm level, and the soil obviously disturbed. This is evidence of an original small hole (to bury a skull?) which was excavated (but the excavator didn't get the hole centered?) and then collapsed in on itself over time.

Sure fits our hypothesis. We aren't to the bottom yet.

Due to the fact that most of the news passed from me to Ric today, this report is short... on the other hand, nothing that much happened at Nikumaroro. We'll make up for it tomorrow.

Everyone on the team has had messages from or talked to the people they needed to know were safe. Ric tells me that there was, on the island, the same sense of stunned disbelief the rest of us are feeling. They worked and accomplished things and covered territory, but with a sense of unreality and inconsequence. But as Ric pointed out – by the time things are wrapped up at Niku and they have found whatever they have found, if the news is good, well, people need good news right now. So a real effort was made by all and much was done.

Yesterday the Dive team worked along the lagoon shore north of “Club Fred” – the place where, in 1989, we pitched our big tent as a headquarters. The coordinates are WH16 and WI17.

There is a lot of stuff in this general area, mostly from the *Norwich City*. Apparently, during storms, the debris goes around the corner and settles out in this neighborhood. The dive team will continue to work in this area as well as out in the lagoon proper.

At the Seven site the hole is down a further 10 cm. Nothing yet, but at this depth the hole is still very confused, with scaevola roots growing through and coral rubble from the surface mixed in with the dirt. The team plans to take the hole down until they reach undisturbed dirt. It’s nasty work, very hot and heavy and picky... “the most mind-numbing job on the planet.” (“Calvin & Hobbes.”)

