Archaeology and Oral History of the Japanese Lighthouse at Yap

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The archaeological remains of the Japanese lighthouse at Dalap, in Lebinaw Village, Gagil Municipality, Yap State, Federated States of Micronesia, are described and interpreted. Yapese lighthouse builders were interviewed, and details of their construction efforts and their wartime recollections and experiences are presented. A contemporary Yapese dance chant, which includes references to the American bombing of the lighthouse, is included as part of the oral history of this traumatic time in Yap.

Although the physical remains of World War II in Micronesia are being documented by archaeologists (see, for example, Bodner & Welch, 1992; Carucci, 1993; Christiansen, 1994; Denfeld, 1988), and some of these sites are promoted as tourist attractions, the wartime experiences of the Islanders themselves have received little outside attention. We attempted to redress this imbalance during our 1992 study of the Japanese lighthouse site at Dalap, in Lebinaw Village, Gagil Municipality, Yap State, Federated States of Micronesia (Hunter-Anderson & Moore, 1992; see Figures 1 and 2).[1] Built by local labor on a hilltop overlooking an eastern reef entrance, Yap's lighthouse is one of several erected under the direction of the Japanese during their tenure in Micronesia from 1914 to 1944 (for historical details of this time, see Peattie, 1988). It is unusual and, perhaps, unique, in having

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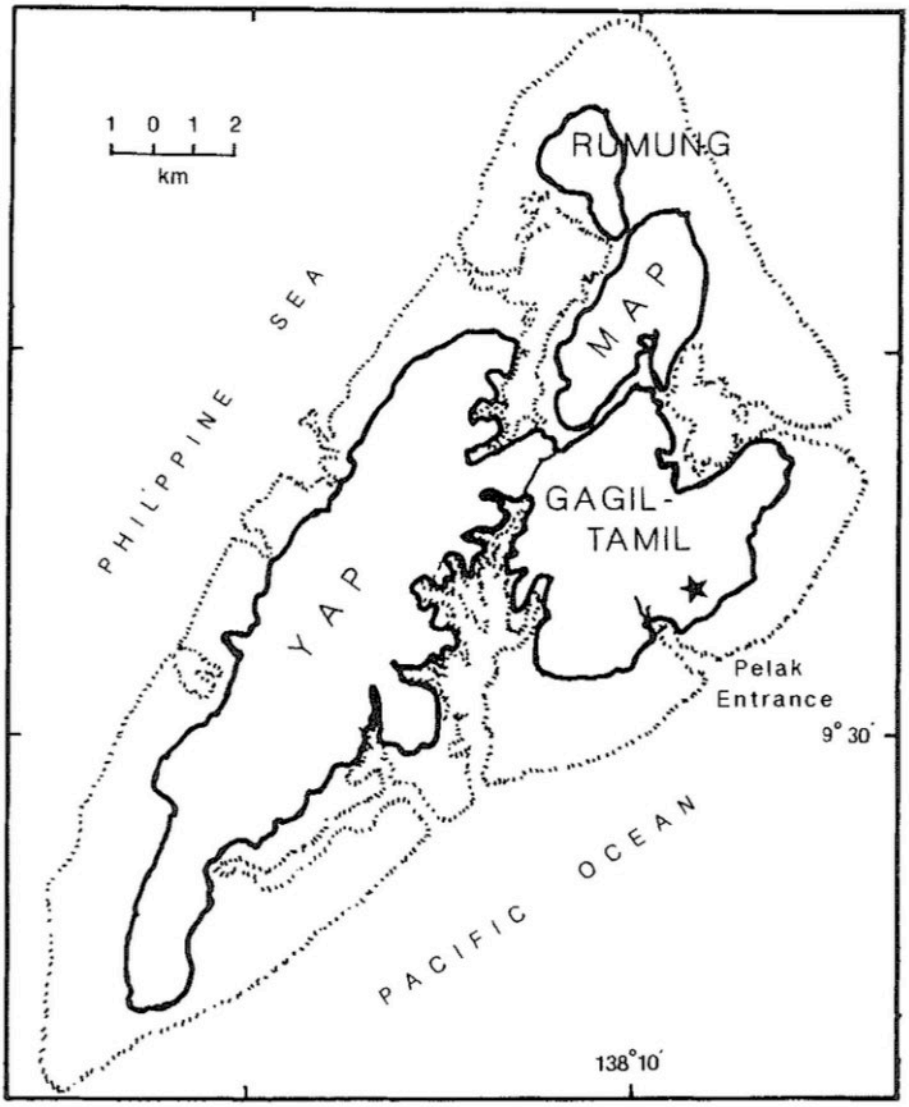

Figure 1. *The Yap Islands; star indicates location of Japanese Lighthouse Project Area (adapted from Johnson, Alvis, & Hetzler, 1960, p. 53).*

been purposefully destroyed—by the Japanese themselves—before it was operational.

