

**DRAFT**  
**RECONNAISSANCE SURVEY**  
**SIGNIFICANT NATURAL AREAS AND CULTURAL SITES**  
**ISLAND OF ROTA**  
**COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS**



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**Prepared by the  
National Park Service  
Pacific West Region - Honolulu**

**for the**

**Legislature of the Commonwealth of the Northern Mariana Islands**

**The findings contained in this draft reconnaissance survey should not be construed as representing either the approval or the disapproval of the National Park Service or the Secretary of the Interior.**

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## 1.0 SUMMARY

The Honolulu Office of the Pacific West Region of the National Park Service (NPS) has found the natural and cultural resources present on the island of Rota meet criteria of national significance. These significant resources are presently not adequately represented in the national park system. In their present condition, configuration and extent, these resources appear to be feasible as potential additions to the national park system.

Rota was the only major island in the Mariana Archipelago to be spared the destruction and large scale land use changes brought about by World War II and its aftermath. As a consequence, the greatest extent and the best remaining examples of this island chain's native limestone forest are found on Rota. Regarded by the indigenous Chamorro people as their cultural home, Rota also contains the most striking and the most well preserved examples of their three thousand-year old culture.

Rota is part of the Commonwealth of the Northern Mariana Islands (CNMI). The CNMI's relationship with the U.S. is defined and governed by the 1976 Covenant between the two governments. The Covenant established the jurisdiction of U.S. laws, agencies and programs and provided for a CNMI Constitution.

Presently, the people of Rota and their political leaders find themselves at a crossroads regarding the uses to which their lands are being put. Major land use changes are continuing to take place in the form of residential and agricultural lots being subdivided out of the island's public lands and transferred into private ownership. Moreover, some residents perceive Endangered Species Act requirements as restricting their being able to use their lands as they wish.

In May 2004, the three senators representing Rota in the CNMI legislature invited the NPS to identify and evaluate alternative ways to protect Rota's natural and cultural resources and make them available for public use, specifically mentioning the potential for establishing a park or conservation area.

In response, the NPS Regional Director for the Pacific West Region directed the NPS Honolulu Office to carry out a reconnaissance survey of Rota's natural and cultural resources to determine if they are of national significance and to evaluate the suitability and feasibility of these resources for being included in the national park system. Based on an on-site visit, consultation with elected officials, and planning and preservation professionals, the Honolulu Office of the Pacific West Region has found Rota's native limestone forest and four of its prehistoric Chamorro sites to be of significance to the entire Nation. The Honolulu Office also found that these significant resources are not now adequately represented in the national park system and therefore would be suitable as additions. Finally, the Honolulu Office finds these resources to be of a sufficient size and in a configuration to permit sustainable resource protection and visitor enjoyment. Since the lands on Rota found to contain nationally significant resources are in public ownership, the acquisition of a less-than-fee interest by the NPS is judged to be feasible—so long as that interest is long-term and achieved at no cost to the federal government.

The following have been identified as different ways in which Rota's significant resources could be protected and managed:

Alternative One - Establish a unit of the national park system

Alternative Two - Establish a Commonwealth park

Alternative Three - Establish a national wildlife refuge

Alternative Four – Designate significant natural or cultural features as national landmarks

Alternative Five - Designate conservation areas under local law

Each of the alternatives was evaluated using the following criteria:

Protection of resources for future generations

Potential effect on existing and future land uses and the local economy

Quantity and type of visitor use opportunity

Comparative operation and maintenance costs

Potential to improve resources

After evaluating each of the alternatives, the Honolulu Office of the NPS's Pacific West Region has found the national park alternative best meets the above criteria. The NPS, with its long tradition of operating national parks, appears to be the most effective managing entity for the long-term protection of Rota's large natural areas and its significant cultural sites, as well as providing for their enjoyment by residents and visitors. This report is being submitted in draft form to Rota's senatorial delegation for their review and distribution for public comment.

## 2.0. INTRODUCTION

### 2.1. Background

On May 4, 2004, Senator Diego M. Songao, Chairman of the Rota Legislative Delegation of the Fourteenth Commonwealth Legislature, wrote to the Regional Director, Pacific West Region to request planning assistance from the National Park Service (NPS) in identifying and evaluating options for the establishment of a park or conservation area on the island of Rota. Senator Songao's letter expressed interest in having the NPS conduct a feasibility study that would identify the means or recommendations for funding and technical assistance to establish such a park or conservation area.



An excellent interpretive foot trail overlooks the bird rookery at the I Chenchon Bird Sanctuary.

On June 7, 2004, Regional Director Jonathan B. Jarvis replied by letter to Senator Songao's request by directing Pacific Area Director Bryan Harry and Park Planner Gary Barbano of the NPS's Honolulu Office to carry out a reconnaissance survey of Rota's natural and cultural resources and to prepare a report that would identify any threats to those resources and alternatives for their protection and management.

On June 13, 2004, Harry and Barbano, accompanied by Greg Schroer, planning consultant for the Commonwealth of the Northern Mariana Islands (CNMI) government, and Michael Ernest, legal counsel to the CNMI Senate, flew to Rota where they were met by the three senators representing the CNMI Legislative Delegation for that island and local officials. These CNMI and Rota officials provided the NPS representatives with an island-wide tour of Rota's natural and cultural attributes (see APPENDIX). During the all-day tour, the senators expressed their concern and passed on the concerns of Rota's residents regarding past, present, and potential future loss of that island's valuable natural and cultural heritage. They requested the NPS evaluate Rota's natural and cultural resources for possible inclusion in the national park system or as a Commonwealth park.

## **2.2. National Park Service Special Resource Studies**

When authorized by Congress, the NPS conducts special studies concerning the potential for creating new units of the national park system. Broadly, these studies apply established criteria, evaluate protection and management alternatives, and, when specifically authorized by Congress, provide the basis for making recommendations to the Secretary of the Interior and to Congress.

Though the NPS cannot initiate feasibility studies of potential new units of the national park system without the specific authorization of Congress, Congress does permit the NPS to conduct preliminary resource assessments and gather data on potential study areas or sites. The term "reconnaissance survey" has been used to describe this type of assessment.

Reconnaissance surveys are carried out to assess if the resource values present in a study area possess national significance. Reconnaissance surveys also include a preliminary evaluation of the suitability and feasibility of nationally significant areas or sites being included in the national park system. The determination of national significance and any evaluations of suitability and feasibility are made based on the following criteria established by the NPS.

### **2.2.1. Significance, Suitability and Feasibility Criteria**

To receive a favorable recommendation from the NPS for inclusion in the national park system, an area or site must (1) possess nationally significant natural or cultural resources; (2) be a suitable addition to the system; (3) be a feasible addition to the system; and (4) require direct NPS management, instead of protection by other public agencies or the private sector.

**2.2.1.1. National Significance** An area or site will be considered nationally significant if it:

- is an outstanding example of a particular type of resource;
- possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of the nation's heritage;
- offers superlative opportunities for public enjoyment, or for scientific study; and
- retains a high degree of integrity as a true, accurate, and relatively unspoiled example of a resource.

National significance for cultural resources is evaluated by applying the National Historic Landmarks process contained in 36 CFR Part 65 (a):

Specific Criteria for National Significance: The quality of national significance is ascribed to districts, sites, buildings, structures and objects that possess exceptional value or quality in illustrating or interpreting the heritage of the United States in history, architecture, archeology, engineering and culture and that possess a high degree of integrity of location, design, setting, materials, workmanship, feeling and association, and . . . associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of the United States history and from which an understanding and appreciation of those patterns may be gained. . .

**2.2.1.2. Suitability** An area or site is considered suitable for addition to the national park system if it represents a natural or cultural resource type that is not already adequately represented in the national park system, or is not comparably represented and protected for public enjoyment by other federal agencies, tribal, state, or local governments; or the private sector. Suitability analysis compares and contrasts the study area with similar resources using the thematic categories developed by the NPS for natural and cultural resource areas.

**2.2.1.3. Feasibility** The test of feasibility involves weighing all of the values and public needs served by establishing an area or site as a unit of the national park system. To be feasible as a new unit of the national park system, the area or site must (1) be of sufficient size and appropriate configuration, considering natural systems and/or historic settings, to ensure sustainable resource protection and visitor enjoyment; and (2) be capable of efficient administration by the NPS at a reasonable cost. There are other factors considered when evaluating feasibility, including land ownership, acquisition costs, access concerns, threats to resources, and staff or development requirements.

In addition to meeting significance, suitability, and feasibility criteria, a study area must also be found to require direct management by the NPS, instead of alternative protection by other public agencies or the private sector, in order to receive a favorable recommendation for inclusion into the national park system. Unless direct NPS management of a study area is identified as the clearly superior alternative, the NPS will recommend that some other entity assume a lead management role, and that the area not be included in the national park system.

As part of the process for conducting feasibility studies the NPS includes an analysis of different alternatives or options for how resources can be managed and protected and who would be responsible for that management. The alternatives would reflect different ideas about what is to be protected and how the resources would be managed.

### 3.0. DESCRIPTION OF THE STUDY AREA

#### 3.1. Regional Context

The Mariana Island Archipelago consists of 15 islands extending northward from Guam at about 13 degrees north latitude to Uracas Island at about 20 degrees north latitude. The Marianas are volcanic islands and raised coral reef formations spanning a total distance of more than 650 miles and situated along the western side of the Marianas Trench. The archipelago can be divided into two groups geologically—the older southern islands that consist of Guam, Rota, Tinian, Saipan and Farallon de Medinilla, and the younger volcanic northern islands. Though the southern islands are volcanic in origin, they are now all nearly covered with uplifted limestone from ancient coral reefs. Guam, the largest island in the archipelago, is a United States Territory while the remaining islands comprise the CNMI, a separate political entity also tied to the U.S. Rota is the southernmost island in the CNMI.

The relationship between the U.S. and the CNMI is governed by the 1976 Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union With the United States of America (Public Law 94-241, 48 USC § 1801 note). Article I, Section 102 of the Covenant reads:

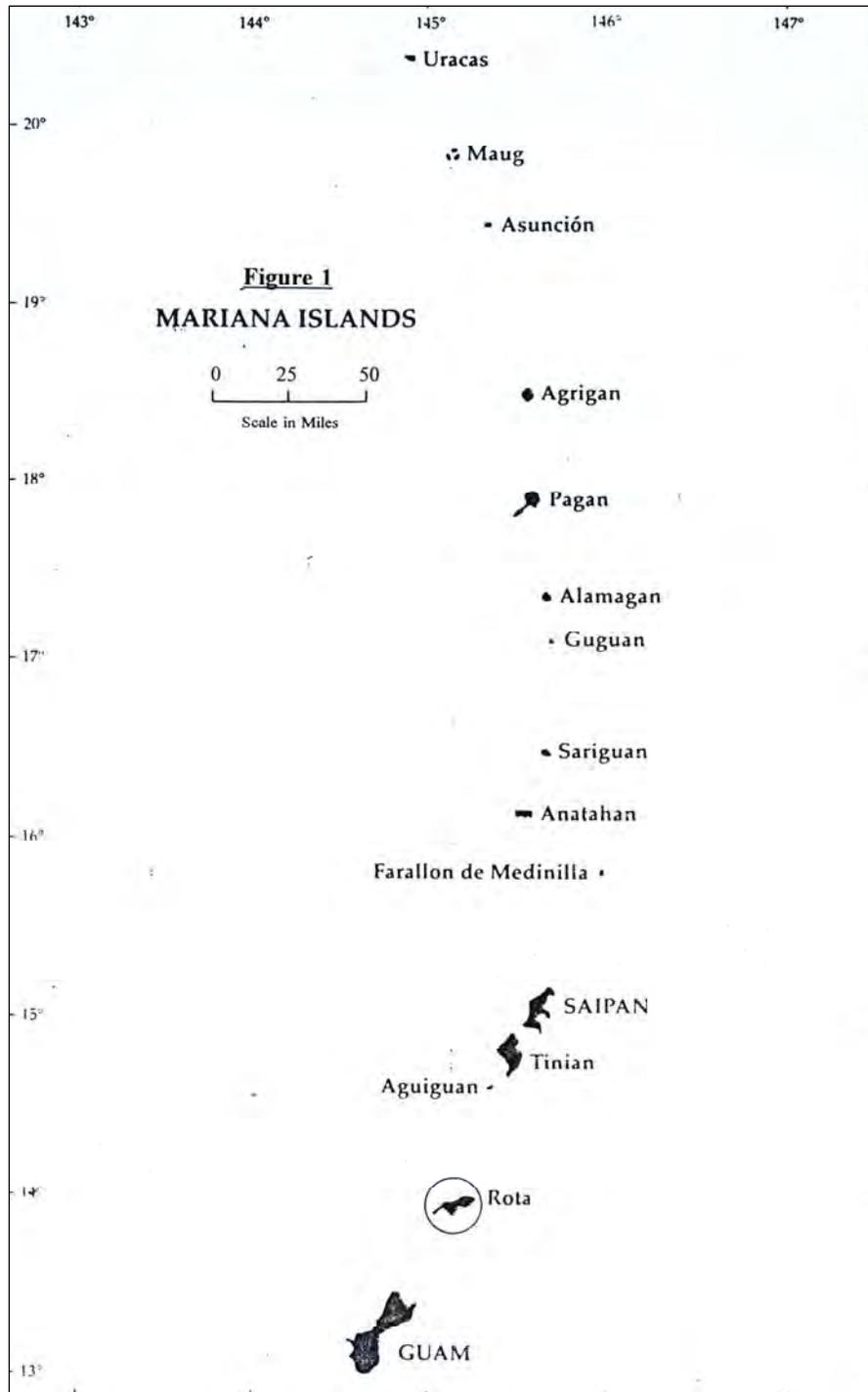
[t]he relations between the Northern Mariana Islands and the United States will be governed by this Covenant which, together with those provisions of the Constitution, treaties and laws of the United States applicable to the Northern Mariana Islands, will be the supreme law of the Northern Mariana Islands.