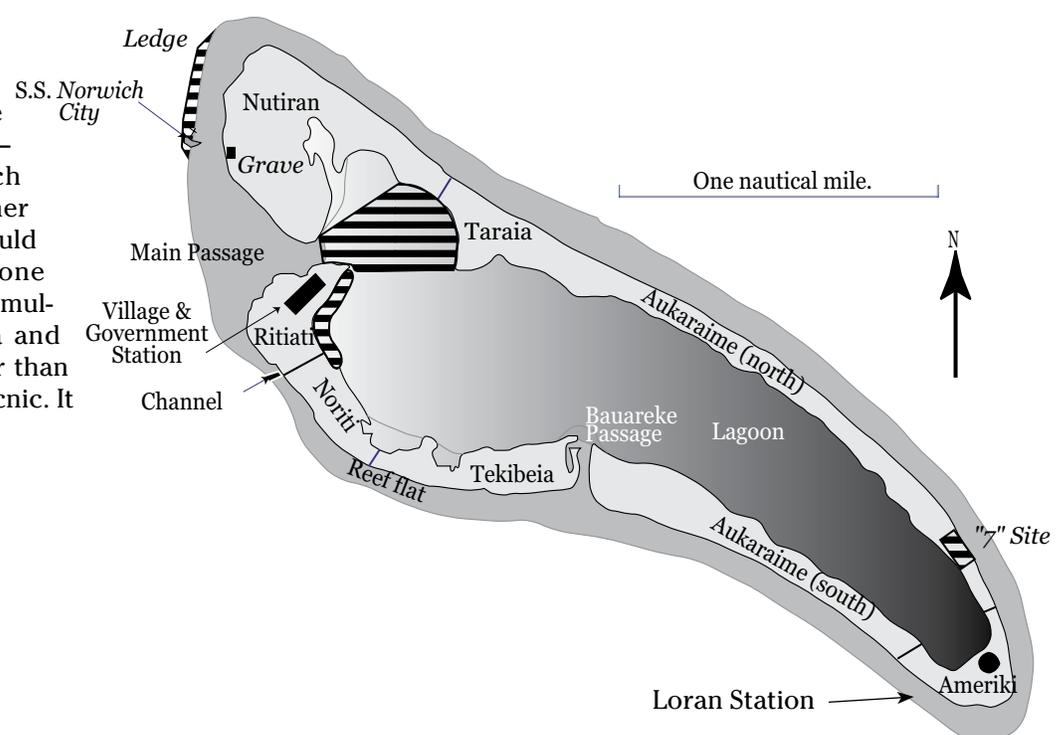
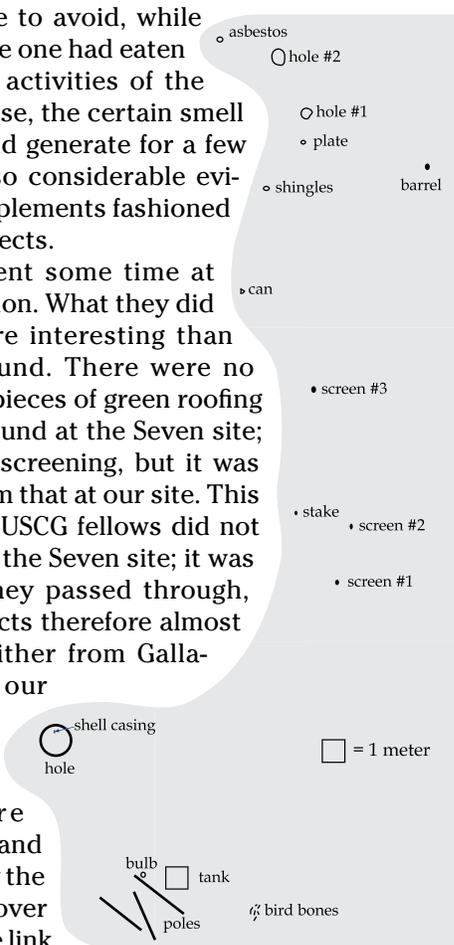
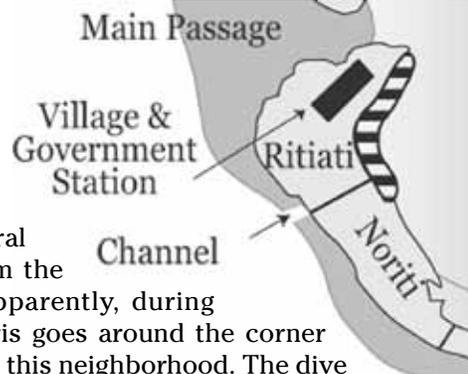
Tom and his gang worked the animal bone sites, getting a handle on the depth and breadth of each deposit. There are all kinds of bones there – turtles, birds, fish – but each in a discreet small site, rather than one big midden. This would tend to indicate that someone (our castaway) was bringing multiple food items to the area and eating each separately, rather than a group putting on one big picnic. It

would make sense to avoid, while eating, areas where one had eaten before, given the activities of the crabs and, of course, the certain smell that garbage would generate for a few days. There is also considerable evidence of crude implements fashioned from available objects.

John and Bill spent some time at the old Loran station. What they did not find was more interesting than anything they found. There were no rolls or stacks or pieces of green roofing material as was found at the Seven site; they found some screening, but it was quite different from that at our site. This suggests that the USCG fellows did not spend any time at the Seven site; it was merely a place they passed through, at best. The artifacts therefore almost certainly come either from Gallagher’s search or our castaway.

I talked more than Ric did, again; they are hungry for news and it’s hard to convey the current situation over a scratchy satellite link.

But the team continues to work, and is making progress. Life goes on.



There are four working days left in the expedition, and the heat is on.

Well, the heat has been on, really (who left that thermostat set to 120°?). It's always tough at this point, though, when there's been no EUREKA find, and people have lost their perspective. Those who've been through it before recognize the symptoms and have another drink of water, but the new folks have to experience it for themselves: the desperate urge to do something, anything, to rush about and look everywhere at once, try a new approach, flap around. The press before the expedition was so focused on the idea of finding some marvelous artifact out on the reef edge, and it's hard to put that aside and concentrate properly on the real work.

Now is the time when it is most essential to keep the faith, keep pushing forward with the plan, lose the desperation, and realize that the expedition has already been wildly successful, and that the final results will be whatever they are.