Our objective here is to raise outside awareness of this midcentury

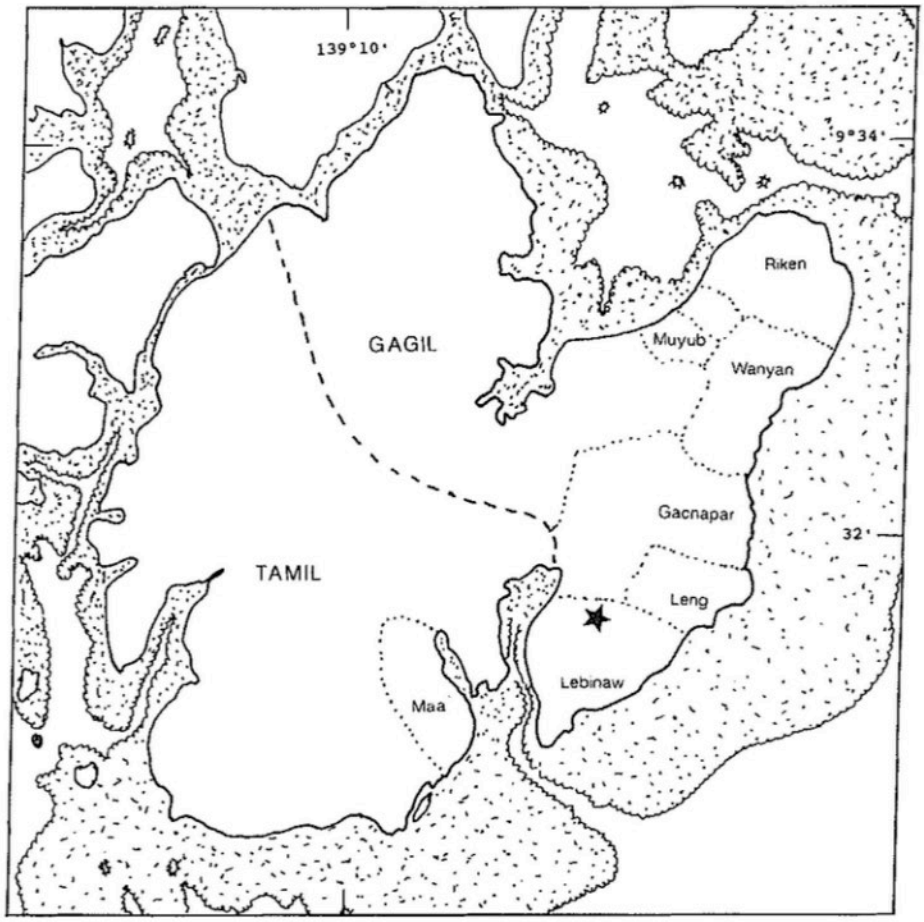

Figure 2. *Gagil-Tomil Island, villages of Gachapar, Lebinaw, Leng, Riken, Wanyan; star indicates Japanese Lighthouse Project Area.*

episode in modern Yapese history by summarizing our archaeological findings and presenting some of the oral history of the Dalap lighthouse site, including a contemporary Yapese dance chant that mentions the American bombing of the lighthouse and conveys some of the horror of the war in this small island. Exposure of such events as the building of the lighthouse, and their consequences, through archaeological documentation, oral history, dance, and other means, not only increases public awareness of the past, but also, exposure can highlight future possibilities. The owners are considering a plan to develop the lighthouse site into a tourist attraction.[2]

JAPANESE-ERA LIGHTHOUSES IN MICRONESIA

To our knowledge, no survey of Japanese-era lighthouses in Micronesia has been conducted, and so their total number and physical condition remain uncertain. We know of at least six in addition to the lighthouse at Dalap: at Saipan in the Commonwealth of the Northern Marianas; at Sapuk, Weno (formerly Moen) Island in Chuuk Lagoon; at Alei Islet, Polowat Atoll, in Chuuk State; and at the islands of Babeldaob, Angaur, and Urukthapel in the Republic of Palau. We have visited the lighthouses at Saipan, Polowat, and Weno. Each of these structures is somewhat different from the others in size, orientation, and in other ways, but detailed comparisons have not been undertaken. It is not clear whether the Japanese used a modular design formula or followed similar design principles determined by the limited functions of these facilities.