Rota, or Luta, the island's original Chamorro name, is the fourth largest in the Marianas Archipelago and the third largest of the 14 islands comprising the CNMI. Rota is a little more than 21,000 acres in size.

The island of Rota is composed of a series of coralline limestone terraces rising one above the other and set atop a volcanic core. Rota's volcanic core emerges from the limestone terraces only in a few places on the southern side of the island. The core appears as a knoll in the Sabana, the high plateau area located in the southwest portion of the island, and marks the island's highest elevation at 1,620 feet. The Sabana is also the core of Rota's primary watershed. The volcanic core is also exposed along the steep, dissected slopes of the south coast where all of the island's surface streams are located. Here, water emerges at about the 1,100-foot elevation where the porous limestone meets the impermeable volcanic core. On the western end, a low-lying isthmus connects the main part of the island with a small terraced headland. Rota's coastline consists of narrow, fringing coral reefs and reef platforms, with numerous patches of raised limestone benches and limestone cliffs that drop abruptly to the sea.

About one-half of the soils found on Rota are varieties of the Luta cobbly clay loam series. The Luta series consist of very shallow, well drained and permeable soils found on the limestone terraces. These soils have formed in sediment on top of the limestone bedrock. Generally, the limestone soils on Rota are not suitable for agriculture and only marginally suitable for grazing.

Figure 1. Mariana Islands.





The southeast shoreline of Rota with narrow fringing reefs and limestone benches of native forest.

Rota's climate, like the rest of the Mariana Islands, is tropical marine. The average annual rainfall is about 88 inches and the average annual relative humidity is about 80 percent. Rainfall averages about 11 inches/month during the wet season and about four inches/month during the December to June dry season. Trade winds occur mostly during the dry season, diminishing during the July through November wet season. It is during this wet period that storms develop in the inter-tropical convergence zone of the Pacific Ocean. These storms are a regular occurrence in the Mariana Islands and sometimes reach typhoon strength.

Rota's population in 2000 was 3,283, which accounts for about five percent of the total CNMI population. The island of Saipan, where the capital of the CNMI is located, accounts for 90 percent of the CNMI population and Tinian for nearly all of the remaining five percent. The ten small northern islands of the CNMI are uninhabited, except for a few individuals residing on Pagan. Five of these islands have been set aside by the CNMI as sanctuaries. One of the northern islands, Anatahan, started erupting in April 2004 and, including periods of low activity, continues to erupt.

Although tourism is Rota's principal economic industry, tourism on the island currently accounts for only about two percent of the total visitation to the CNMI. Saipan, the main CNMI tourist destination, currently receives about a half million visitors/year. Guam receives about one million annual visitors. About three-quarters of Rota's visitors are from Japan. Most of Rota's political and business leaders consider tourism to be the most promising industry in the future.

The 1996 Rota Economic Master Plan emphasized the importance of conserving portions of Rota's environmental and cultural attributes, and the inherent importance of these attributes not only to the people of Rota but to the entire CNMI. The plan also pointed out the importance of conserving portions of Rota's environment for tourism. Recent studies have found that Rota's natural and cultural values would be ideally suited for the development of eco-tourism.

Land ownership on Rota has been transitioning from public to private over the course of several decades. Most private lands are on flat or low sloping ground (less than 30 percent slope). These lands comprise approximately 66 percent of Rota's land base, and at least 75 percent of that land is now or will soon be committed to private land uses. The other 34 percent of Rota that is less suitable for development primarily consists of cliffs or steep slopes, and these are also the areas with the remaining undisturbed native forests. A CNMI government program calls for the transfer of portions of Rota's public lands from public to private ownership via agricultural or village homestead programs.

Title to public land on Rota is vested in the Mariana Public Land Authority (MLPA). MLPA has responsibility for the disposition of all public lands and is the government agency responsible for transferring those portions of the publicly owned lands identified as homestead projects to private ownership.

The MLPA retains authority over the homestead lots until the three-year permit requirements are met whereupon the land is then legally transferred to private ownership through a deed of conveyance. As noted, this process is ongoing, and on Rota homestead permits have so far been issued for about 775 village homestead lots. Presently, the MLPA is proposing to issue another approximately 250 agricultural homestead permits covering about a 600-acre project area on the eastern end of the island.

### ***3.2. Land Use on Rota***

What makes Rota unique among the major islands of the Marianas is the extent of the archipelago's remaining native limestone forest found on that single island. World War II and the subsequent major economic development significantly altered the native limestone forests of Guam, Saipan and Tinian. Rota, however, was never invaded and economic development here has been more limited than on the other islands. As a result, well over half of the island is still covered by native limestone forest.

Urbanized areas on Rota presently consist of Songsong and Sinapalo villages, the airport, schools, community parks and a small marine port. These lands account for about ten percent of the island's total area. Songsong, a historic village that has been in existence for more than three centuries, is the major business and government center for the island. Sinapalo was created in 1980. A third village, Dugi, is in the process of being developed. Plans are in place to extend the airport runway to accommodate large commercial jet aircraft.

Throughout Rota's history, most of the development and farming activities have taken place on the more level and lower elevation portions of the island. On Rota's steeper terrain, the coastal cliffs, and portions of the Sabana, native forests remain relatively intact. Approximately 20 percent of Rota is still covered by a large tree limestone forest. A more open canopy small diameter limestone forest mixed with secondary vegetation covers an additional 35 percent of Rota.

There are many small-scale subsistence farms throughout Rota, and some large-scale farms and some ranches exist especially on the eastern part of the island. Community farms are present on

the highest plateau of the Sabana; however, most of that farming has been discontinued during recent years due to concerns about adverse impacts to the domestic water supply.

Rota's publicly owned lands are used for a variety of purposes, including those lands either now permitted, or proposed as agricultural or village homesteads. As noted, homestead lands will ultimately be transferred from public to private ownership and developed by local residents for residential or subsistence agriculture uses. Other portions of the public lands have been identified for the development of large resorts. Those lands designated for resorts are to remain in public ownership and operated as leases. Presently, the Rota Resort, located along the north coast, is the only large-scale resort on Rota. The Rota resort is on private as well as the leased public lands. The Rota Resort consists of about 120 hotel rooms, two restaurants, and an 18-hole golf course.

Major portions of Rota's public lands are currently protected under local law (Rota Local Law 9-1) as watershed or for natural resource values such as sea bird sanctuaries or as conservation areas for forests and wildlife. The Department of Land and Natural Resources (DLNR) manages those public lands designated as conservation areas. The largest of these is the Sabana Protected Area. This high plateau area in the southwestern portion of the island was established to provide watershed protection, wildlife and forest conservation, as well as for community farming, hunting, and medicinal plant gathering. The other important conservation area is the I Chenchon Bird Sanctuary on the eastern side of the island. This area consists primarily of steep cliffs above the shoreline interspersed with narrow benches. The sanctuary provides habitat for colonies of nesting sea birds, a fruit bat roosting area, and important habitat for the endangered Mariana crow.

The other locally protected areas are the Liyo Conservation Area, at the western tip of the island, and the Coral Gardens Marine Reserve off the southwest coast. In addition to the conservation areas, there are several public park and historic preservation sites located throughout the island. All of these protected areas and parks are under the jurisdiction of the MPLA and are managed by the DLNR. The Historic Preservation Office (HPO) administers a portion of the Mochon prehistoric village and the Taga Stone Quarry, although each site is without land buffers to protect them from adjacent land uses. The remaining public lands on Rota, comprising nearly half of the total, have not yet been designated for any particular use.

Botanists believe pre-contact Rota, as with the other main islands of the Mariana Archipelago, was almost completely covered by forest. Historically, on Rota, only small portions of forest were cleared for subsistence agriculture. This limited clearing lasted up until the early part of the twentieth century when the Japanese began to clear large areas to plant sugar cane. The planting occurred mainly in the lower elevation and on the more gently sloping areas of the island. During the 1920s and 1930s, a portion of the Sabana was excavated to mine phosphate. Aerial photos taken in 1945 showed that Rota's forests had been spared from the devastating effects of the naval shelling, aerial bombing and ground fighting that took place on Guam, Saipan and Tinian during World War II.

Figure 2. Land Use.



### **3.3. *Covenant to Establish a Commonwealth of the Northern Mariana Islands***

The following sections of the Covenant are relevant to the purpose of this reconnaissance survey:

Article VIII, Section 806(a) The United States will continue to recognize and respect the scarcity and special importance of land in the Northern Mariana Islands. If the United States must acquire any interest in real property not transferred to it under this Covenant, it will follow the policy of seeking to acquire only the minimum area necessary to accomplish the public purpose for which the real property is required, of seeking only the minimum interest in real property necessary to support such public purpose, acquiring title only if the public purpose cannot be accomplished if a lesser interest is obtained, and of seeking first to satisfy its requirement by acquiring an interest in public rather than private property.

(b) The United States may, upon prior written notice to the Government of the Northern Mariana Islands, acquire for public purposes in accordance with federal laws and procedures any interest in real property in the Northern Mariana Islands by purchase, lease, exchange, gift or otherwise under such terms and conditions as may be negotiated by the parties. The United States will in all cases attempt to acquire any interest in real property for public purposes by voluntary means under this Subsection before exercising the power of eminent domain. No interest in real property will be acquired unless duly authorized by the Congress of the United States and appropriations are available therefore.

(c) In the event it is not possible for the United States to obtain an interest in real property for public purposes voluntary means, it may exercise within the Commonwealth the power of eminent domain to the same extent and in the same manner as it has and can exercise the power of eminent domain in a State of the Union. The power of eminent domain will be exercised within the Commonwealth only to the extent necessary and in compliance with applicable United States laws, and with full recognition of the due process required by the United States Constitution.

The Covenant required the creation of a Constitution for the CNMI. In January 1978, the CNMI formally adopted its own Constitution. Articles of the CNMI Constitution relevant to this reconnaissance survey are:

Article XI: Public Lands, Section 1 transfers land from the Trust Territory of the Pacific Islands to government entities of the CNMI and declares such lands to be public lands belonging collectively to the people of the Commonwealth who are of Northern Marianas descent. Section 4 establishes the Marianas Public Land Corporation. Section 5 gives the Corporation the responsibility to adopt a comprehensive land use plan for the public lands and to make available portions for a homestead program.

Article XII: Restrictions on Alienation of Land, Section 1 restricts the acquisition of permanent and long-term interests in real property within the Commonwealth to persons of Northern Marianas descent. Section 2 terms acquisition to include sale, lease, gift, inheritance or other means. Section 3 terms permanent and long-term interests to include freehold interests and leasehold interests of more than forty

years including renewal rights. Section 4 terms persons of Northern Marianas descent as a person who is a citizen or national of the United States and who is at least one-quarter Northern Marianas Chamorro or Northern Marianas Carolinian blood or a combination thereof. . .

Article XIV: Natural Resources, Section 1 provides for the marine resources in waters off the coast of the Commonwealth to be managed, controlled, protected and preserved by the legislature for the benefit of the people. Section 3 provides for the protection and preservation of and public access to places of importance to the culture, traditions and history of the people of the Northern Mariana Islands to be maintained as provided by law.

### **3.4. Resource Type**

The two publications, *Natural History in the National Park System and the National Registry of Natural Landmarks* and *History and Prehistory in the National Park System and the National Historic Landmarks Program*, are used by the NPS to help evaluate the resource values found in study areas to determine how well they are currently represented in the national park system. The natural history publication divides the Nation into 35 natural regions. The islands of the former Trust Territories, which now include the CNMI, are considered one region. The publication contains a list and a description of 33 different natural history themes. The themes are categorized as either geological or ecological and then grouped either by landform type, geologic history, land ecosystems or aquatic ecosystems. The publication also describes how well each of the themes is currently represented in the national park system and in the national registry of national natural landmarks.

The other publication, *History and Prehistory in the National Park System*, is also based on a thematic framework. In this instance, the historical resources of the Nation are divided and classified into major themes, subthemes, topical facets, and facets. This publication also describes how adequately each of these classifications is currently represented in the national park system and in the national historic landmark program.

The thematic approach to determine both the significance and the suitability of cultural resources for inclusion in the national park system has recently been updated in a booklet entitled *Revision of the National Park Service's Thematic Framework*. The revised thematic framework encourages an expanded representation within the national park system by including themes for which individual units were not specifically designated.

The study area has been found to contain examples of the following resource types, as defined by the thematic frameworks dealing with natural history or with history/prehistory:

#### Natural History Themes:

- Tropical Ecosystems
  - Lowland rain forest
- Marine Environments
  - Coral reefs
- Works of Volcanism
- Underground Systems

#### History or Prehistory Themes:

- Cultural Development: Indigenous Populations

Subtheme: the Earliest Inhabitants

Facet: the Early Peopling of the Pacific

Subtheme: Post Archaic and Pre-Contact Developments

Facet: Late Prehistoric Adaptations in the Western, Central and Eastern Pacific

Subtheme: Prehistoric Archeology

Facet: Prehistoric Architecture/Shelter/Housing

Facet: Prehistoric Technology

Facet: Prehistoric Arts/Handicraft

Facet: Prehistoric Settlements and Settlement Patterns

World War II

Subtheme: War in the Pacific, 1941-1945

## **4.0. RESOURCE SIGNIFICANCE**

### ***4.1. Current Status of the Study Area***

The CNMI Legislative Delegation for the island of Rota, local government officials and many residents all believe their island home is presently at a crossroads for making long-term decisions about future land use. They all recognize that Rota was spared the destruction caused by World War II on nearby Guam, Tinian and Saipan, and that Rota has not experienced the widespread urbanization that has occurred and is still occurring on Guam and Saipan. These officials and the residents of Rota are now attempting to address issues that profoundly effect future uses of Rota's land base as well as the vibrancy of its local economy. Essentially, the issue is how to conserve Rota's natural and cultural resources and at the same time provide a way for the people of Rota to maintain economic sustainability.