Even the most experienced people are not totally immune to this syndrome. The plan from the beginning has always been to completely excavate the hole at the Seven site to be sure it did not contain any human bones or teeth. This is painstaking, hard, heavy, nasty work, but essential.

Other work that could be done at the Seven site is to excavate the various "units" – deposits of animal bones and other items which might provide some general clues as to how the site was used. This would be useful information, but not essential.

Unfortunately, both things cannot be done at the same time, due to lack of assets – personnel, screens, and so on. Some would like to take the broader approach, and it is Ric's job to maintain the focus.

Another change that has come over the group is a sudden lack of enthusiasm for camping out on the island. After the Crab Experience a number of people suddenly found it slightly less inviting to sprawl for the night on the beach and bask in the moon light. Further acquaintance with Aukaraima North reinforces that lesson. Kar was playing with a four inch long centipede that Ric says is the ugliest thing he ever saw, and Jim hightailed it out of the scaevola after encountering a spider with a body about 3 inches across. He didn't wait around to see



Spiders abound on Niku, and their webs glistening in the morning are truly lovely... until you walk into one. TIGHAR photo by P. Thrasher, 1991.

what it might eat, fearing that he might be on the menu himself. Add to these lovely creatures the crabs and the rats, and sleeping at sea seems truly desirable, no matter how one feels about boats.

Yesterday the Dive team worked in the lagoon off Taraia point (opposite the mouth of Tatiman Passage; see map previous page).

Ric and Bill took metal detectors and worked the lagoon shore just off the the village at Club Fred (see yesterday's report). They found village-related stuff there – bits of this and that, a Jeep tire, that sort of thing, out to about 20 meters off shore. After that, there was nothing until about 50 meters off shore, when they started finding big chunks of rusty iron, obviously *Norwich City* debris. These chunks were buried fairly deep, and required two people to excavate: one to dig with mask and snorkel, and one to chase away a five foot shark who insisted on participating in the work.

He had brought two or three of his younger brothers along, and it was like trying to work with a street gang hanging around and snickering at you. At one point the big one had Bill treed on a coral head. And you never have a live-feed camera when you need one...



A black tip reef shark, which abound in the Niku lagoon. Up to five feet long. they are usually harmless. Usually.

Today the Dive team will abandon their visual search from manta boards, which wasn't working very well due to lack of visibility, and will start doing metal detector sweeps, hoping to pick up the debris trail. They will work in the area more than 50 meters off shore – beyond the depth Ric and Bill could work – and around the coral heads.

John and Van will install the *Norwich City* plaque while Ric collects tidal information out on the reef near the *Norwich City*. Then Van will rejoin the divers, and John and Ric will work the Taraia scaevola with metal detectors, which promises to be brutal. They will be in sectors WO10, WO11, WP12, and WP13. Everyone else will continue at the Seven site.

Dateline: Nikumaroro, 0530 Saturday, September 15 local time (1230 Thursday, September 14 EDT).

Yesterday John and Van installed the plaque on the *Norwich City* engine. A dedication is planned for later this week.

Ric walked the reef flat from the channel to the *Norwich City* at the same time, taking photographs and measurements for the tide observations we've been doing. The normal high tide, measured on the chunks of reef block sitting on the reef, and on the *Norwich City* remains, is about 1 meter above the reef surface.

The Dive team is switching from the manta boards and visual search, which yielded no results, to metal detector searches along the lagoon shore, tracing the flow patterns and picking up a debris trail. It is evident that material comes through Tatiman Passage, sweeping into the lagoon and around the ends of the channel opening, and works down the lagoon shore. They found a piece of aluminum yesterday, the first found outside the village. While it is small, and too generic to be identified, it does indicate that they are now looking in the right places. It was actually in the channel, about three meters out from the shore, in WI14.