Construction dates and details about the design and construction of Japanese lighthouses in Micronesia were not located in our library searches; military or civil documents in Japanese archives may eventually yield such information. A prewar list of lighthouses *(Annual Report,* 1937) indicates there were only two lighthouses in Micronesia in the late 1930s, one at Tinian and the other at Palau (which Palau island is not specified). We know of no lighthouse remains at Tinian, and apparently the lighthouse at Weno was built well before 1937 (Rock, 1992; T. Rock, personal communication, May 25, 1992), casting doubt on the accuracy of the prewar list. According to Peattie (1988, pp. 253–254), the 1940 Japanese budgets for the islands included large sums of money designated for "lighthouse construction," but whether the monies were spent only for this purpose has been seriously questioned (Wilds, 1955, cited in Peattie, 1988).

HISTORICAL BACKGROUND

In 1914 Japan seized all of the German-held Micronesian islands, including Yap. The seizure was accomplished by Japanese military detachments who were sent to the various island groups. The naval detachment designated to seize Yap arrived on October 14, 1914 (Peattie, 1988, p. 64). Japan immediately began to operate the internationally-used Yap cable station,[3] diverting the Yap–Shanghai cable to the Japanese-held Ryukyu Islands. Thereafter, Americans using the Yap cable had to route their messages to Shanghai and Manila through Japan (Lee, 1939).

In 1919 the League of Nations granted Japan a mandate over Micronesia, and a civilian administrative organization, the South Seas government, was created to administer the islands. Under the South Seas government, six administrative districts were recognized, and a branch government was established at each district. The Yap branch government administered the islands from Pikelot in the east to Ngulu in the west (see map in the front matter of this volume).

Yap's experience under Japanese rule differed from some of the other Micronesian islands. Few Japanese civilians emigrated to Yap, and no homestead or farming land was made available to outsiders. Professionals came to Yap mainly to operate Japanese concerns, such as the branch office of the South Seas government, the cable station, the meteorological laboratory, post office, hospital, agricultural station, and schools. Although small demonstration farms were developed, the Japanese did not alter the landscape for any major enterprise, such as sugarcane plantations (as was done in the Marianas). A mine was opened, but it involved a small area and the operation was short-lived. Even though the Japanese withdrew from the League of Nations in the mid-1930s, the League-sanctioned South Seas government continued to administer the islands until the disruptions of World War II, when the Japanese military took over.

Even prior to Japan's 1941 attacks on Pearl Harbor and Guam, which marked the beginning of US involvement in World War II, the Japanese Navy, not the South Seas government, determined what construction projects were to be implemented in the islands (Peattie, 1988, p. 250). Most of the indirect military construction undertaken prior to 1941 consisted of building or expanding Japanese facilities such as airfields and harbors. Construction continued under the direction of the navy until the autumn of 1943 when Japanese Army detachments arrived in Micronesia and began to fortify the islands (Peattie, 1988, pp. 263–265). In 1944 the number of Japanese military assigned to Yap was estimated to be about 10,000 (The Western Carolines, 1946).

In 1943 the United States mounted aggressive military campaigns against the Japanese-held Micronesian islands in an effort to push west across the Pacific. By December the Americans had gained the Gilberts (now known as Kiribati); by February 1944 they had secured the Marshalls. Although these operations focused primarily on eastern Micronesia, during February and March some air attacks were carried out against Japanese bases and other targets in the western Pacific. In February the Japanese installations on Chuuk were bombed, and from March 30 to April 1,US planes flew

hundreds of raids over Palau and the Western Carolines, including Yap, where the airport was bombed and planes were destroyed on the ground (Denfeld, 1988; Hoyt, 1980, p. 94).

By August 1944 the United States had gained the Mariana Islands and had devised a plan to invade Palau, Yap, and Ulithi Atoll in order to break Japan's line of defense, to link US forces in the north with those in New Hebrides and Australia, and to gain a major fleet anchorage. The plan, known as The Western Carolines Operation, was implemented on September 15 with a landing on Peleliu, Palau (The Western Carolines, 1946). Five days later, the US landing at Ulithi Atoll obtained for the navy the safe anchorage needed for the supply ships of the Seventh Fleet, which was moved forward from the Marshalls. Plans to invade Yap were canceled because by then it had been determined that the remaining Japanese garrisons, including those in the Eastern Carolines, had been isolated and no longer presented a threat. No ground combat between Japanese and American soldiers occurred on Yap during World War II; however, Yap-based Japanese planes are credited with making a few attacks on US ships anchored in Ulithi lagoon.[4]

The Dalap lighthouse site was still intact in May 1944, as shown in an aerial photo[5] taken at that time from a US plane. It appears that the purposeful demolition of the lighthouse occurred after the American bombing raids on Yap, which began in July and continued into September.

THE DALAP LIGHTHOUSE ARCHAEOLOGICAL SITE

Methods

Before the lighthouse site could be mapped and photographed, it was necessary to clear by hand the thickly overgrown site with machetes, axes, and saws. Major site clearing took 3 days with an eight-person crew, and additional clearing was done as necessary during the course of field documentation (see Plate 1).