One issue now facing Rota is the federal requirements under the Endangered Species Act (ESA) for the conservation of three endangered plant species, two endangered bird species, and one threatened mammal species. These species and other rare plant, animal and invertebrate species are all found on Rota. As noted, Rota's forests comprise some of the most intact and extensive native primary forests remaining on any of the islands of the Mariana Archipelago. Since nearly all of the native limestone forest originally found on the islands of Saipan and Tinian was either destroyed during World War II or has since been altered by commercial or residential development, the protection of the native forest on Rota is an issue of importance to the entire Commonwealth.

The 1996 Rota Economic Master Plan for Rota called for the development and implementation of an island wide Habitat Conservation Plan (HCP) to address ongoing issues with regard to habitat requirements for the endangered Mariana crow while also allowing the development of agricultural homesteads. The "no take" requirements of the ESA have prevented some Rota residents from being able to obtain agricultural homestead permits. The MPLA is currently negotiating with the U.S. Fish and Wildlife Service (FWS) to legally use the I Chenchon Bird Sanctuary and adjoining areas as long-term mitigation for the loss of Mariana crow habitat. The ESA requires mitigation not only for Rota's currently proposed homestead projects, but also for other future projects that may adversely impact the habitats of threatened or endangered species.

Another issue is the threat to the integrity of Rota's significant archeological sites from expanding development of homestead lots. Residential and agricultural developments have not yet intruded on most archeological sites; however, there is every indication that many of the most important archeological sites will be directly and indirectly impacted during coming decades. Any loss of the sites and features connected with Rota's Chamorro heritage would likewise be an issue of concern to island residents and to residents throughout the CNMI.

#### **4.1.1. Habitat Conservation Plan**

Some of the lands on Rota identified for agriculture homesteading projects have the potential to adversely affect Mariana crow habitat, as well as the habitats of other listed species. The MPLA, mindful the ESA prohibits non-federal entities from taking listed species without an Incidental Take Permit (ITP), has applied to the FWS for an ITP. To obtain this permit, the MPLA is required to prepare and submit a HCP to the FWS.

A HCP is currently being prepared to mitigate the issuance of permits for the development of agricultural homestead lots on lands determined to be critical habitat for the endangered Mariana crow. The HCP describes the expected level of take to the Mariana crow and the

conservation management actions that will be implemented to minimize and mitigate that take. The HCP would preserve essential crow habitat while allowing for economic development in ecologically responsible manner.

Broadly, the HCP would identify the requirements for receiving an ITP from the FWS for the Mariana crow and other listed species. Then, the FWS, the CNMI, and the residents of Rota would all need to reach agreement on the habitat requirements identified in the HCP in order for the permit application to be completed. If the high value habitat areas where future development would be restricted fall outside of identified conservation areas, then the CNMI would be required to establish additional conservation areas elsewhere on the island. These conservation areas would have to be managed to sustain and increase the populations of the Mariana crow and other listed species according to criteria that would be defined in the HCP's Management Plan.

If conservation areas identified in the HCP fall on private property, land exchanges or some other form of compensation would need to be made to local residents. As part of this agreement process, mitigation would be provided for proposed project impacts on the Mariana crow and other species—this mitigation would be in the form of long-term conservation and management of habitat conservation areas. These conservation areas would be managed to sustain, and possibly increase, the populations of the Mariana crow and other listed species according to relevant recovery plans. If it turns out no agreement is reached, the HCP could not be implemented and any development project within endangered species habitat would be required to apply for an ITP.

The MPLA and the DLNR are co-applicants for the ITP issued by the FWS. These government agencies are referred to as the "Permit Applicants." The MPLA would be responsible for implementing the HCP. The DLNR would be responsible for the monitoring and management of the HCP.

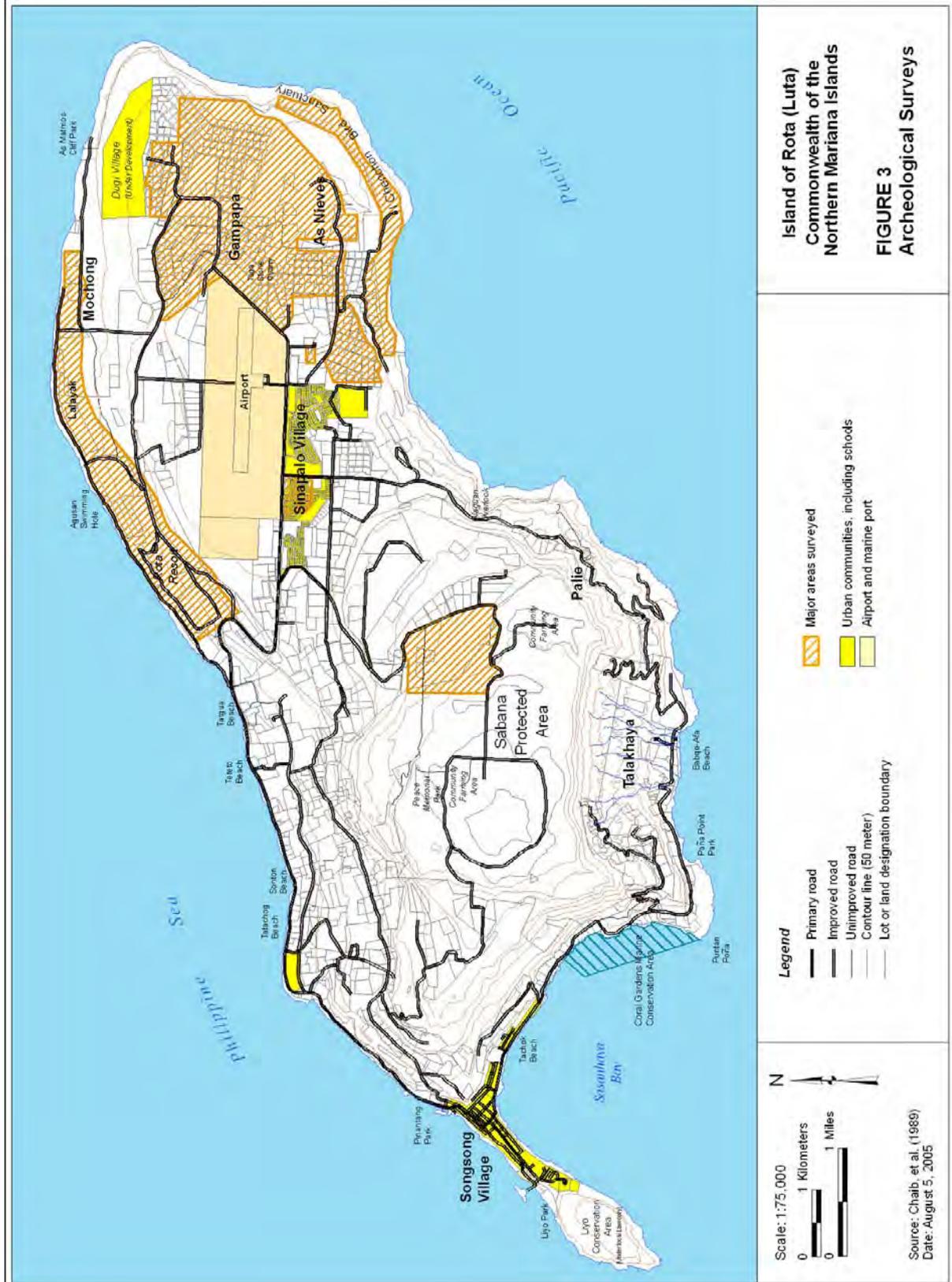
The CNMI Board of Public Lands has the authority to transfer public lands to the DLNR for habitat conservation and the responsibility to ensure habitat conservation outside of project areas in perpetuity. The DLNR's Division of Fish and Wildlife would be the agency responsible for implementing the HCP Management Plan. The FWS would be responsible for enforcing the provisions of the ITP, reviewing annual status reports, and monitoring take.

#### ***4.2. Cultural Resources***

Rota has been described by professional archeologists as having the most numerous, most intact, and generally the most unique prehistoric sites of any of the islands in the Mariana Archipelago. The indigenous Chamorro people have continually occupied the island for three millennia. For many Chamorros throughout the CNMI, the island of Rota is considered to be their cultural home.

The social changes and economic developments that took place and reshaped Guam and Saipan since the end of World War II have had comparatively little effect on the island of Rota. The absence of major and intensive military activities during and after World War II and the lack of a large-scale tourism industry have permitted Rota to retain many tangible examples of its ancient cultural heritage. Rota also contains the remains of civilian and military sites or features related to the Japanese period and there are a few structures remaining going back to the German period and the Spanish colonial period.

Figure 3. Archeological Surveys.



Starting in the early 1970s, several surveys have been carried out by professional archeologists. These surveys covered major portions of Rota. The earlier surveys tended to be research oriented, while those occurring over the past 15 years have been more concerned with the management of cultural resources. Two important sites, the Mochon Latte Stone Village and Taga Latte Stone Quarry, have been surveyed several times during which excavations were carried out. During one of the surveys of Mochon, a small test pit was excavated at the base of one of the latte stones. The charcoal sample taken from the near the bottom of the test pit revealed an uncalibrated date of about 500 B.C.

Major archeological surveys have taken place along a nearly contiguous stretch of the north coast of Rota from Mochon west to Salug. Excavations have been carried out at most of the sites along this coast. The surveys revealed the presence of several different types of prehistoric features, including assemblages of latte, stone quarries, pottery shards, rock shelters, and water wells. Burials were uncovered at some of the sites.

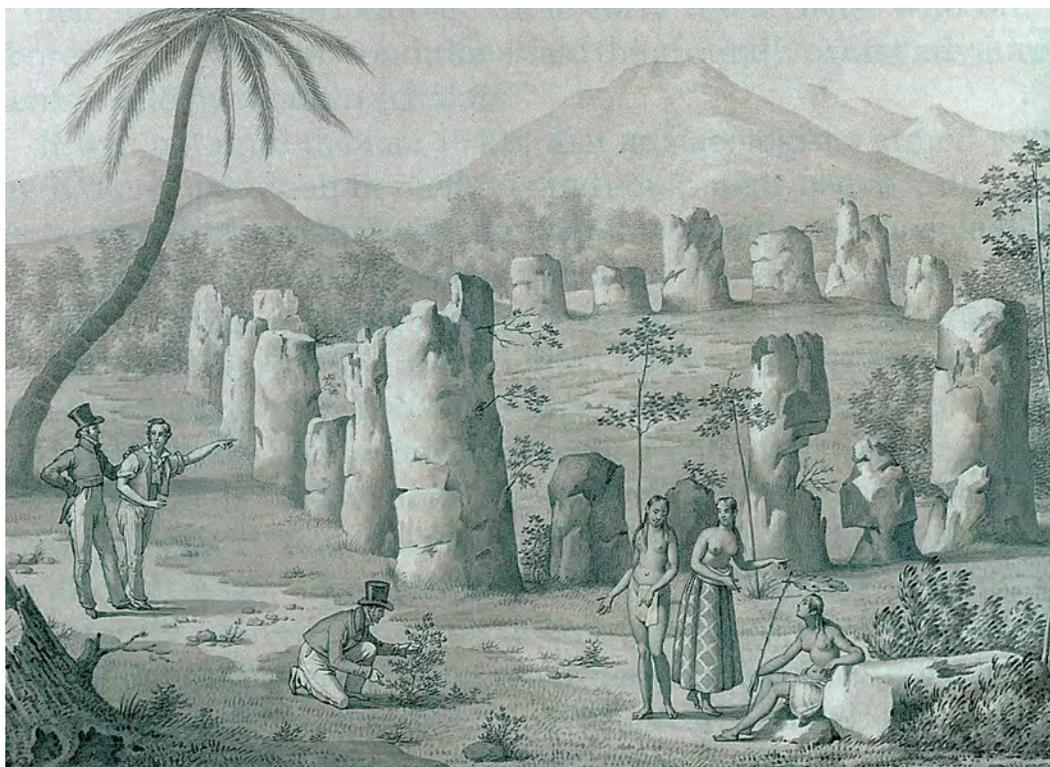
Surveys have also taken place along Rota's southern and southeastern coasts. These surveys included the Alaguan area where surface scatters of cultural materials have been described by professional archeologists as the "richest they had observed." A major (370 acres) archeological survey of the area immediately northeast of the summit of the Sabana revealed the presence of more than 200 features of the Japanese period. No evidence of prehistoric use was found in this area.

The most extensive archeological work on Rota occurred in 1992 when nearly 1,600 acres were surveyed in the Dugi, Gampapa, As Nieves and Chenchon areas for the MPLC. The survey was carried out to compile baseline resource information needed for the preparation of a HCP for the homestead project area being proposed in the eastern part of the island. During the survey, a total of 79 individual sites were recorded, and 48 of these were determined to be prehistoric. Nine of the prehistoric sites were selected for subsurface testing and typical latte period features were recovered from each of the sites. The calibrated dates of these features ranged from 1000 to 1700 A.D.

Three of the five significant prehistoric sites described below are listed on the National Register of Historic Places and one has been nominated for listing on the Register. Authorized under the National Historic Preservation Act of 1966, the National Register of Historic Places is part of a nationwide program to identify, evaluate, and protect historic and archeological resources. Properties listed on the National Register include districts, sites, buildings, structures, and objects that are significant in archeology, history, and culture. The National Register helps preserve these significant historic places by recognizing their irreplaceable heritage. Sites on the National Register are recognized nationally as highly significant and worthy of preservation. CNMI residents particularly value the four sites described below for their cultural value and importance.