They'll be doing more searching tomorrow in WI15, WH15, WI13, WJ13, WJ12, and WP15. If they can pick up the main debris trail from the *Norwich City*, they will follow it on the assumption that where ship wreckage goes, there too will go Electra debris.

At the Seven site, they plan to finish the hole excavation today. So far nothing has been found, but the unit certainly fits the profile for a place for a skull to be



The remains of the Norwich City are scattered on the reef, with only the anchor and the engine in anything like their original places. Photo courtesy John Clauss 1999.

buried, and no other explanation for it has been found. The other units confirm signs of discreet eating events, sometimes with small campfires, which predate the construction materials found at the site – they are under the construction materials.

Skeet and Tom spent some time yesterday surveying out a swath at the Seven site from the lagoon to the ocean in order to get information for a good cross-section and accurate topography.

The Seven site will probably be wrapped up by Monday, and the team will shift to the village to attempt to match a few artifacts that are suspected of coming from the village to the Seven site.

At this time, they are planning to depart from Niku on Tuesday night.

Dateline: Nikumaroro, 0530 Sunday, September 16 local time (1230 Saturday, September 16 EDT).

As a former cavalry officer, Ric is given to using cavalry expressions for everyday activities. So when he reported to me this morning that yesterday the divers were dismounted and fighting on foot, I knew what he meant.

They were in the water, but not diving. Instead, with the aid of two of the Seven site gang, they were searching along the shore line with metal detectors, out to about 50 meters – as far as wading /snorkeling will take you. They were working Taraia point and the bay to the north and west, from WP15 to WM11.

The farther north and west they went, the less they found of any kind of debris. Apparently that bay just doesn't collect stuff. So today they will skip the rest of the bay and begin work at WJ13, which is the north shore of Tatiman passage, and work along there.

Meanwhile, Walt and Andrew will go around to WQ15 and WR14 and begin metal detector work there.

At the Seven site, the team secured the hole. They were still getting fish and bird bones at 1.5 meters. Possibly that layer is prehistoric (prior to 1880, that is). They placed a tarp at the bottom of the hole, then a layer of

aluminum cans (so as to find it easily another time with a metal detector); then filled the hole in with coral rubble to obscure its outline to the casual observer. Some small artifacts have been found that are not easy to describe, and may be identifiable; we will be posting photographs soon after the team returns to start the identification process.

Elsewhere in the Seven site they mapped and recorded two clam deposits. In each there were the remains of exactly 15 clams. In order to find out where the clams came from, the lagoon shore was walked and examined. No live clam beds are in evidence now, but a dead clam bed was discovered, about two meters in diameter, near the shore. In the 1938 photograph, there is a clear trail leading directly from the Seven site to the area of this clam bed.

During the excavation of the "food units" – places where fish and bird bones were found – Skeet found something rather odd. In 1996 we found some material that was like a combination of tarpaper and shingling, greenish with a rough surface. We assumed (oh, that word!) that it was a relic of the village and Gallagher's

search. Skeet found a piece of that material, folded in half like a sandwich, with a “filling” of something softer, like padding. Hard to tell what the filling was, perhaps felt or some sort of moss type stuff. Most of the green scratchy layer was gone. This was found some distance



from the other deposit of the “roofing” material. The item reminded people of a make-shift shoe. We may need to re-evaluate the assumption that the construction type materials (the roofing, the screen) necessarily post-dates the castaway. There is a chance that the construction materials, rather than being left over from the initial bone search, are actually salvaged from the Arundel coconut plantings – ca. 1890.

Today they were planning to wrap up the Seven site. Tomorrow, the plan is to take a look at the “European house” found on Niku IIIIP, which is from the Arundel period, and the village as well, and see if any of the materials found at the Seven site can be matched.

The “tarpaper” roofing material. This batch appeared to still be in its original rolled-up form.

Dateline: Nikumaroro, 0530 Monday, September 17 local time (1230 Sunday, September 16 EDT).

The home stretch. Everyone is really tired, but holding up all right. The only real injury has been to one of the crew, who cut his hand fishing. Jim stitched it up and it’s healing fine.