Plan-view drawings of the platform and of the various concrete structures built upon it were made in the field using Brunton and Silva compasses, tapes, levels, and rules. Baselines were set up along both axes of the platform, and several of the measurements were taken at right angles from these. Other points were plotted using azimuths and taped distances. Messrs. Figirmad and Waifathal assisted with these tasks. Color slides and black-and-

Plate 1. *Mr. Garong and Mr. Benag cutting the vegetation away from the generator and storage structure.*

white photographs were taken of the features and artifacts. All artifacts, except for pieces of shrapnel and most of the glass bottles, were removed. The artifacts were inventoried, described, and deposited with the Yap Historic Preservation Office.

Findings

The lighthouse complex was built on an artificially truncated hilltop, said to have been the highest hill in Gagil. The complex consists of a platform, the ruins of a lighthouse and office building, a generator and storage building, and a water catchment and washing area.

The level platform, which received bomb damage during the war, measures about 50 m long (N/S) by 40 m wide. The exterior slopes of the platform had been stabilized by facing them with courses of stacked rock within a concrete retaining wall. The entrance to the platform is located near the center of the north side. Two concrete pillars separated by a

distance of 3.6 m mark either side of the entrance. Yapese informants referred to them as *mong*, the Japanese word for gate (see Plate 2). At the northwest corner of the platform a series of two or three steps (the original configuration is too damaged to tell for certain) leads from the original access road to the platform. The southwest corner of the platform is destroyed, and five fairly large depressions (bomb holes) occur at various places on the platform surface.

The number of rock courses and the height of the retaining walls vary around the edges of the platform. This variation is due in part to the original configuration of the hill. For example, there is no, or very little, slope at

Plate 2. *The north side of the west entrance pillar. The photo rod is 50 cm long.*

the north and northwest sides of the platform. In contrast, its southwest, south, and southeast sides have markedly steep slopes on which 10 or more courses of stacked rock face the platform, creating its exterior surface above a basal concrete wall.

The platform provided a level surface and firm foundation for the lighthouse and its associated structures. Originally, the structures built on the platform included a lighthouse tower that joined an office building on one side and a stairs-entrance on the other, a generator and storage building, and an area for water catchment, washing, and drainage. All of the structures were built of concrete reinforced with steel rebar. Because of American strafing, bombing, and shelling, and Japanese dynamiting, the structures are partially damaged or entirely destroyed.

The lighthouse tower was toppled during the war, according to our informants, by the Japanese (Plate 3). The remains of the tower lie to the south of its foundation and entrance stairs. The top of the tower is missing; thus the original lighthouse configuration cannot be determined from the remains. However, the tower had two entrances, on opposite sides of its base; one doorway was located on the raised exterior porch and the other

Plate 3. *Base of the toppled lighthouse tower, foundation, and northern staircase.*

provided access to the office building through a hallway. There were two windows on opposite sides of the tower shaft. A series of concrete spiral steps on the inside of the tower rose from its base to its top. The steps encircled a central, hollow shaft.

Portions of the circular foundation for the tower are intact. A double set of curved stairs, each with eight steps, ascends to the elevated porch and the west entrance. Two shallow, circular, concrete basins, each with an outer diameter of 1.8 m, are located on the ground between the stairs. Yapese informants told us that these circular features were footbaths that people used prior to climbing the stairs to the lighthouse entrance.

The remains and rubble of the office building are located on the east side of the lighthouse tower, and it appears that a short hall, or passage, connected the office with the tower. The office building is totally destroyed, and meager information about its original configuration can be gained from the concrete rubble.

The concrete generator and storage building is located on the northwest portion of the platform. Although damaged by shelling and strafing, its walls and roof are intact (Plate 4). The rectangular building measures 6.3 m by

Plate 4. *Front view of the generator and storage structure.*

4.3 m. Two windows and a door are located on its east side, and an interior wall divides the space into two rooms. The floors are concrete, and raised curbs on the floors set off rectangular spaces adjacent to the walls. The interior sides of the outer walls have impressions in the concrete for a wooden framework that would have been fastened to the walls to support a floor-to-ceiling shelving system. One of the boards is still attached to the wall. Yapese informants recalled that this building was never completed and that no generator was installed.

The water catchment, washing area, and drain are located on the southwest portion of the platform. These concrete structures are intact. The catchment is set into the ground and is 2.5 m long, 1.80 m wide, and 1.75 m deep. Its interior space is divided into two tanks. The washing area, located 1.68 m south of the catchment, consists of two tanks set into the ground on either side of a shallow basin, or stall. The concrete floor of the rectangular stall rests on the ground. Its exterior dimensions are 2.14 m long by 1.38 m wide. A drain is located on the west side of the stall. The square concrete tanks located on either end of the stall are also set into the ground. The design of the system for using these tanks and the concrete catchment is not apparent. The Yapese indicated that construction in this portion of the site was not completed.

