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Cover: Resembling an underwater sunburst, this Crown of Thorns (*Acanthaster planci*) is only one of many breathtaking sights beneath the surface of Guam's waters. Photo by Dan Harding.

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Inspecting the damage caused by months of exposure to the elements, the Puluwatan craftsmen decide what needs to be done. Canoes on Puluwat, as elsewhere in the Carolines, are meticulously cared for, and are never left exposed when not in use.



The obvious and imposing part of Micronesia's physical environment is the ocean. For the people who populate these tiny specks of land, the vast and seemingly endless Pacific has been the dominant force in shaping their cultures. Historically, the ocean provided Micronesians a bountiful supply of food and materials, instilled in them a distinctive identity, and until three hundred years ago, served as a barrier protecting them from the depredations of an often hostile outside world.

To Westerners, the ocean has long been viewed as a powerful enemy, a force to be conquered and put to productive use. But for the adventurous people who originally settled the scattered islands and atolls of Micronesia, and for their offspring, who turned the empty islands into productive homes, the ocean has been a valuable ally, a force to be respected but not feared, a resource to be utilized but not conquered.

Although long serving to keep Micronesia isolated from the rest of the world, the ocean also provided its first settlers a wide highway to their new island homes. Anthropologists, using archeological and linguistic data, have theorized that the islands of Micronesia were populated by people from the Philippines and Indonesia at different times beginning roughly 2,000 years ago. Hearty

*By reviving the faded skills of canoe making, Micronesians are*

## Getting Back on the Ocean's Highway

*by Scott Russell -  
photos by Betsy Robb*



(top) The skilled hands of master navigator Ikefai Onopei twist strands of coconut fiber together to make coir rope. Coir, which ranges in size from fine twine to heavy rope close to an inch in diameter, is used to lash all parts of the canoe together.  
(above) Paddles, rudder, bailers - all necessary for sailing a canoe.



adventurers traveling in sturdy canoes made possible man's first settlements in Micronesia.

Naturally in such a vast marine environment, the canoe was an extremely important tool, serving as the only means of transportation between islands. It also played a very important part in fishing and food gathering. Because of the canoe's importance in ensuring the survival of the islands' populations, the skills of canoe building developed to a very high level of sophistication. Indeed most scholars believe that by the time the Marianas were sighted by European explorers in the 1500s, canoe building and navigational skills had reached a zenith in Micronesia. No where else in all of Oceania were such skills surpassed.

Canoes in Micronesia as elsewhere in Oceania came in a variety of sizes and designs to fulfill a number of specific tasks. Warfare, voyaging, fishing and inter-lagoon

transportation - each had its own specialized canoe. Of all types constructed though, deep water sailing canoes are the ones for which Micronesians are particularly known.

Although local stylistic changes occurred in the different island groups through the centuries, the deep water sailing canoe of Micronesia generally consisted of a single asymmetric hull, usually fashioned from the trunk of a breadfruit tree, counterbalanced by a sturdy outrigger. Unlike the elaborate double-hulled canoes of Polynesia, Micronesians preferred the single hull design. To compensate for the limited cargo areas in the narrow hull, a platform opposite the outrigger was added to store additional supplies and allowed the canoe to undertake long ocean voyages. This "lee" platform was a characteristic unique to Micronesian canoes.

In addition to constructing fine sailing canoes, Micronesians were also highly skilled navigators.

(above) Applying the finishing touches, Idefai dabs the lower hull with traditional paint. Puluwatans use modern paint to decorate the upper hull in red and orange but still prefer their own black paint over commercial brands.

(opposite, top) With a steady hand gained from years of practice, Joash uses an adze to shape a new paddle. Modern adzes are equipped with steel blades, but before metal was introduced to the islands blades were fashioned from the shell of giant clams.

(opposite, below right) Constructed to withstand the constant pounding of the ocean, the canoe's outrigger float is attached to the booms by short Y-shaped struts and a mass of heavy lashing. This assembly, like all other parts is flexible and allows the canoe to absorb the punishment dished out by heavy seas without breaking up.

(opposite, below left) Paramount Chief Manupi Rapung sews individual pandanus mats together to form the sail. Traditionally canoes utilized woven sails but in recent years the cumbersome pandanus has given way to lighter, more efficient Dacron.