It was another long hot day at the Seven site. They are finding more animal and bird bone deposits, and more small camp/cooking fires, but not very many human artifacts. In a way this is encouraging. The bits of fashioned glass and so on that were found earlier are not simply parts of bigger things that ended up there somehow, because the rest of the bigger things haven’t been found. The inference can therefore be drawn that these are utilitarian objects, beachcombed and perhaps made into tools by a castaway, rather than simply being the casual detritus of storms.

Another batch of the roofing material was found grown in among/rooted into a tree root system. More was found about three meters away. Because it had been in the sun it was almost dust, but the outline and the remnants were visible.

The Waders (formerly the Divers) covered the areas

mentioned in yesterday’s report with no meaningful results – no airplane-esque stuff.

Today they will dedicate the *Norwich City* plaque around 10 a.m. – that’s in sector WB09. Then they will go to take a close look at the Arundel structures in WE11 to see if any of the construction type materials found at the Seven site can be matched to items there.

Additionally, they will be filling in the hole left by the excavation of Grave 3, which turned out not to be a grave.

Tonight, John, Andrew and Kar will stay overnight at the Seven site to do U.V. screening. Jim has rigged some very nice hammocks, which should make things much more comfortable... or at least a little less creepy-crawly.

Tomorrow, everything will come off the Seven site and the process of withdrawal will commence. The last day will be spent in the village in an effort to match any artifacts from the Seven site that might provide clues as to layers.

Dateline: Nikumaroro, 0530 Tuesday, September 18 local time (1230 Monday, September 17 EDT).

Slowly the expedition is winding down. Last minute tasks and housekeeping are jostling elbows with final excavation work.

Yesterday the gang spent a lot of time out on the reef flat at a very low tide, taking advantage of the opportunity to examine the sad remains of *Norwich City*. Lots of photographs were taken, and the plaque looks great. A brief on-shore ceremony was held in memory of those who died there, and a verse of the *Navy Hymn* was sung. A tape of an appropriate reading and prayer by a Muslim cleric was played in honor of the six Arab firemen who perished in the wreck.

*Eternal Father, strong to save
Whose arm doth bind the restless wave,
Who bids’t the mighty ocean deep
Its own appointed limits keep,
O hear us when we cry to thee
For those in peril on the sea.*

The entire team turned to to fill the (as it turned out) non-grave site excavation. Backbreaking, and unbelievably hot, people just took turns with shovels and gritted their way through it. Picking up and putting away is the most difficult part of the expedition, but putting away a “dead” unit is the worst of all. Ric commented that the scene resembled some of the chain gang scenes in “Oh Brother, Where Art Thou?” and immediately sparked a song-fest, which made the time go much faster.



The pile of fill from the grave excavation in 1999. The pile this year was just as big. Photo courtesy Skeet Gifford.

The next order of business was a walking tour of the “European house site.” A lot of debate has been generated by this excursion, with widely varying opinions as to dating the structures. One thing is clear: this was a heavily used site and there are a lot of layers to understand before being sure of dating anything there. One nail was recovered from a board. Gary Quigg is a museum professional working with a living history museum, and he thought he recognized the nail as 19th century. This should be readily identifiable stateside. Samples of copper screening and corrugated metal were also collected to compare to artifacts found at the Seven site.

Last night Kar, John, Andrew, and Mark stayed ashore to do ultraviolet screening at the Seven site. Their activities will be reported on tomorrow, since no one has seen them yet.

Today, everyone but Van and Walt will be finishing up at the Seven site, digging one or two more units and making sure everything is picked up and put away. Van and Walt will be securing dive gear and packing aquatic things for shipment. Ric will be trying to trace the 1938 trail from the site to the clam beds with the help of the photographs. All supplies and equipment must be out of the site by the end of the day today, as the Naiad leaves the lagoon on the high tide.