A few artifacts were found on the surface of the lighthouse complex. These consist of pieces of metal hardware, a metal tool, Japanese glass bottles and bottle fragments, red clay bricks, and a cache of Yapese cultural items such as a boar's tusk, a pearl-shell valuable, and a cowrie shell strung with wire, together with a whetstone and a flashlight bulb. These items were turned over to the Yap State Historic Preservation Office. We observed no remnants of floor tiles nor office furnishings, but because considerable plant litter covered the surface of the platform, it is possible that such materials and other artifacts are present but hidden from view.

REMEMBERING DALAP

Now largely obscured by jungle growth and weathered by the tropical sun and rain, the Dalap lighthouse site represents a harsh time in Yap when the island people were drawn into a fierce international conflict through none of their own doing. The Yapese commemorate no World War II events, but they have preserved memories of this time in a dance and chant performed for tourists. The Yapese-composed translation into English of the Yapese

dance chant is presented intact because it is a primary ethnographic document that powerfully conveys its meanings, regardless of grammatical and spelling errors. In doing so, we respect the Yapese effort to impart their wartime experiences to us in their own voice(s), whether in Yapese or in English.[6] The following text of the chant is taken from a brochure provided by the Manta Ray Hotel in Yap.

> This song is for a dance composed by the elders and performed by the youths of Maa Village, in Tamil Municipality. This song is about the World War II between the Japanese and American soldiers, in which a lot of Yapese elders are still treasured today.
>
> The song and dance are not only for entertainment purposes, but also for the promotion of the Yapese cultural heritage identities as well. So please, relax and enjoy yourself.

Kammagar

1. On a bright clear morning
   The day war stroke
   The beauty of the Island of Yap.
   American planes started dropping bombs at Colonia and
   The lighthouse at Dalap. No one was awared
   Or even prepared for such a war.

2. When seen the American planes dropping
   Bombs at Colonia and the lighthouse (Dalap),
   Everyone assumed that Japanese was just
   Drilled for a possible combat.

3. When seen the American flags on the wings of
   The planes, everyone was astonishingly
   Certain the war was realistic, with distress
   And dismay everyone started rushing into the
   Valleys, taro patches, and some to the water
   For the war was extremely furious.

4. On the morning of the next day before anyone
   Could prepare for the morning feast, the skies

Began to roar with heavy smokes and
Lightening of the machine gun barrels.
Everyone dodged and some stumbled as they
Seeked a safe place to hide. When it was
Cleared, most of the belongings were
Destroyed, including cooking pots which made
It impossible for the next day's routined.

5. One of the American plane was seen coming
Down ablazed, was so frightened and stumbled
Around without hopes of being alived.

6. When gained consciousnes, there was no food
Left anywhere. Everyone was starving to death.

One Person Sing *(Gasig)*

Excuse me, I'm going to express our sympathy to our parents for all the adversity they had gone through during the war.

1. Thanks to Mr. Bill Acker and Mr. Jesse Faimau
For their presence and the arrangement they
Made and we are very proud.

2. Thanks to all the tourists who came all over
The world here to praise us. We all
Appreciate you being here. We are very proud,
We are very proud . . . .

Interviews

At the beginning of the project, interviews with Yapese men who worked on the Dalap lighthouse construction project were conducted in the Manegil *faluw* (men's house) on the beach in Lebinaw Village. Later, as the vegetation was cleared and the edges and walls of the structures began to emerge at the lighthouse site, we talked with some of these men about their work experiences at Dalap. Our informants live in Lebinaw and Leng Villages, and they ranged in age from 63 to 78. Most had directly participated in building the lighthouse, performing a variety of tasks. One man was too young to work at the time, but he recalled bringing lunch to his father, who was working at the job site.

We found that questions pertaining to the lighthouse inspired answers that also pertained to other wartime experiences and events in Yap. Because these experiences provide often neglected local contexts for global historic events such as World War II, we have synthesized much of this material here.

The Yapese said that work parties were organized by the *doboka,* the Japanese organization responsible for road construction and concrete work, and that such labor gangs of Yapese and Carolinians worked on doboka projects throughout Yap during the war. Men, women, and children were pressed into service on major construction projects such as the two airports, one of which was built in southern Yap and was used during and after the war. The other airport project, never completed, was located on Gagil-Tamil Island, at Madalay Village.