#### **4.2.1. Significant Prehistoric Sites**

The island of Rota contains the best remaining examples of what is known as the Latte Phase of the cultural tradition of the indigenous Chamorro people of the Mariana Islands. This phase commenced roughly in 1100 AD and lasted until the initial European contact in the early 1500s. The Latte phase is named for the distinctive stone architectural elements that began to appear throughout the archipelago roughly 800 to 1000 years ago



Arago, a member of the French expedition under Luis de Freycinet, made this sketch of the Rota ruins in 1823. From Russell, *The Island of Rota*.

**4.2.1.1. Mochon Latte Stone Village** This ancient Chamorro village is located on the north coast of Rota and has been locally designated an archeological district. The district contains 46 individual latte stone assemblages, extensive pottery and artifact scatters, and stone-lined water wells. The latte stones are arranged in two parallel rows and originally capped by domed shaped stones. The columns are believed to have served as the foundations of traditional Chamorro houses at the time of European contact.

Archeological testing within the district indicates that Mochon revealed cultural strata down to a depth of eight feet. A radiocarbon sample recovered in 1983 from an early stratum yielded a date of 2920 BP (Before Present), attesting to the great antiquity of portions of the Mochon site.

The Mochon Archeological District encompasses both the earlier and later periods of prehistory in the Mariana Islands. Based on radiocarbon determinations, it is possible Mochon may have been among the first locations to be settled on Rota. The area may have had a continuous occupation until the beginning of the eighteenth century. The profound changes which took place in the traditional Chamorro life-style resulting from Spanish military and religious policies caused Mochon to be abandoned during that time.

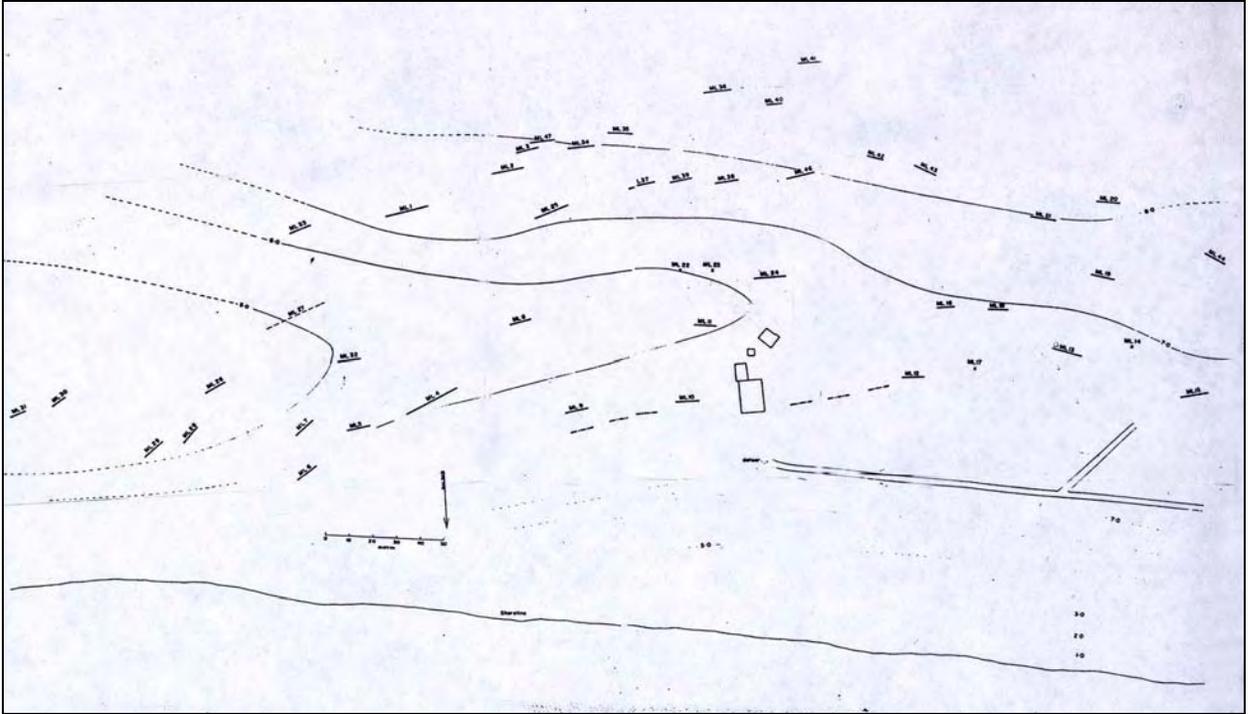


Figure 4. This archeological base map accompanied the nomination of Mochon to the National Register of Historic Places (survey location points are removed). Note that the nearly 50 sets of latte are arranged generally parallel with the shoreline. The solid lines of latte represent sets still intact.



In 2004 the Mochon ruins are intact and appear remarkably similar to the sketch made by Arago in 1823.



The reconnaissance group visited the Mochon site on June 13, 2004.

The Mochon Archeological District remains in an excellent state of preservation. There was some impact on the site during the Japanese period when trenches were dug here as part of the island's defense system. The trenching caused the destruction of small portions of the site's subsurface deposits and a few of the latte stones. The stones may have been utilized for strengthening the defensive positions. After World War II, a local family took up residence in the area, constructing a small house, a storage shed and a chicken coop. The family carefully maintained the integrity of the Latte stones.

**4.2.1.1.1. Significance** The Mochon Archeological District is significant for two reasons:

(1) It is the one of most extensive and best-preserved ancient Chamorro village site in the Mariana Archipelago. Since the site was occupied continuously for nearly three thousand years and contains extensive subsurface cultural deposits, Mochon is potentially valuable for the scientific study of a number of aspects of the earlier period of Marianas prehistory, including the time period and geographic origin of the first Chamorro settlers. The Mochon Archeological District is listed on the National Register of Historic Places.

2) Latte stone houses are judged to be the most spectacular tangible remnants of the ancient Chamorro culture. Since few intact latte stone villages still exist in the Marianas, the Mochon Archeological District has enormous potential as a site to

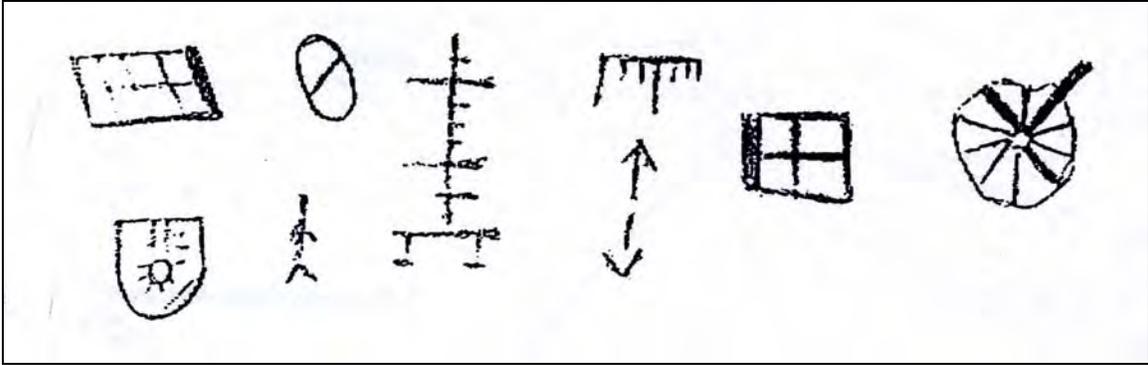
interpret the Chamorro culture, not only to the people of the CMNI but to international visitors.

The Mochon site is rich in smaller lithic scatter and artifacts in place such as this mortar and pestle.

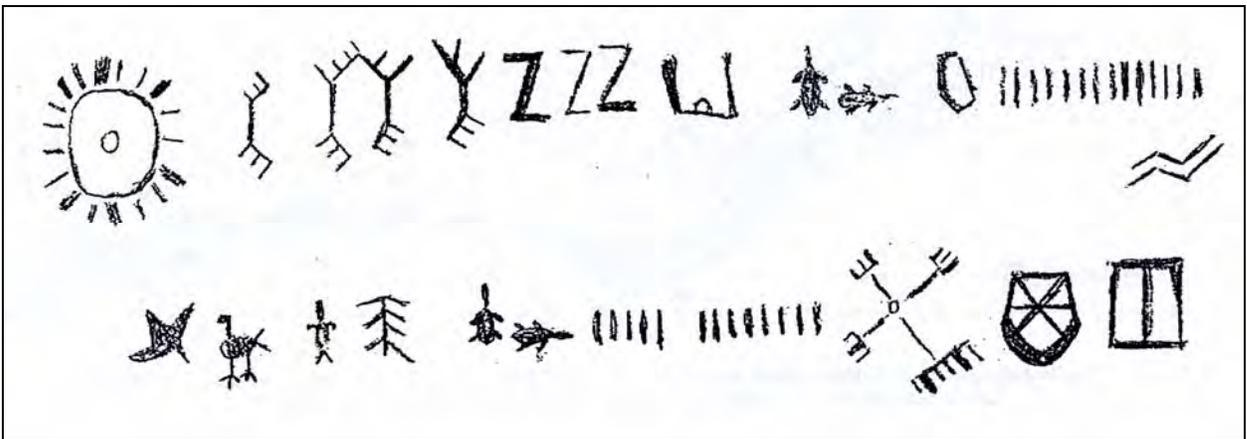


#### **4.2.1.2. Chugai Pictograph Cave**

This natural limestone cave is located in the eastern portion of Rota on the rim of a plateau immediately above the second terrace inland from the coast. The cave consists of a single passageway about 185 feet in length and averaging about 15 feet in width. The cave is accessible via a rock stairway constructed by the Japanese during World War II. Within the cave approximately 90 pictographs of prehistoric origin have been painted on the walls. The drawings were executed in what appears to be a black, dark gray, and brown charcoal-based pigment. Most of the drawings are linear or rectilinear, possess a geometric character, and do not appear to be representations of natural subjects. Some of the drawings do exhibit anthropomorphic and zoomorphic characteristics; two are well-executed drawings of sea turtles and one drawing is of a large billfish measuring more than a yard in length.



Sketch diagram of pictographs on the north wall of Chugai Cave.



Sketch diagram of pictographs on the south wall of Chugai Cave.

The Chugai pictographs were undoubtedly created in prehistoric times by the ancient ancestors of the present day Chamorros, however, very little information exists concerning ancient rock art in the Marianas. Individual pictograph sites also have been documented on Guam, Tinian and Saipan. The Chugai pictographs have not been analyzed through radiocarbon dating as this method would require the destruction of some of the images to acquire datable material. The fact that rock art on Rota tends to be located near latte settlements suggests it was produced relatively late in the prehistoric sequence.

Near the entrance to the cave are the remains of Japanese quarters dating from the World War II period as well as scattered Japanese artifact material.

**4.2.1.2.1. Significance** The pictograph cave at Chugai contains one of the most impressive examples of ancient Chamorro rock art documented in the Mariana Islands. The pictographs on the cave walls derive their significance from the presumed association with ancient Chamorro religious systems, particularly ancestor worship. The pictographs are suspected of being directly linked to the activities of Chamorro shaman. The pictographs represent an indigenous art form that no longer is practiced and about which there is little scientific knowledge.



The pictograph wall has artistic images of two sea turtles.

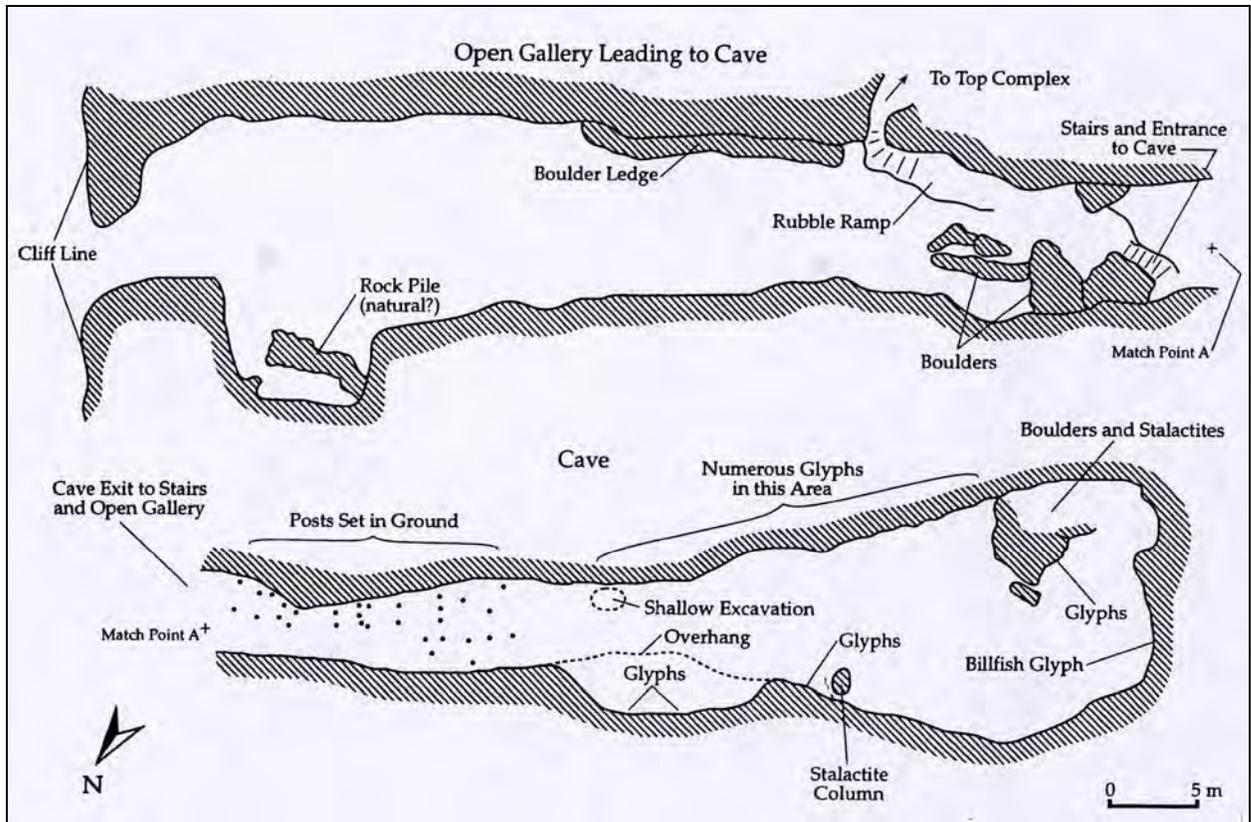


Figure 5. The Chugai Cave complex.