Using the wind, stars and familiar sea marks (which often took the form of supernatural fish and other marine animals) navigators were able to guide their canoes to distant landfalls with surprising precision. At the time of European contact, canoe trips between island groups were common. Journals kept by Spanish ship captains note with amazement the extremely exact knowledge navigators had of island groups hundreds of miles distant.

The arrival of the Europeans however, brought about the almost total demise of canoe building and navigation in Micronesia. Although, to a large extent, the Carolines and Marshalls escaped the social changes affected by foreign missionaries, soldiers, and administrators about a hundred years longer than Polynesia, the Marianas were not so lucky. Having the dubious distinction of being the first island group in Micronesia to be administered by a foreign power, the Chamorros of the Marianas unsurprisingly enough, were

the first to lose their skills of canoe building. Early Spanish visitors to Guam wrote enthusiastically of the extremely swift and graceful canoes that fairly danced about their clumsy galleons. However, a hundred years of Spanish enlightenment was more than sufficient to make the surviving Chamorros forget most of their previous maritime skills. All that survives today are a few brief sketches and descriptions of the flying proa.

Most of the other islands and atolls in the Carolines and Marshalls, with the notable exception of Kosrae (which was nearly depopulated by venereal disease by the 1850s, courtesy of American whaling crews,) were able to keep at least portions of their sailing cultures fairly intact until the beginning of the 20th century. Starting in the early 1900s the Germans, and later the Japanese, placed restrictions on inter-island sailing voyages which led appreciably to the decline of deep water canoes, and especially

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(below) With plenty of teamwork, the outrigger platform is carefully placed into position.

(opposite) While young helpers paddle, Lino Olopei tacks Micronesian style by passing the yard and boom to Oiluk during a test sail. Since the outrigger is always kept to windward when underway tacking is accomplished by moving the yard and boom from one side of the canoe to the other.







traditional navigational skills. The final coup de grace to most of the paddling and small sailing canoes was delivered in the 20th century by the American administration, which made outboard engines available to the islands for the first time. As the tempo of life quickened in Micronesia during the sixties, the demand grew for gas powered boats. Trips that had taken a day or more in a canoe could be completed in a matter of hours with an outboard.

Today in most of the islands, canoes, and the skills necessary to construct and sail them, are but rapidly fading memories held by a few aging craftsmen. In the summer of 1978, the Trust Territory Historic Preservation Office organized the restoration of the *Waherak Maihar*, a deep water sailing canoe from Puluwat Atoll that was slowly rotting on Saipan. The canoe was to have participated in Operation Sail during the U.S. Bicentennial celebrations but transportation difficulties left it stranded on Saipan. Seven traditional craftsmen from Puluwat were brought to Saipan to complete repairs. Isolated Puluwat, long famous for its skilled navigators and daring sailors, is one of the few places in Micronesia where traditional maritime skills are still an important part of daily life.

The restoration of the *Waherak Maihar* has sparked considerable interest among Micronesians in reviving the canoe craft. In Palau, the Palau Historical and Cultural Preservation Commission, utilizing a grant from the U.S. Heritage Conservation

and Recreation Service, is currently setting up two schools to pass on the skills necessary to build the *Kabekl*, the traditional Palauan war canoe. The *Kabekl*, a huge paddling canoe carved from a single hardwood tree, once carried warriors to battle during Palau's almost incessant village warfare during the 17th and 18th centuries. They were also used to transport important Rubaks (chiefs) to official affairs of state.

After the Germans ended village warfare in the early 1900s, the *Kabekl* was used for less deadly but no less competitive races between villages. *Kabekl* racing, an important part of life for the competitive Palauans, continued through the Japanese administration. After World War II however, their popularity declined, and the last hull rotted away several decades ago.

The Palau Commission intends to identify older craftsmen, those who in their youth constructed the giant canoes, and have them pass on their skills to younger men. This project has aroused considerable excitement in Palau, and there is talk of reviving a number of other traditional activities associated with the canoes.

The next decade will be critical to the fate of the canoe craft in Micronesia. If projects such as the one in Palau succeed in passing important skills on to the younger generation, and if there continues a strong interest in reviving traditional ways among the islanders, it may still be possible to save one of the most important aspects of Micronesian culture. ■



With repairs completed, a heavily laden *Waherak Maihar* glides gracefully through the calm waters of Saipan's lagoon on its way up to the commercial port. Lacking skilled sailors to sail and maintain her on Saipan, the *Waherak Maihar* is now in semi-permanent drydock at the Saipan International Airport.