Another forced labor project was the sweet-potato gardens in southern Yap, run by the Japanese agricultural brigade, *kaikontai,* called by the Yapese *kaikanchi.* Women and children were made to work on this project to produce food for the Japanese.

Prior to the war, the Yapese had worked on several other Japanese projects, such as the iron mine in Gachapar. There was a Yapese song about this project, which was abandoned by the mid-1930s. At the time of its construction, no songs were composed about the lighthouse; the informants explained that everyone was too tired to create a song about it.

It is probable that the lighthouse construction at Dalap began in 1940 or 1941. Yapese informants told us that the project went on for 3 years and was not finished when it became a target for repeated American air strikes in 1944.

The lighthouse project was considered the largest and most difficult of all the doboka undertakings in Yap. Only men in their late teens to early middle age worked on it. The typical workday was 7 a.m. to 5 p.m. The laborers were paid the equivalent of US 50 cents, or 2 yen (see Table of Equivalents in Useem, 1946, p. 150) per day until halfway through the project when all work payments ceased. The Yapese said that the Japanese inadequately compensated them for their efforts. Niggardly payment for substantial work was commemorated in the name, "One Cigarette," given a large outrigger canoe constructed by the Yapese for a Japanese policeman stationed in Gachapar Village. All of the master canoe makers *(salap ko muw)* from Gagil worked on the project, and the payment was one cigarette for each of them, hence the name, reminding people of this offense. In Yap,

such a canoe is one of the most valuable items that can be produced using traditional knowledge and materials.

In Muyub Village, Gagil, a Yapese canoe was also built exclusively for the lighthouse project. It was kept in its own *sipal* 'canoe house' at M'lil, near the Manegil faluw in Lebinaw. Throughout the project, the Yapese sailed and maintained the canoe, which was used to transport building materials. This canoe was not named.

Details of the Building Sequence and Associated Tasks

The lighthouse project involved a sequence of building events. First, a pier at the west end of the Lebinaw causeway was constructed; next, the unpaved road leading from this pier up (inland) to the lighthouse site was built. Then the lighthouse complex at Dalap was built over a period of about 3 years. The pier was constructed at the site of a Yapese *chobok* 'piled rock canoe dock' in an area known as Tanebinaw. People were living nearby at the time.

Much of the pier-to-lighthouse road construction was done by Outer Islanders, or Carolinians (people from the coral islands of the Central Carolines), under the supervision of Siling, a Yapese man from Gachapar Village, Gagil. This man spoke the Carolinian language, as well as Yapese and some Japanese, and he supervised the Micronesian labor gangs throughout the project.

The road from the pier to the lighthouse was built across a large taro patch *(mu'ut ni ga');* several plots within the taro patch were destroyed when the roadbed was created by infilling to raise it well above the groundwater level. No compensation was paid to the owners for their loss of productive land. The road construction also disturbed or destroyed an unknown number of stone house and sitting platforms in coastal Lebinaw. Rocks taken from these architectural features were incorporated into the roadbed in lowlying areas.

Most of the rocks and sand for the road and for the lighthouse complex were quarried at Riken Village and brought in a single truck to the construction site. Informants said only one truck was available for the project. All other materials, whether obtained locally or brought by boat, were carried up the road by the laborers. When not in use, the road was chained off at the north end near the north corner of the platform that supported the lighthouse.

Building the Lighthouse

The Yapese informants stated that building the lighthouse complex was the most difficult of all the Japanese construction projects undertaken on Yap.

Over 100 Yapese and Carolinian men were forced to work on the project. The six Japanese employed in the work included one supervisor-project manager, whose name was Furusawa, two masons, two carpenters, and one specialist for the design and building of windows and stairs. The food for these men was supplied from Colonia by sampan.

The lighthouse complex construction involved several kinds of tasks: hauling supplies, such as cement and fuel, from the pier to the building site; felling trees and ripping them into planks, which were then carried to the site; cutting mangrove posts and carrying them to the site; and gathering rocks at Riken Village for truck transport to the site. Other tasks included breaking rocks by hand into gravel to be mixed with cement to make concrete, carrying water by hand to the site to mix the concrete, and mixing and pouring the concrete by hand. Continuously for 2 days before a concrete pour, the Micronesians were assigned to carry water from the Gilaw Spring in Lebinaw in 5-gallon tin containers, two per man, up to the site.

Hardwoods cut for lumber included mangrove trees, mahogany *(Calophyllum inophyllum),* breadfruit *(Artocarpus altilis),* and *lach,* the Yapese name for a tree that is probably an acacia.

The work was extremely difficult, and the Japanese assigned daily work quotas. The workers had to meet the quota before they were finished for the day. For example, if the task was breaking rocks into gravel using hand tools, a certain number of containers per day had to be filled with gravel. Sometimes the men had to work very long days to reach their quotas.