Further study of the Chugai Pictograph Cave is likely to yield information important to increasing the understanding of Chamorro prehistory. In 1998, the CNMI Office of Historic Preservation (HPO) nominated the Chugai Pictograph Cave for listing on the National Register of Historic Places.

**4.2.1.3 Taga Latte Stone Quarry** This site where the quarrying of latte stones took place is located in the As Nieves area of the island near the eastern end of the airport runway. The site consists of several latte stone columns and capstones in various states of being cut away from the solid coral limestone. The edges of the columns and capstones have been separated from the limestone rock by excavating trenches. The site consists of eight columns (each column approximately eight by twenty feet) and eight capstones (approximately twelve feet in diameter) in varying states of having been quarried out of the rock. One capstone has been elevated to nearly the surface of the ground.

It is believed basalt tools, possibly in combination with fire, were used to dig out the huge latte stones from the solid rock. Today, erosion has back-filled all of the trenches to some extent and some of the stones have been split, either during quarrying or by subsequent earthquakes or root actions.

**4.2.1.3.1. Significance** The site on Rota is the best preserved and largest known latte stone quarry in Micronesia. Archeologists have described the Taga Latte



The Taga Latte Stone Quarry is the finest and best-preserved latte quarry known to exist.



The exposed quarry with work in progress shows the technique of carving in place both the vertical pillar and cap components of the latte.

Stone Quarry as the most unique cultural site on Rota. It is listed on the National Register of Historic Places. The quarry represents tangible evidence of the engineering skill attained by the ancient Chamorros.

The latte stone structures at the Taga site are somewhat larger than the latte stones connected with the "House of Taga" on Tinian. The Tinian site is the legendary home of Taga, the great unifier of the Marianas. It is not known if the stone latte being quarried at As Nieves on Rota were intended for shipment to Tinian as tribute or if they were to be erected on Rota by a rival clan or perhaps as the initial step in moving the capital to that island.

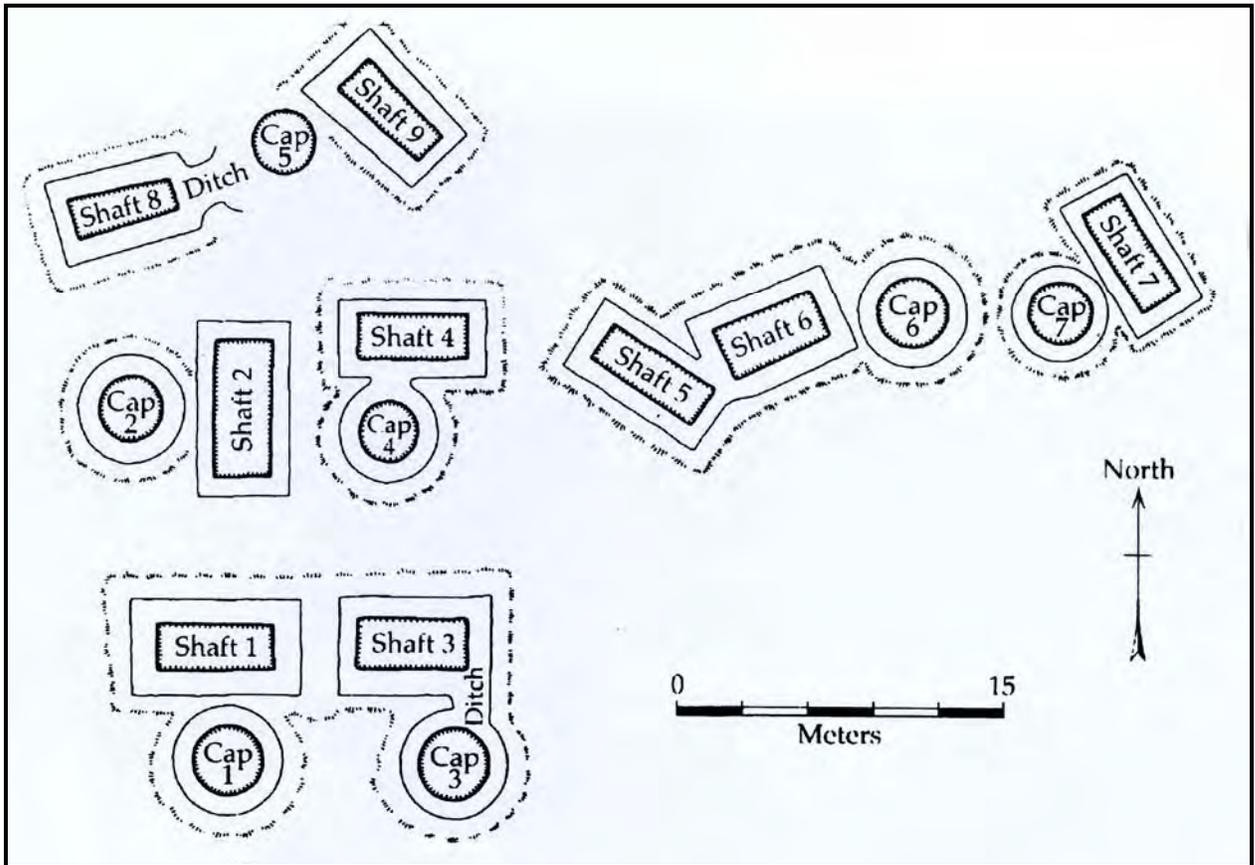


Figure 6. Hans Hornbostel, of the Bishop Museum, made this plan map of the Taga Latte Quarry in the 1920s.

**4.2.1.4. Dugi Archeological Site** The latte stone site is located atop the highest of three consecutive terraces in the northern portion of Rota. The 16 individual latte structures at Dugi are badly weathered and three have been heavily disturbed. Most of the base stones have fallen and none retain their capstones. Several stone mortars are scattered around the site. Archeologists believe Dugi may represent a relatively late Latte Period settlement resulting from population pressure or warfare.

**4.2.1.4.1. Significance** Dugi's significance is due primarily to its geographical location--it is one of the few inland latte sites to have survived the agricultural development of Rota by the Japanese in the 1920s and 1930s. The site is likely to contain information valuable to understanding the prehistory of the Mariana Islands. The Dugi Archeological Site is listed on the National Register of Historic Places.

**4.2.1.5. Alaguan Bay Ancient Village** This ancient Chamorro village is located in a heavily vegetated valley along the southern coast of Rota. The village site is extremely rich in surface material, very extensive covering about 25 acres, and contains more than 60 latte. Although visited by several archeologists who attested to the abundance of the surface scatters, the true size of the site and the number of latte present remained unknown until an intensive survey was conducted in 1988. After weeks of survey and substantial clearing in some areas, three 12-pillar, six 10-pillar, and 42 six- or eight-pillar latte were found. Based on the distribution of these latte, seven distinct residential groups were identified by archeologists. A subsequent two-phase excavation was undertaken to sample each of the seven residential units. About 15 cubic yards of deposit were excavated. Based on the dating of charcoal samples taken during the excavation, it was determined that Alaguan was settled between 700 and 900 years ago.

**4.2.1.5.1. Significance** The Alaguan Bay site is believed to be the largest, best preserved ancient Chamorro village in the Mariana Archipelago. The site's isolation--surrounded by tall-canopy limestone forest and inaccessible by roads--has allowed the archeological features to remain in an excellent state of preservation.

#### **4.2.2. Historic Sites**

Historic sites remaining on Rota date from the Spanish Period (1521-1898), the German Period (1899-1914) and the Japanese Period (1914-1945).

**4.2.2.1. Japanese Period** Following World War I, the League of Nations awarded Japan a mandate over the Northern Mariana Islands. In the 1920s and 1930s, the Japanese developed phosphate mining and sugar plantations on Rota. Later, during World War II, they built defensive fortifications on the island.

**4.2.2.1.1. Ginalangan Japanese Defensive Complex.** These fortifications are located just to the south of the present-day village of Sinapalo. The complex consists of a network of natural and man-made caves and tunnels set within a cliff face. Individual features include a parapet, pillbox, revetment, a rock-faced terrace, stone steps, and a stonewall enclosure. Compared to the defensive fortifications built by the Japanese on Guam and Saipan, these are small in scale. Nearby and connected with the fortifications, archeologists have documented live and spent ammunition, tools, mechanical equipment and domestic refuse.

Since Rota was not invaded by the U.S. during World War II the complex did not sustain major damage and is in an excellent state of preservation. Documentation has been prepared by the CNMI HPO to nominate the Ginalangan World War II Defensive Complex for listing on the National Register of Historic Places.

**4.2.2.1.2. Nanyo Kohatsu Kabushiki Kaisha Sugar Mill, Japanese Coastal Defense Gun, Japanese Hospital** A mill to refine cane sugar was built in 1930 on the west side of Songsong Village. Some remains of the mill still exist. A hospital

built by the Japanese is located on the west side of Sasanhaya Bay. A well-preserved swivel-mounted cannon is set into the side of the cliff on the south side of the island. These features are all separately listed on the National Register of Historic Places.

**4.2.2.2. German Period.** There are only a few minor buildings remaining on Rota associated with the German Period. These include a school and a small chapel. None of these features are judged to be of significance to the history of the U.S.

**4.2.2.3. Spanish Period.** Two buildings, the Commissioner's Office and the Rectory, both related to the Spanish period are located in Songsong Village and believed to date back to the 1700s and both are listed on the National Register of Historic Places. The two buildings are judged not to be of significance to the history of the U.S.

### **4.3 Natural Resources**

The significance of Rota's natural resources is based primarily on the extent and intact condition of its native limestone forest and the presence of several federally listed species of native bird and plant species, including two that are endemic to that single island. The native limestone forest of the Mariana Islands is a unique natural heritage, rich in endemic species. However, as noted, throughout the archipelago these forests have been substantially reduced and altered. On Guam, Saipan and Tinian, much of the native limestone forest has been replaced by introduced species such as *Leucaena leucocephala* and *Acacia confusa*.

The best, largest and most intact examples of primary native limestone forest remaining on the Mariana Islands are those found on Rota. Three endangered land bird species are found on the island and the native limestone forest provides habitat for two of these species, the Mariana crow and the Rota bridled white-eye. Three endangered plant species are found on Rota, two of which are endemic to the island. This is a remarkable assemblage of significant biotic resources for such a small island.

#### **4.3.1. Native Forest**

The original vegetation on Rota was probably very simple. On the limestone terraces, a mixed forest existed. On the lower terraces, the forest was semixerophytic, that is, dry season deciduous, and on the highest terraces it was moist forest. The indigenous Chamorros who have inhabited Rota for three thousand years unquestionably made major modifications to the island's native vegetation. Today, some areas on Rota show evidence of having been terraced in ancient times for the cultivation of rice and taro.

The French explorer, Freycinet, who visited the Mariana Islands in 1819 on a scientific expedition, gave a full account of his voyage in a multi-volume work. The following is Freycinet's account of the vegetation of Rota:

So thick is the brush on uninhabited parts of Rota that one has difficulty in getting through it. In general, it is a pleasure to gaze at the island's woodlands. Even the lines of great rocks that run across those woods, into which vegetation drives its roots to find the source of life as though they were rich soil, supplement the picture without detracting from it. The north coast, where sandy beaches are quite extensive, is strewn with coconut palms from the shoreline right up to the feet of the mountains. From there up to the summits stretches an uninterrupted forest cover.



Native hardwood forest remains along the island's limestone cliff terraces.

During the 200 years of occupation by the Spanish, the indigenous Chamorro population of Rota plummeted and the native vegetation recovered, even on areas that had been completely cleared for subsistence agriculture. In the initial period of the Japanese occupation during World War I, it was reported that impenetrable forests covered the entire island. Two decades later, in the 1930s, much of Rota had been cleared by the Japanese to plant sugar cane and roads had been constructed to all parts of the island.

After World War II, about 40 percent of the native forest on Rota remained relatively undisturbed. These were confined mostly to where the soil was too thin for agriculture. Those other areas that had been planted in sugar cane and then abandoned were now covered with second-growth scrub and forest. Aerial photos taken in 1946 show about one-quarter of the former sugar cane areas to be now covered by well-developed forest. The other areas that had been planted in sugar cane subsequently naturally revegetated with second-growth scrub and forest.

In 1946 and 1950, during brief stays on Rota, F. Raymond Fosberg, the noted botanist on the flora of Micronesia, made observations of Rota's vegetation. From these observations and from interpreting aerial photos flown in 1952, accounts were subsequently published on Rota's vegetation. Fosberg made a second short visit in 1980 and verbal accounts by several subsequent visitors have made it possible to update some of Fosberg's earlier (1960) description.

In July 1989, the U.S. Forest Service's Pacific Southwest Forest and Range Experiment Station published results of its vegetation survey of the islands of Rota, Tinian and Saipan. The detailed description of Rota's forests in this publication is based on vegetation types

identified on 1976 aerial photographs. The descriptions of the limestone forest types are based on field reconnaissance.