Tonight is the traditional banquet and sing-sing thrown by the crew for the team aboard *Nai'a*. The buffet is wonderful and the music is great, and a good time is had by all at these events. Spirits are still good; the grave-filling-in songfest lasted into the evening last night, and the cook marched out when they quieted down and said, “No music, no supper!” so they had to start up again.

Tomorrow, everyone will be looking around the village for any items which might be matched to things at the Seven site in order to try and establish dates/times for artifacts.

Dateline: Nikumaroro, 0530 Wednesday, September 19 local time (1230 Tuesday, September 18 EDT).

Yesterday the team wrapped up work at the Seven site, almost literally – tarps were put out and weighted down over the excavated units to discourage scaevola growth and protect the site, as much as is practical, from the worst effects of weather. That site is now shut down.

John took a small team down to the Loran station and found the site of the “headquarters” quonset hut, where they looked for green roofing material and didn’t find any. We still don’t know where that stuff came from.

Andrew, Kar and Ric tried to trace the trail from the Seven site to the clam beds. It was an interesting experience; going out was rough, lots of scaevola chopping and they came out 40 meters off goal. But going back, they struck a finger of higher ground where the buka forest was still intact, and found it led directly into the Seven site. A trail there made all kinds of sense.

Last night, the crew threw a party for the team. It was, by all accounts, an incredible experience. To begin with, there was an impromptu sea mammals show – the resident dolphin pod (who seem to find our activities fascinating) decided to put on an aquabatic display that would rival that of any of the aquatic theme parks. The entire crew and team hung over the rails, cheering and applauding, and the dolphins showed off for fifteen minutes.



When the group retired to the salon, a ceremony was held honoring those who died in last week’s attacks. After a minute of silence, an American flag and a Fijian flag, folded into triangles, were held high as first the U.S. national anthem and then the Fijian national anthem were sung. Simple, but very moving, Ric describes the singing as “inspired.”

Fritz then addressed the group in highly complimentary terms, speaking of how easy they had been to work and live with for the trip, and hoping to work with the team again. A crew spokesman echoed these sentiments on behalf of the staff. Then the crew chaplain said a grace for a safe passage home and an end to terror.

A huge spread of traditional Fijian foods was laid on and everyone ate a lot and drank kava and sang and played their instruments and a wonderful time was had by all.

Today the team will be working in the village in an attempt to match any of the building materials found

at the Seven site to things that were used during the colonial period. Points of particular interest will be the radio shack and rest house at WH15, the cistern at WH16, and the new village at WH20. They leave tonight with last light.

Dateline: At sea, 1330 Thursday, September 20 local time (2030 Wednesday, September 19 EDT).

It's like déjà vu all over again ... Storm at sea 1997, photo courtesy John Clauss.

No real report on the last day at the island, because as soon as they left they ran into heavy seas and driving rain squalls. Ric called from the foredeck, drenched, hanging onto equipment to keep from being tossed around, and we kept losing the connection because the phone was getting wet.

So we decided that discretion was the better part, and he'll call again tonight and see if we can get the last bit of news.



Dateline: Pago Pago, American Samoa, 1400 Saturday, September 22 local time (2100 EDT).

After three and a half days at sea, *Nai'a* turned the corner into the harbor at Pago Pago about 1 p.m. local time on Friday and was finally still for the first time since leaving Nikumaroro. While the passage did not rival that of 1997, when forty foot seas were the order of the day, it was very rough indeed, and everyone was heartily glad to go ashore. Watching water tower above one's head is not really so much fun.



A rough passage for people and ships. Photo courtesy John Clauss, 1997.

The last day on the island was spent in the village, by both necessity and plan. Both boats were out of the lagoon, which meant no intra-island transportation; and the team needed to look at the village carefully to try to match artifacts and materials found at the Seven site.

Remember that the Seven site is multi-layered. There is possibly some prehistoric activity; certainly castaway activity; certainly Gilbertese/Gallagher activity; certainly

Coast Guard activity... and so on. In order to understand the layers and units correctly, it's important to know, if possible, what came from where and even how.