If a worker was sick or too slow, the Japanese punished him severely. Punishments were slaps, punches, kicks, and beatings with a piece of wood. A vividly remembered punishment consisted of the victim kneeling for a long time on crushed shells scattered over a cement platform while enduring a bamboo stalk being pressed by two men against the backs of his knees.

The hill on which the Japanese decided to build the lighthouse complex had been a Yapese burial ground and was considered sacred by the Yapese. However, the Yapese people were not consulted about nor were they compensated for the ultimate destruction of the graves during the ground-leveling process that involved dynamiting, excavating, and filling. It is not known how many graves were destroyed. We observed some intact burial features on the forested slopes of the hill below the complex.

When some of the graves were destroyed during the leveling of the hilltop, the Carolinians removed the bones and gave them to the Yapese, who reburied them elsewhere in the village. In other cases, when no des-

cendants could identify the remains in a grave, no bone recovery and reburial efforts were made.

All construction work was accomplished with hand tools. Picks, shovels, rakes, machetes, and so forth had to be supplied by the Yapese workers, who said they had a difficult time obtaining the tools to perform the required work.

The first task in the construction process was clearing the hill of vegetation, which informants stated was mainly *Pandanus*. The trees were cut and burned. Next came the leveling of the hill. The surface of the platform is now 7 to 10 m lower than the original hilltop. The first 3 m of the hill was removed entirely by hand, using picks and shovels. Below about 3 m, bedrock was encountered. The Japanese used dynamite to break up the bedrock, which was then removed by hand to level the site. The loose rock was stockpiled. Some of it was used to face the slopes of the platform, and some was broken into gravel for the concrete.

Once the platform was constructed, work on the lighthouse and other features began, but the exact date construction began is not known. It is known, however, that not all of the buildings were complete by the time the site was bombed and dynamited in 1944. In part, this facility could not be finished because American bombing elsewhere in Micronesia destroyed the Japanese supply lines to Yap early in 1944.

The lighthouse tower walls were built up in sections, each about 2 m high. The wood planks of the concrete forms were braced with mangrove wood, and then the poured concrete was left to cure in place for 2 to 7 days. Chipping smoothed the ridges left by the wood forms.

According to informants, the lighthouse was plastered inside and outside. The doors were made of local mahogany. Glass windows were installed all around the top of the tower, which was ringed on the outside by a concrete walkway with a handrail. The light in the tower had been installed, but it never functioned because the generator never arrived.

Only the office building, described as beautiful, was completely finished. The windows were glassed and the doors installed, but no furnishings or supplies were placed inside. Some parts of the office building were painted.

The generator and storage building structure was not completed—it lacked doors, windows, and furnishings. Wood shelves had been installed, but were never stocked.

The water catchment and washing area also was not completed. The roof and water channeling system to the catchment tanks were not built.

In addition to the walled earth platform that supported the lighthouse, generator and storage building, office, and water catchment and washing facilities, some structures were built off the platform. Within 20 m of the north end of the platform, a warehouse for storing building supplies was erected, as was a residence and office structure for the project manager, Mr. Furuzawa (a man about 30 years of age who lived there with his wife). These temporary buildings were made of wood and had tin roofs.

We noted, but did not systematically investigate, an area west of the lighthouse platform and road. According to the Yapese, this area contained two houses, each with its own concrete water catchment tank. Entrance to this area was through a gateway marked by two concrete pillars similar to those built at the north entrance to the lighthouse platform. A carpenter's house, also of wood and tin, was built north of the two houses, but it apparently had no catchment tank. The carpenter was in his thirties, but informants could not recall his name.

US Attacks on the Lighthouse Complex

Our informants stated that the first American air raid on Yap came on March 30 or 31, 1944, and it was aimed at three targets: Colonia, the airport in southern Yap Island, and the lighthouse complex. During the strafing and bombing of the lighthouse complex, heavy damage was inflicted on the warehouse and the manager's house off the platform, the two residences west of the road, and the office building. The tower still stood after this attack.

The most intense air attacks occurred in the summer of 1944. Informants said the daily raids failed to topple the tower, although it was a primary target. In frustration the Japanese decided to blow up the tower themselves so that the shelling would cease. No Yapese were present when the lighthouse was destroyed, nor during the bombing raids. They said that one Japanese (whether a soldier or a civilian is not known) died there. When the lighthouse complex and the Gagil-Tamil area, including Lebinaw, were under air attack, the Yapese fled to other villages or hid in the jungle. The terror of this time is reflected in the dance chant quoted above.