The Forest Service's 1976 survey of Rota identified 12,147 acres of native limestone forest on the island, about 57 percent of the total land area. On Tinian, 1,714 acres of native limestone forest were identified and on Saipan 1,182 acres were identified. Clearly, nearly all of what remains of the native limestone forests of the Mariana Island is on the island of Rota. Figure 7 shows the general extent of the native limestone forest on Rota. The map shows those forested areas where the crown closure over the canopy exceeds 70 percent and where the diameter of the trunk at breast height is at least five inches. Native forests with larger trees are generally located on steep slopes or where the terrain is especially rocky and uneven. There are additional small, scattered areas of native forest on Rota where the trees are not as dense and the canopy more open.

**4.3.1.1. Lower Limestone Terraces** In drier northeastern Rota where the terrain is more level and less rocky, small to medium size *Intsia bijuga* is common. The forest here is relatively low and scrubby with *Hibiscus tiliaceus* and *Pandanus* spp. being common. Other species here include *Guamia mariannae*, *Guettarda speciosa*, *Eugenia* spp., *Morinda citrifolia*, *Maytenus thompsonii*, *Triphasia trifolia*, *Polyscias grandifolia*, *Cycas circinalis*, *Flagellaria indica*, and *Caesalpinia major*.

The lowest terrace along Rota's north coast still possesses remnants of a strand forest type of *Hernandia nymphaeifolia*, *Thespesia populnea*, *Hibiscus tiliaceus*, *Barringtonia asiatica*, *Pandanus tectorius*, *P. dubius*, *Neisosperma oppositifolium*, *Pisonia grandis*, *Guettarda speciosa*, and other trees and shrubs. Below the terrace, on the spray-swept coast, *Tournefortia argentea*, *Scaevola taccada*, *Excoecaria agallocha*, *Pemphis acidula*, and *Sophora tometosa* are more abundant. Landward from the coast through the strand forest various other plants are encountered such as *Cycas circinalis*, *Terminalia catappa*, *Laportea*, *Macaranga*, *Mamma*, *Premna*, *Morinda citrifolia*, *Hernandia nymphaeifolia*, *Allophylus*, *Melanolepis*, *Pipturus*, *F. tintora*, *Albizia lebbek*, *Pithecellobium dulce*, and *Muntingia calabura* as the forest gradually changes to the subxerophytic forest of the lower terraces. The last three plants in the list are introduced species that have become completely naturalized in this area. *Cynometra ramiflora* is the dominant or exclusive species in this dry area, especially on cliffs and rough areas.

Botanists report that a substantial portion of the lower terrace on the southeastern corner of the Sabana contains native forest in good condition, with examples of the extremely rare *Serianthes nelsonii* and *Heritiera longipetiolata* and other unusual trees.

The endangered endemic herbaceous plant *Nesogenes rotensis* is found in the coastal spray zone at the southwestern base of the Sabana. Its nearest relatives are found in southeastern Polynesia, the Cook Islands, and the western Indian Ocean.

**4.3.1.2. Mid-elevation Limestone Terraces** A substantial portion of the limestone terraces of the Sabana contains native forest in good condition. Species found here include: *Serianthes nelsonii*, *Heritiera longipetiolata*, *Artocarpus* spp., *Hibiscus tiliaceus*, and *Osmoxylon mariannese*. Understory species include *Macaranga thompsonii* and *Pipturus argenteus*. Epiphytes are abundant and include *Freycinetia reineckeii*, *Asplenium nidus*, *Davallia solida* and other ferns; *Coelogyne guamensis* and other orchids; and mosses.

**4.3.1.3. Upper Limestone Terraces** At the higher altitudes, the forest changes to a wetter type which is very luxuriant and has a full canopy. In these wet parts the principal trees are *Elaeocarpus joga*, *Hernandia labyrinthica*, *Fagraea berteroana*, *Pandanus*, *Guettarda*, *Ficus prolixa*, *F. tinctoria*, *Artocarpus mariannensis*, *Pipturus*, *Laportea*, *Guamia*, *Claoxylon*, *Osmoxylon*, *Macaranga*, *Pisonia umbellifera* and others, with *Psychotria*, *Piper*, *Discocalyx*, *Maesa* and other shrubs and many ferns in the undergrowth. *Freycinetia* and *Alyxia* are common lianas. Epiphytic ferns and orchids are abundant.

Mixed in with the *Elaeocarpus/Hernandia* are a few *Ficus* spp., *Artocarpus* spp., *Hibiscus tiliaceus*, and *Osmoxylon mariannense*. Understory species here include *Freycinetia reineckei*, *asplanium nidus*, *Davallia solida* and other ferns, *Coelogyne guamensis* and other orchids, and mosses.

A considerable area on the southwestern summit of the Sabana Plateau is pitted and pinnacled, the result of phosphate mining during the Japanese period.

The native forests of the Sabana, the high plateau in the southwestern part of the island, are an association of the endemic *Hernandia labyrinthica* and *Elaeocarpus joga* interspersed with *Pandanus* thickets. The Sabana is often shrouded in clouds and mist. A number of native and endemic species grow here, both in the understory or as epiphytes. These include the giant fern *Angiopteris evecta*, the magenta flowered *Medinilla medinilliana*, the pendant *Lycopodium phlegmaria* var. *longifolium*, and *Coelogyne guamensis*, an orchid with large white blossoms. The large fern *Historiopteris incisa* also occurs in this area.

#### **4.3.2. Threatened and Endangered Plants**

Two species of trees, *Serianthes nelsonii* and *Osmoxylon mariannense*, and a perennial herbaceous species, *Nesogenes rotensis*, found on Rota have been listed by the FWS as endangered. *Osmoxylon mariannense* and *Nesogenes rotensis* are both endemic to Rota. The FWS has also identified three plant species found on Rota, *Lycopodium phlegmaria*, *Coelogyne guamensis* and *Nervilia jacksoniae*, as species of concern. The CNMI has also classified *Serianthes nelsonii* and *Lycopodium phlegmaria* var. *longifolium* as threatened/endangered species.

To date, only 121 specimens of *Serianthes* have been found on Rota. *Osmoxylon* is endemic to Rota where only about 20 specimens have been found. This small, unique population of *Osmoxylon* appears to be in decline as evidenced by the death of several previously mapped older individuals and the lack of evidence of any new individuals being recruited into the population. The primary factors threatening these rare tree species are lack of regeneration probably caused by ungulate browsing and insect predation on seeds. Native flora of the Northern Mariana Islands evolved in an environment free of ungulates making several species vulnerable to heavy browsing. Three species of ungulates, Philippine deer (*Cervus mariannus*), feral pig (*Sus scrofa*), and domestic cattle (*Bos taurus*) are likely involved in the destruction of these tree species. Attempts to propagate *Osmoxylon* from cuttings have so far been unsuccessful. *Nesogenes rotensis* is found only within the salt spray zone of Pona Point on Rota and that population is believed to consist of less than 20 to 30 individuals.

Figure 7. Native Limestone Forest.



#### 4.3.3. Other Vegetation

Other types of vegetation classified by the U.S. Forest Service on Rota include savanna/grassland covering about 15 percent of the land area, secondary vegetation on about 13 percent, and coconut plantation on about five percent.

In 1960, Fosberg reported the savanna/grassland community on Rota included species such as *Gleichenia linearis*, *Lycopodium cernuum*, *Myrtella bennigseniana*, *Geniostoma micranthum*, *Wikstroemia elliptica*, and *Scaevola taccada*. At that time, Fosberg described the portion of the Sabana previously mined for phosphate being covered with a meadow-like herbaceous growth, with *Pennisetium* spp. being common here, as well as patches of *Eupatorium odoratum* and mixed fern species. Presently, this entire area is covered with a mix of secondary shrubs and trees growing within a rocky area pitted with deep holes.

Secondary vegetation on Rota includes fast growing shrubs and weedy species, small trees and vines occurring on lands that have been recently disturbed. Areas classified as coconut plantation consisted of these areas originally planted for commercial purposes that are now intermixed with secondary vegetation.



Heavy browsing by non-native Philippine deer is a major factor threatening rare tree species on Rota.

Figure 8. Threatened/Endangered and Rare Species.



#### 4.3.4. Threatened and Endangered Wildlife

Rota provides habitat for several animal species listed by the FWS and the CNMI as threatened or endangered, or as candidates for listing. Three bird species, the Mariana crow (*Corvus kubaryi*), the Rota bridled white-eye (*Zosterops conspicillatus rotensis*), and the Mariana common moorhen (*Gallinula chloropus guami*) are federally listed as endangered. The Mariana fruit bat (*Pteropus m. mariannus*) is now listed as a threatened species. The Mariana crow and the Rota bridled white-eye populations have significantly declined in recent decades. The Mariana common moorhen is found at one location on Rota, the Rota Resort, where the island's only freshwater wetland habitat exists. Two species, the Mariana swiftlet (*Aerodramus bartschi*) and the Micronesian megapod (*Megapodius l. laperous*), were historically present on Rota, but have since been extirpated. A small population of the Mariana common moorhen has become established at the wastewater treatment ponds of the Rota Resort. Recent analysis conducted by the CNMI Division of Fish and Wildlife has shown that most other bird populations on Rota also have substantially declined over the past few decades.

The green sea turtle (*Chelonia mydas*) is federally listed as a threatened species and the hawksbill sea turtle (*Eretmochelys imbricata*) is federally listed as endangered. Both species inhabit the coastal waters of the Mariana Islands, but only rare instances of green sea turtle nesting have been documented on Rota and most likely the hawksbill sea turtle no longer nests on Rota. The threatened Mariana fruit bat roosts primarily in the Sabana, with smaller numbers in the I Chenchon Bird Sanctuary and the Liyo Conservation Area. The fruit bat forages in the forests on other parts of the island. The sheath-tailed bat (*Emballoneura semicaudata*) was also believed to have inhabited Rota historically, but is now considered to be extirpated from the island. The Micronesian gecko (*Perochirus ateles*) has been listed as a CNMI threatened/endangered species.

The FWS has identified six invertebrates on Rota as species of concern. Five of these have been classified as federal candidates for potential future listing. The five consist of three tree snails (*Partula gibba*, *Partula langfordi* and *Samoana fragilis*) and two endemic butterflies, the Mariana wandering butterfly (*Vagrans egestina*) and the Mariana eight-spot butterfly (*Hypolimnas octucula mariannensis*). The sixth is the Rota blue damselfly (*Ischnura luta* n. spp.).

**4.3.4.1. Mariana Crow** The Mariana crow is endemic to the islands of Guam and Rota. The FWS listed the Mariana crow on Rota as an endangered species in 1984. The CNMI declared the crow a threatened/endangered species under CNMI law in 1986. The FWS's recovery plan for the crow was approved in September 1990. A recovery team was established in 1997 to revise the 1990 plan and a revised recovery plan is currently being drafted.

During 2002, the FWS proposed about 6,000 acres on Rota as critical habitat for the Mariana crow. Although the Mariana crow was historically found on Guam, its population on that island is now down to one dozen birds, ten of which were translocated from Rota or from mainland zoos.

Figure 9. Critical Habitat, Mariana Crow.



On Rota, the population of the Mariana crow has significantly declined. The latest studies (1996-1999) on the crow population concluded that approximately only 220 breeding adults were present. Studies and anecdotal reports over the past two decades indicate that crow nest sites are located on those portions of the limestone forest where the canopy cover is greatest (79 to 93 percent). The FWS reports that between 1992 and 1994 90 percent of the observations made of perching crows on Rota were in native trees. No crow nests have been found in any non-native tree species. Further, of 161 nest trees found during 1996 to 1999, 63 percent were *Neisosperma oppositifolia*, *Eugenia reinwardtiana*, *Intsia bijuga*, or *Premna obtusifolia*. The distance of the nests from the forest edge appears to indicate that nesting crows are sensitive to disturbance from humans.

As noted, Rota has the greatest extent of primary native limestone forest left on any island in Mariana Islands and is the only location worldwide that has a naturally sustaining crow population. The most severe, but latent, threat to the crow and all native forest birds on Rota is the possibility of the brown tree snake, *Boiga irregularis*, becoming established from nearby Guam. There the snake has completely decimated the native forest bird fauna.

Aggressive quarantine measures have kept the invasive brown tree snake from Rota





The I  
Chenchon  
Bird  
Sanctuary  
sea bird  
nesting  
colony lies  
in the  
woodland at  
the base of  
limestone  
cliffs.

Even at a time  
when most birds  
are not present, a  
closer view of the  
treetops at the  
nesting colony  
gives a glimpse  
of the sea bird life  
present.



#### 4.3.5. Other Wildlife

The island of Rota is important habitat for several species of breeding resident sea birds. The I Chenchon Bird Sanctuary on the island's eastern coastline is the largest sea bird nesting colony in the Mariana Island Archipelago providing habitat for thousands of sea birds.



Red-footed boobies are the most numerous of the nesting birds at the I Chenchon sanctuary. Numbers of nests are in the thousands.

White or fairy terns are abundant.



Great frigatebirds nest here but are less abundant than the boobies. They are more vulnerable to disturbance than other nesting species here.



The colony consists primarily of six species of sea birds: the brown noddy (*Anous stolidus*), the brown booby (*Sula leucogaster*), the Red-footed booby (*Sula sula*), the red-tailed tropicbird (*Phaethon rubricauda*), the white-tailed tropicbird (*Phaethon lepturus*) and the white tern (*Gygis alba*).

#### 4.3.6. Marine Resources.

Geologically recent, Rota has a characteristically small fringing reef system. Broadly, Rota's coral reefs remain healthy despite being subjected to significant damage from major typhoons. Nearshore fish resources of Rota also remain in good condition. Some of Rota's marine resources, however, are threatened by non-point pollution, particularly the soil erosion occurring in the Talakhaya region on the south side of the Sabana. Coral reefs along this coastline are showing signs of decreasing health due to significant soil and debris deposition originating from that upland erosion.