Things found in the village that appear to match artifacts or items found at the Seven site are:

Fine mesh copper screening.

The screening found in the village is very similar to that found at the Seven site. It is not, however, in context — it is simply lying about, not part of anything. Possible uses for screening in the village would be to cover windows; to cover water barrels; in cooking; and so on. However, because none of these uses were seen in the village, we can't

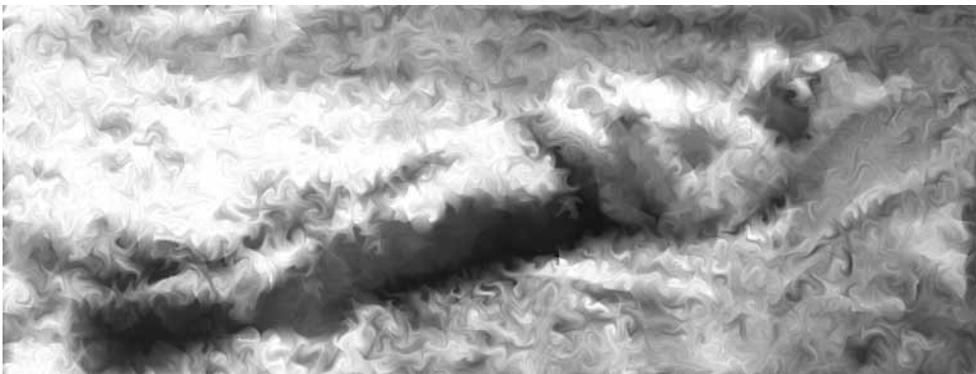


know for sure that it is actually part of the village life. It may be that there is some cache of screening somewhere on the island that both the castaway and the villagers found and made use of. There is some copper screening at the Loran station, but it is much heavier gauge.

Asbestos sheeting.

This is incorporated into a number of buildings in the village, including the cistern which was one of the earliest structures on the island. It also was used to make shutters for the cookhouse. We think we can say that it is likely that the search party brought some of this to the Seven site for whatever reason.

After working in and around the village for several hours, the team sat down to eat some lunch near Gallagher's grave, where there were still some palm fronds scattered about from the memorial service. One by one they laid down, "just for a moment," and about an hour later decided that the expedition was over. Everyone packed up, called the ship's boat, and went aboard, the adrenalin rush thoroughly spent.



On Saturday, the FedEx folks came over with a truck and loaded up everything to go to their warehouse. Today the team was going to spend the day packing everything – EVERYTHING – for shipment home, leaving everyone, if possibly, with only one or two smallish



Shingle stuff photographed in situ at the Seven site, 1996.

Green roofing material.

This stuff is an old fashioned kind of roofing material that incorporates tarpaper and shingling into one unit, and comes in rolls. It's the sort of thing that might be used to roof a shed. Two pieces of it were found in the village, nailed to the side of the radio shack... which was built in the early 1950s. There is no evidence that more of it was nailed to the shed and is now gone. Quite a lot was found at the Seven site. Definitely one of those Nikumaroro mysteries.

Corrugated metal sheeting.

There is quite a bit of this around the village; it was a popular roofing material. It is found both in the lighter and the heavier gauge.



Corrugated metal photographed in situ at the Seven site, 1996.

Meltdown on the last day... a palmfrond and the world turns into a blur.

carryons with which to tackle the airlines. The flight out is at 2340 local time tonight, heading for Honolulu. If all goes well, everyone will be home either Tuesday or Wednesday, depending on their individual travel arrangements.



A just-off-the-plane, still-jetlagged impression of where The Earhart Project stands now that Niku IIII is in the record books.



Niku IIII was the most successful Earhart expedition ever conducted. Whether or not it has produced the proverbial smoking gun remains to be seen, but there is no question that we have now identified and begun the clearing and excavation of a bona-fide archaeological site on Nikumaroro that is producing artifacts which have the potential of conclusively solving the Earhart mystery.