In anticipation of enemy landings on the beach, the Japanese dug trenches across the road that led to the pier. After the war the Yapese filled in some of these trenches, and the road between the pier and the village of Lebinaw is still used (Plate 5). There may be other defensive features in the lighthouse area, such as an ammunition cave, which was rumored to have been bulldozed closed by the Americans. An undetermined number of years after the war, a local man lived in the generator and storage building for a short time.

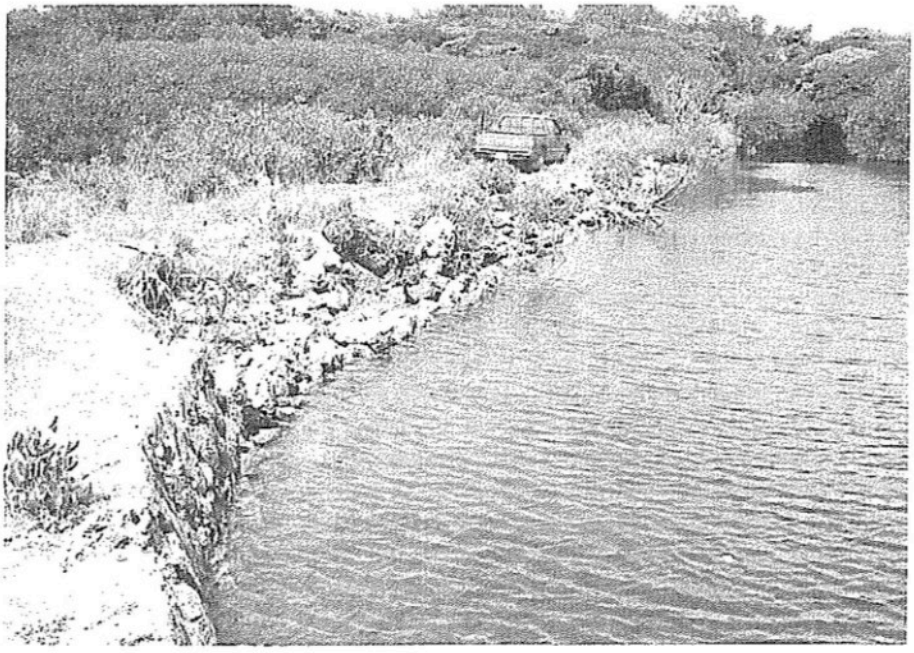

Plate 5. *The causeway joining the east end of the Japanese pier.*

CONCLUSION

In this report on the archaeology and human experiential aspects of a little-known episode in modern Yapese history, we have noted the involuntary nature of the Yapese involvement in building the lighthouse. Though the owners were neither consulted about nor compensated for the use of their land for the lighthouse, this time around they appear to be taking control of the future uses of this special portion of their history. In a fine irony, the Yapese expect that the lighthouse site will be of interest to Japanese tourists, notwithstanding the fact that the Japanese government has not memorialized any World War II events in Yap, as they have done elsewhere in Micronesia.

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Notes

1. The impetus for studying World War II sites and features has come from island historic preservation programs established by the US National Parks Service during the 1970s and from separate congressional grants. The Yap lighthouse study project is an example of the latter. The Yap State Historic Preservation Office obtained support for the project from a specially funded federal program to record and preserve historic lighthouses.

2. Previous archaeological surveys in Yap have noted Japanese-era features (Adams, Campbell, & Ross, 1990; Hunter-Anderson, 1983; Pickering, 1980), but archaeological projects devoted to Yap's historic sites are limited to two "predevelopment reviews" performed in 1980 (Price, 1982a, 1982b). Apparently both sites were being considered for development as properties of historic interest to the Yap government; however, neither has been developed nor has stabilization been attempted.

3. After Spain was defeated in the Spanish-American War, Germany purchased the Carolines, including Yap, from Spain in 1899. The German administration established a vast communications system in the western Pacific, with Yap as the main node linking Shanghai, Guam, and Manado, in Sulawesi, formerly Celebes (Lee, 1939, p. 6; Peattie, 1988, pp. 57–58). For a history of the contentious relations between Japan and the United States over Yap and its cable station, see Peattie (1988, pp. 55–61).

4. This information is taken from page 7 of the "Ulithi" Encyclopedia, WVTY United States Armed Forces Radio Station, Ulithi, Western Carolines, an undated document at the Micronesian Area Research Center, University of Guam.

5. We have been unable to locate a print of this photograph; it can be viewed on microfilm at the Micronesian Area Research Center, University of Guam.

6. Mr. Andrew Kugfas, Yap State Historic Preservation Officer, concurs that the Yapese-composed English translation of the dance chant should be reproduced here "as is." He pointed out that in the composition of Yapese dance chants, poetic license is frequently taken with grammar and syntax to make the words fit the rhythm and music of the dance. An example of this is found in the first stanza.

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