Established by Local Law 9-1 in 1994, the Sasanhaya Bay Fish Reserve on Rota was the first marine protected area to be designated in the CNMI. On the southeastern portion of Sasanhaya Bay is the Coral Garden Marine Reserve, a biological preserve. The portion of Rota's fringing reef located within the reserve extends out to a depth of approximately 100 feet. Biological studies within the reserve and at adjacent coastal and submerged reef sites off of Apanon found a total of 72 coral species representing eleven families and 25 genera. All types of coral growth, including species with massive branching and encrusting, were represented in the studied areas. Crustose coralline algae were common on the substratum in the surveyed areas.



Rota has a narrow, healthy fringing reef surrounding much of the island.

The protection of Rota's coral reefs and associated species are the shared responsibility of the Coastal Resources Management Office, the Division of Fish and Wildlife, and the Division of Environmental Quality. In 2003, the Governor of the CNMI signed an executive order for the establishment of an interagency structure to coordinate coral reef issues throughout the Commonwealth. The executive order established a facilitator position in the governor's office and interagency committees from each of the above agencies. Also, in 2003, the CNMI completed a Coral Reef Protection Local Action Strategy containing 49 projects in five protected areas.

The National Oceanic and Atmospheric Administration's National Ocean Service (NOA) has prepared a digital map of Rota's benthic habitats (Figure 10). The map shows the extent of the five benthic zones and habitats that NOA has classified around Rota's shoreline. The habitats are coral reefs, coralline algae, macroalgae, turf algae, and uncolonized.

The coral reef habitat consists of the areas where the linear or fringing reef formation oriented parallel to the shoreline occurs. Habitats within this classification are those which have been colonized by live coral sitting on top of a hardened substrate formed by the deposition of calcium carbonate by reef building corals and other organisms. The coralline reef habitat classification is where ten percent or greater coverage of any combination of numerous species of encrusting or coralline algae occurs. Those areas where there is ten percent or greater coverage by numerous species of red, green, or brown macroalgae have been classified as macroalgae habitat. Turf algae habitat consists of those areas where densely packed algae, usually filamentous, rise to less than one centimeter above the substratum upon which they are growing. This habitat is limited to the area adjacent to the northeast coast of Rota. The uncolonized or reef rubble habitat has been classified as those areas where the hard substrate is composed of relic deposits of calcium carbonate.

#### **4.4. Evaluation of Significance**

##### **4.4.1. Cultural Resources**

On the single island of Rota is found the largest, most intact and unique collection of prehistoric sites in the Mariana Archipelago. These archeological sites contain architectural features that are unique to the ancient Chamorro culture. The Chamorro people who have inhabited the Mariana Islands for three thousand years consider Rota to be their cultural home due to its rich folklore and many intact cultural sites.

Four of the five significant prehistoric sites described and evaluated--the Mochon Latte Village, the Chugai Pictograph Cave, the Taga Latte Stone Quarry and the Alaguan Bay Ancient Village--are judged to represent outstanding examples of the nation's cultural resources. The Mochon and Taga sites are worthy of being nominated for designation as national historical landmarks. The remains of the Alaguan Bay village and the ancient rock art found in the cave at Chugai though also of major significance may require additional study prior to any formal nomination for historic landmark designation being made.



The Taga Latte Stone Quarry is of major significance and in excellent condition

Although significant, the latte stone structures found at the Dugi site are not as well preserved or extensive as those at Mochon. The Dugi prehistoric site is judged to be less than nationally significant.

The Ginalangan Japanese Defensive Complex, although important, is not considered to be of major significance to the history of the United States. The Japanese sugar mill, coastal defense gun, and hospital also are not considered significant to the history of the United States, as are the historic buildings associated with the German and Spanish periods on Rota.

In summary, the four prehistoric sites—the Mochon Latte Village, the Chugai Pictograph Cave, the Taga Latte Stone Quarry and the Alaguan Bay Ancient Village—all possess exceptional value. Each of these sites possesses a high degree of integrity in location, materials, workmanship and association.

#### **4.4.2. Natural Resources**

The limestone forests of Rota are the best and most extensive examples of primary, native limestone forest remaining on any island in the Mariana Archipelago. Moreover, the tall-canopy portions of Rota's limestone forest are the most extensive, most intact example of that particular type remaining in the archipelago. This intact limestone forest sustains threatened and endangered bird, bat and plant species.



Rota's native limestone forest remains habitat for many rare and endangered species.

The integrity of Rota's limestone forest is a major reason why numerous rare and endangered animal species continue to exist here. Rota's forests provide and sustain important habitat for endangered bird species, a threatened species of fruit bat, and numerous species of invertebrates that are proposed for listing as threatened or endangered. Several of these species are endemic to Rota. Rota's limestone forests provide about 94 percent of the designated critical habitat for the endangered Mariana crow.

The intact condition of Rota's native limestone forest and the presence of several threatened and endangered species of plants and animals within the forest represent an outstanding example of a unique type of biotic community. Further scientific study may be needed to identify the particular location or locations on the island where this biotic community is best represented and determine if it is deemed qualified and fulfills the requirements for national natural landmark status.

The island of Rota is the only location worldwide that has a naturally sustaining population of the endangered Mariana crow. The Mariana crow is endemic to the islands of Guam and Rota and typically nests in the native limestone forests of these two islands. The population on Guam now numbers only 12 birds, ten of which were translocated from Rota or mainland zoos. The Guam population is not reproducing and is no longer considered viable. The Mariana crow is still widely distributed on Rota, but the results of several surveys show this population has significantly declined since the early 1980s, when the first island-wide surveys were conducted. At that time, the population of the Mariana crow on Rota was estimated to be 1,318 individuals. The latest studies (1996-1999) concluded that only about 110 breeding pairs were left.

Geologically, Rota does not appear to be significant. The other large islands of the Mariana Archipelago are geologically similar, also being limestone terraces set atop a volcanic core. Similarly, the limestone caves of Rota are not of major significance as geological features

## 5.0. PRELIMINARY EVALUATION OF SUITABILITY AND FEASIBILITY

### 5.1. *Rarity of Resources (Suitability)*

Congress has declared in the General Authorities Act of 1970 that areas comprising the national park system are cumulative expressions of a single national heritage. Potential additions to the national park system should therefore contribute in their own special way to a system that fully represents the broad spectrum of natural and cultural resources that characterize our nation.



Native biodiversity characterizes broad expanses of Rota's landscape.

#### 5.1.1. Natural History Themes

The natural history theme, Tropical Ecosystems, is well represented in the study area. Although there are several examples of tropical ecosystems found in existing units of the national park system (Virgin Islands National Park, the National Park of American Samoa, and Haleakala National Park), there are no units currently in the system containing noteworthy examples of the native limestone forest of the Mariana Islands. Within War in the Pacific National Historical Park on Guam on the Fonte Plateau above Asan is only example of the native limestone forest of the Mariana Islands existing in the national park system. However, this example is considerably less than 50 acres in extent and the trees it contains, in terms of size and age, are not of significance. Consequently, this particular type of tropical ecosystem is currently not adequately represented in the national park system. Adding the best remaining example of this particular type of tropical ecosystem to the national park system would contribute to ensuring that the national park system represents the most outstanding examples of the nation's natural resources.

Volcanism has only limited representation in the study area. The examples of volcanism found in the study area are minor and consist of a few areas where Rota's volcanic core is exposed. This natural history theme is already well and better represented in several existing units of the national park system. Hawaii Volcanoes National Park on the Big Island,

Haleakala National Park on Maui and Kalaupapa National Historical Park on Molokai contain nearly all of the different landforms comprising this natural history theme. Other national parks on the Mainland also contain this type of landform. The limestone caves found on Rota are also better represented in existing units of the national park system.

### **5.1.2. History and Prehistory Themes**

The prehistory theme, Cultural Development: Indigenous Populations, is very well represented in the study area. The Mochon Latte Village, the Taga Latte Stone Quarry, the Chugai Pictograph Cave and the Alaguan Bay Ancient Village represent outstanding examples of three subthemes (The Earliest Inhabitants, Post-Archaic and Pre-Contact Developments and Prehistoric Archeology) and several facets of those subthemes. The facets are: (1) Early Peopling of the Pacific, (2) Late Prehistoric Adaptations in Western, Central and Eastern Pacific, (3) Prehistoric Architecture, Shelter and Housing, (4) Prehistoric Technology, (5) Prehistoric Art, and (6) Prehistoric Settlements and Settlement Patterns. All six are important facets of the culture of the indigenous Chamorro people of the Mariana Islands. These facets are currently not represented in the national park system.

The subtheme, War in the Pacific, 1941-1945, is also represented in the study area, primarily by the Ginalangan Japanese defensive complex. However, that theme is better represented in the national park system at War in the Pacific National Historical Park on nearby Guam. Rota was never invaded and the site containing the defensive complex played no important role in the Pacific Theater of World War II.



Taga Latte  
Stone Quarry



Mochon Latte  
Village

### **5.1.3. Summary of Suitability**

In summary, there is currently no representation of the limestone forest tropical ecosystem of the Pacific islands in the national park system. That the limestone forests of Rota also provide important and even critical habitat for several species of endangered plants and animals provides additional justification for adding this tropical ecosystem to the national park system. The significant tangible resources found on Rota associated with the three thousand-year old Chamorro culture are not presently represented in the national park system. Currently, there are no examples of the unique prehistoric architecture of the Chamorro people in the national park system, nor any examples of their art or settlements. The island of Rota contains the most outstanding examples of all of these cultural resource values. The present level of protection appears to be inadequate for the long-term protection of Rota's native forest, its threatened and endangered species, and its significant archeological sites.

### **5.2. *Feasibility for Addition to the National Park System***

In addition to the determination of national significance and their seeming suitability as additions to the national park system, the natural and cultural resources of Rota appear to also meet some of the tests of feasibility. Namely, they appear to be of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment. These natural systems and prehistoric settings also appear to be capable of being acquired and administered by the NPS at a reasonable cost.

With regard to acquisition, land ownership is one of the factors considered in evaluating the feasibility of an area or site as a potential unit of the national park system. The NPS, to ensure the

long-term protection of resources included within units of the national park system established by Congress, usually attempts to acquire all of the lands located within park boundaries. These lands may be acquired by purchase, donation or exchange. Most of the time, the NPS seeks to acquire a fee simple ownership. Over time, this acquisition method has proven to be the most effective to ensure the protection of national park resources for future generations.

There are, however, other methods that can and have been used by the NPS to protect and manage national park resources. These include acquiring easements (less-than-fee ownership), entering into cooperative agreements, and leasing. These alternative methods are utilized in those units of the national park system that have been established on lands already in public ownership. In these instances, the public entity owning the land is willing to dedicate their lands to national park purposes and not be compensated for allowing their lands to be managed by the NPS.

The Covenant to Establish a Commonwealth of the Northern Mariana Islands defines the relationship between the U.S. and the CNMI. Article VIII, Section 806(b) of the Covenant gives the NPS, as an agency of the U.S. federal government, the authority to acquire for public purposes “in accordance with federal laws and procedures any interest in real property by purchase, lease, exchange, gift or otherwise as may be negotiated by the parties.”

Article XII, Section 1 of the Constitution of the Northern Mariana Islands “restricts the acquisition of permanent and long-term interests within the Commonwealth to persons of Northern Mariana descent.” Section 3 of Article XII defines “permanent and long-term interests” to include “freehold interests and leasehold interests of more than forty years including renewal rights.”

By letter (see APPENDIX), legal counsel for the CNMI legislature (Senate) opined the NPS legally can acquire an interest in lands sufficient to support the establishment of a unit of the national park system. Senate counsel clarified the above by opining that establishment of a national park would fulfill the “public purpose” requirement of section 806(b) of the Covenant and that although NPS could acquire an interest, this interest could not be a fee simple interest. The basis for the latter is Article XII restricting “freehold interests and leasehold interests of more than forty years including renewal rights . . .” to persons of Northern Mariana descent.

Thus, while the Covenant does give the NPS authority to acquire lands for the public purpose of a national park, the Constitution of the Northern Mariana Islands prevents the NPS from acquiring a fee simple interest in those lands. However, because nearly all of the lands that have been found to be of national significance and meet the test of suitability already appear to be in public ownership, acquisition by securing a less-than-fee interest is judged to be feasible--so long as that interest is long-term and achieved at no cost to the federal government.

With regard to administration, because of the well-preserved condition of the cultural and natural resources evaluated, their configuration, and the absence of any major threats at this time, it is judged the NPS could protect and manage them at a reasonable cost. It is also judged the NPS could provide appropriate and adequate visitor use facilities and interpretive services to these areas and sites at a reasonable cost.

## **6.0. ALTERNATIVES FOR RESOURCE PROTECTION AND MANAGEMENT**

Alternatives for the protection of Rota's nationally significant natural and cultural resources have been evaluated to determine (1) if they can be adequately protected outside of the national park system and (2) if they would be available to the public. Each of the alternatives has also been evaluated with respect to:

- whether or not resources would be protected for future generations;
- the potential effect on existing and future land uses and the local economy;
- the type and quality of visitor use opportunities provided;
- a general and comparative consideration of costs; and
- the potential to improve resources.

### ***6.1. Alternative One. Establish a Unit of the National Park System***

This alternative calls for those areas or sites on Rota found to possess resources of national significance to be added to the national park system and be operated by the U.S. National Park Service. This alternative would apply only to those areas or sites found to be feasible for park management.

#### **6.1.1. Long-term Resource Protection**

The establishment of a unit of the national park system by Congress would ensure the protection of Rota's nationally significant cultural and natural resources for future generations. The U.S. Congress establishes national parks. Placing these resources within a national park would ensure their long-term protection under federal law. The NPS contains park professionals who would be the cadre for the training of local residents to operate and maintain a national park. Funding for units of the national park system comes from Congress. Each and every unit of the national park system has its own separate annual operating budget thus ensuring a continuous and steady source of funding year after year. As noted, units of the national park system also can compete each year for project money for protecting natural resources, preserving historic sites, and constructing visitor use facilities.