Going into this expedition, thirteen years and five expeditions had revealed archival, photographic and artifactual evidence that strongly suggested that the island was where Earhart and Noonan met their fate, but the paramount question has always been, "Yes, but where?" A few airplane parts found in the village may well be from the Electra but were clearly brought there from somewhere else. The grave and shoe parts on Aukeraime looked promising for a time but the grave proved to be that of an infant, the shoe ultimately didn't fit, and a detailed look at that site revealed nothing but a campfire containing a 1970s vintage can label.

By contrast, the Seven Site has proven to be rich in a variety of artifacts. Like most archaeological sites it bears evidence of layers of activity over time. Clearly the Gilbertese colonists and the U.S. Coast Guardsmen were there at various times and left their respective debris behind, but there are also definite indications of an earlier presence at the site – indications that are consistent with the presence and residence of a person or persons who fashioned primitive tools from 20th century objects and subsisted inexpertly on local food sources (for example, bashing rather than cutting giant clams open). We know, of course, that a castway or castaways died on the island and was ultimately written off by British authorities as being "some unfortunate native." However, if initial indications from the the Niku IIII excavations at the Seven Site are borne out by subsequent research, the castaway or castaways exhibited "Western" rather than "native" behavior. If, in fact, any of the bits of lightweight metal technology recovered from the site prove to be from prewar aviation-related items there will be a distinct scent of gunsmoke in the air.

In addition to the very positive results at the Seven Site, the Niku IIII expedition answered several other important questions:

- Do either of the grave-like features (Grave 3 and Grave 4) on the Nutiran shore hold human remains that match anecdotal accounts of bones found in that area? No.
- Is the Triangle Site on the southern shore of Aukeraime a reasonable candidate as the place where the castway's bones were found in 1940? No.
- Is the anomaly in the satellite photo the wreckage seen by Emily Sikuli? No.
- Is there aircraft wreckage in the canyons or on the ledge off the west end of the island? No.
- Is there shipwreck and/or aircraft debris visible on the lagoon bottom just inside the main ocean passage? No.
- Does metal debris from the reef wash into the lagoon and around the corners of the passage to lie buried under sand and coral? Yes.

Some vital questions remain unanswered:

- Where is all the Norwich City debris that must have washed into the lagoon? Buried in the lagoon bottom? Airplane debris from the reef should logically follow the same or similar pattern.
- We've only scratched the surface at the Seven Site. What lies buried beneath the tangles of scaevola we haven't yet cleared?

Field work is data collection. In a search operation sometimes (read usually) the data are entirely negative – that is, you only establish where something isn't. Niku IIII produced plenty of that kind of information but it also produced that rarest of commodities: it established where something is. We have recovered some of it and in the coming weeks and months we'll need a lot of help to discover the significance of what we have brought back.

Once we've had a chance to do some high-quality photography under controlled conditions we'll be mounting an Artifact Identification section on the TIGHAR website and publishing it in TIGHAR Tracks. We'll be seeking out all kinds of experts in specialized fields and commissioning a wide variety of studies and laboratory tests. It will be time consuming and it will be expensive. We will need your help; please use the donation card enclosed to send in your contribution to this important work.

For my part, I want to thank you all for making this expedition possible. All of us out there felt your presence with us and you made us strong. I want to thank the team for their unflagging dedication, courage and hard, hard work. They gathered a tremendous amount of information with a

lightness and good humor that belied the trying and often dangerous conditions under which they labored. They didn't break any equipment and nobody got hurt. They made it look easy – and it isn't.

I want to thank the captain and crew of the good ship *Nai'a*. They were as much a part of the TIGHAR team as any of us and they went far beyond their contractual obligations to give us the support that made our success achievable. There are many, many others I want to, and will, thank in due course but for now, let me say again how delighted I am to be back home with so much new information to digest, analyze, and interpret. In many ways the most exciting part of the expedition is just beginning.

Ric