#### **6.1.2. Effects on Existing Land Uses, Land Ownership and the Local Economy**

The NPS would gradually phase out non-park uses on lands possessing nationally significant cultural and natural resources. Land ownership would not be affected. All of the lands containing resources judged to be of national significance are now in public ownership. Nearly all of these public lands have already been designated as conservation areas under local law. The effect on Rota's economy would be beneficial in the long-term. The presence of a national park in an area usually results in an increase in the demand for service industries such as hotels, car rentals, and restaurants. The establishment of a national park on Rota would also create additional job opportunities for residents of that island.

#### **6.1.3. Quantity and Type of Visitor Use Opportunities**

There would be an increase in the number of visitors and an increase in the type of visitor use opportunities if a unit of the national park system were established on Rota. Many of these visitors would be eco-tourists. It is likely that the establishment of a unit of the national park

system on Rota would be bring more visitors to Rota than would any of the alternatives evaluated in the previous chapter.

#### **6.1.4. General and Comparative Consideration of Cost**

The costs to operate and maintain a national park would be greater than those costs for a Commonwealth park or a unit of the national wildlife refuge system. These costs would be considerably higher than those costs associated with national landmark designation or the costs to operate locally designated conservation areas. All of these costs would be come out of the operation of the national park system and would not be borne by CNMI. Since the natural and cultural resources to be protected for future generations are of national rather than of merely local significance, the responsibility for funding would more fairly become a national responsibility rather than a local burden.

#### **6.1.5. Potential for Resource Improvement**

The establishment of a unit of the national park system would substantially increase the potential for maintaining and eventually improving the overall health of Rota's native limestone forest. This would also mean better protection for the habitats of Rota's threatened and endangered species and its nesting seabirds. NPS cultural resource professionals would be available to provide expertise to stabilize and preserve Rota's significant prehistoric resources.

### ***6.2. Alternative Two. Establish a Commonwealth Park on Rota***

Under this alternative certain natural areas and cultural sites identified in this reconnaissance survey as possessing national or Commonwealth-wide significance would be managed by a park agency of the CNMI government. The CNMI presently does not have a system of commonwealth parks. The DLNR has a division to maintain small urban parks, but no agency presently exists within the CNMI government to administer large natural areas or significant cultural sites. A commonwealth park system would need to be legislatively established and an agency created and funded for operating, maintaining, and protecting for future generations those natural and cultural areas judged to be of significance to all of the CNMI. The purpose of the CNMI park system would be to promote public (residents and non-residents) enjoyment, appreciation and enrichment of those areas established within that system.

The establishment of a Commonwealth-based system of protected areas was one of the findings to come out of the Heritage Eco-Tourism Conference held on Rota in 2000.

#### **6.2.1. Long-term Resource Protection**

The establishment of a Commonwealth park system and a public agency by the CNMI legislature specifically to preserve and protect large natural areas and cultural sites would help to ensure long-term resource protection of many of Rota's significant cultural and natural values. Protection of natural and cultural resources would be under CNMI laws. Long-term resource protection would depend a great deal on the successful development of a cadre of local park officials possessing the necessary expertise to operate and maintain large natural areas and significant cultural sites. The limited amount of funding available on Rota and within CNMI to operate a system of Commonwealth parks is expected to compromise that system's ability to adequately preserve and protect Rota's natural and cultural resources.

#### **6.2.2. Effects on Existing Land Uses, Land Ownership and the Local Economy**

Non-park uses on lands possessing significant cultural and natural resource values would be eliminated on any lands made part of a Commonwealth park system. Private land ownership

would not be affected. In the future, private lands adjoining potential Commonwealth park lands could be exchanged for public lands elsewhere or purchased by the Commonwealth or by a third party who then transfers the land to the Commonwealth. These potential land exchanges only would be made on a voluntary basis and they would involve relatively few parcels. Having park areas set permanently aside for public use would increase the potential for the future growth of tourism on Rota. The economic benefits accruing specifically to Rota may be limited if Commonwealth parks are also established on other nearby CNMI islands.

#### **6.2.3. Quantity and Type of Visitor Use Opportunities**

These parks not only would appeal to eco-tourists, but to a broad spectrum of traveler who incorporate parks into their travel plans." (i.e., Hawaii is a great example)

#### **6.2.4. General and Comparative Consideration of Cost**

The costs to operate and maintain a Commonwealth park would be borne by the CNMI and come from having to fund a new government agency and incorporating the responsibilities within the existing DLNR. There could be a small increase in the tax burden to CNMI residents from having to fund a new government agency to operate and maintain a system of natural and cultural park areas. Some of the expenditures for the planning and development of the Commonwealth park system might be shared with the federal government through the use of Land and Water Conservation Fund matching grant monies available from the NPS.

#### **6.2.5. Potential for Resource Improvement**

The establishment of a public agency by the CNMI legislature specifically responsible for the long-term care of Rota's cultural and natural resources would increase the level of protection of these resources. However, the funding limitations for CNMI initiated management, protection, restoration, and visitor interpretation would most likely limit long-term protection of those resources as well as the ability to provide a quality visitor experience to Rota. There would be little potential for resource improvement under this alternative.

### ***6.3. Alternative Three. Establish a National Wildlife Refuge***

This alternative calls for natural areas on Rota containing threatened and endangered species to be added to the national wildlife refuge system, and operated and managed by the FWS. This alternative would apply primarily to those lands containing habitat for the Mariana crow and the Rota bridled white-eye. If cultural resources were located within any national wildlife refuge area, they would be protected under the applicable federal statutes such as the National Historic Preservation Act or the Historic Sites Act. However, the FWS does not have the legislative authority or the expertise to manage cultural resources. Consequently, this alternative, by itself, would not provide protection to areas containing only archeological or historic sites.

#### **6.3.1. Long-Term Resource Protection**

The establishment of a national wildlife refuge would protect threatened and endangered species and other rare species, such as the Mariana crow and the Rota bridled white-eye. As a unit of the national wildlife refuge system, Rota's populations of rare bird and plant species, and a major portion of its native limestone forest would be protected in perpetuity. The FWS possesses trained biologists with experience and expertise in managing large natural areas to protect endangered species. As noted, cultural resources located outside of designated critical habitat would not receive any additional protection, long-term or otherwise, under this alternative.

### **6.3.2. Effects on Existing Land Uses, Land Ownership and the Local Economy**

Land uses that adversely impact threatened or endangered species would not be allowed within the wildlife refuge. If any private lands or permitted homestead lands were included within the boundary of any national wildlife refuge, they could be exchanged for public lands located elsewhere, or purchased by the Commonwealth or a third party for transfer to the refuge. No lands are currently identified for homesteading in areas that most likely would become a national wildlife refuge; however uses that could be deemed compatible with a park, such as visitor centers, trails, and archaeological interpretive sites, may not be acceptable for a wildlife refuge. The establishment of a national wildlife refuge on Rota would primarily attract only a certain type of eco-tourist (bird watchers, nature photographers, etc.), so there would be only a limited benefit to the local economy from increased visitation.

### **6.3.3. Quantity and Type of Visitor Use Opportunities**

There would likely be some increase in the number and type of visitor use opportunities due to the establishment of a national wildlife refuge, but these would likely be fewer than under the Commonwealth park alternative and far fewer than under a unit of the national park system. Visitor use and interpretive facilities developed within national wildlife refuges are usually more limited than those built within national parks.

### **6.3.4. General and Comparative Consideration of Cost**

Costs to operate and maintain a national wildlife refuge would likely be higher than to those associated with a Commonwealth park because of the larger area to be managed. These and other costs associated with natural resource management would be considerably higher. However, the costs for the development of public use facilities would likely be less than under the Commonwealth park alternative or if a unit of the national park system were established. All of these costs would come out of the operation of the national wildlife refuge system and would not be borne by the CNMI.

### **6.3.5. Potential for Resource Improvement**

The establishment of a national wildlife refuge would substantially increase the potential for improving habitats of threatened or endangered species. Improvements in cultural resources would take place only if they happen to be located within the boundary of the refuge and only if supplemental funding was appropriated for historical resource protection and management. This kind of work also most likely would not have as high a priority within a national wildlife refuge.

## ***6.4. Alternative Four. Designation as National Landmarks***

This alternative calls for areas determined in this reconnaissance survey to be of national significance to be studied and nominated, reviewed and recommended for designation as national landmarks. The cultural resources would be nominated for designation by the Secretary of the Interior as National Historic Landmarks and the biotic resources as National Natural Landmarks. These are voluntary programs administered by the NPS. Ownership of land is not affected and designation occurs only with the consent of the landowner or landowners. The protection of landmark resources rests with the landowner. Continuing integrity of the landmark property would be essential in maintaining the quality of national significance and landmark status. Under this alternative, there would be no on-site management.

National Historic Landmarks The NPS is responsible for administering the National Historic Landmarks program. The purpose of the program is to focus attention on historic properties that are of exceptional value to the nation as a whole rather than to a particular State, Territory or Commonwealth. The NPS is authorized to conduct surveys and research

for the purpose of determining which properties possess exceptional value as illustrating the history of the United States. Specific criteria for determining national significance are applied to evaluate historic properties for possible designation as National Historic Landmarks (see INTRODUCTION).

To be considered for designation as national historic landmarks, the existing baseline information on each of the National Register sites would need to be compiled into a single document and submitted for review by the Secretary of the Interior's Advisory Board. Following their review, the board would submit its recommendations to the secretary who has the final responsibility for declaring historic properties eligible for designation as national historic landmarks.

Designation as national historic landmarks would provide a formal recognition by the Secretary of the Interior in the form of a bronze plaque attesting to the national significance of the important archeological sites now listed on the National Register. National historic landmark designation would increase the potential for cohesive management of Rota's significant cultural resources. National historic landmark boundaries would cover only those areas where significant cultural resources are located.

National Natural Landmarks Essentially, the National Natural Landmarks program is the biotic or geologic equivalent of the national historic landmark program. The purpose of the program is to identify and encourage the preservation of nationally significant examples of the full range of features that constitute the nation's natural heritage, including the habitats for native and/or listed plant and animal species.

To provide the scientific basis for nominating Rota's native plant and animal habitat for natural landmark designation, additional study may be needed. The NPS usually contracts with natural scientists for these kinds of studies. Nomination forms are then completed by professionals with the appropriate academic credentials and submitted to the Secretary of the Interior.

#### **6.4.1. Long-Term Resource Protection**

National landmark designation is a formal recognition afforded to resources that have been studied and determined to be of national significance. Designation as a landmark by the Secretary of the Interior would not give any authority to the NPS to operate and maintain the affected lands. Under this alternative, there would be no guarantee of long-term resource protection. There would be no on-site management by a public entity, including interpretation for visitors. Landmark designation would not guarantee the protection of Rota's significant natural and cultural resources for future generations.

#### **6.4.2. Effects on Existing Land Uses, Land Ownership and the Local Economy**

Landmark designation would have very little effect on land uses and no effect on land ownership. The recognition of national significance that landmark designation would bestow on cultural or natural resources would likely attract more visitors to Rota and there would be a limited beneficial effect on the local economy.

#### **6.4.3. Quantity and Type of Visitor Use Opportunities**

Landmark designation would have little effect on the quantity and type of visitor use opportunities. No visitor use facilities would be developed on landmark areas unless the property owner chooses to build them. There would be no interpretation for visitors by a public entity.

#### **6.4.4. General and Comparative Consideration of Cost**

There are no costs associated with landmark designation.

#### **6.4.5. Potential for Resource Improvement**

Recognition of a natural or cultural resource's national significance may provide incentive for landowners to improve the condition of that resource. Any improvements made to the affected resources would be up to the landowner.

### ***6.5. Alternative Five. Protection By Locally Designated Conservation Areas***

Under this alternative no park agency would be established at the CNMI level nor would there be any involvement in managing resources by the FWS or the NPS. None of the affected lands would be nominated for landmark designation. The existing conservation areas as well as any future conservation areas would continue to be protected under local law and managed by DLNR. Archeological sites listed on the National Register would be protected and managed by the CNMI HPO. Under this alternative an island-wide HCP agreement would eventually need to be developed between the CNMI and the Federal governments to resolve the federal and local laws pertaining to endangered species conservation. Without such a legal agreement, all development or clearing projects proposed for any listed species habitat on Rota would need to comply with the endangered species issues on a case-by-case basis which would involve significant time and financial costs. An island-wide approach would be much more cost and time efficient and also provide direct benefits to Rota's tourism industry.

#### **6.5.1. Long-Term Resource Protection**

The long-term protection of these locally established conservation areas would rest with the CNMI. Currently, the land within Rota's conservation areas is owned by the MPLA and managed by the DLNR. These conservation areas also are not fully protected from degradation because the conservation area boundaries have never been legally established, nor have regulations been promulgated specifically for those local conservation areas, nor has that conservation land been transferred to a natural resources management agency for long-term ownership and management authority. Currently, there is no guarantee these areas will be protected over the long-term for future generations.

A HCP agreement between the CNMI and the Federal government could provide legal assurance that conservation areas (identified in the agreement) would be protected over the long-term, however, those agreements may be amended, and either party to the agreement has the option of withdrawing from the agreement. This would in turn lead to a continuing need to resolve the endangered species issues, yet there would be no guarantee as to what conservation agreements could be developed to resolve those issues if further negotiations are needed. This alternative consisting of locally protected conservation areas, with or without a HCP agreement, may provide some limited conservation protection, yet it is uncertain what quality or quantity of conservation will result from those actions, and it would not have the funding needed to adequately ensure the protection of those resources nor the development of a high quality visitor interpretation network.

#### **6.5.2. Effects on Existing Land Uses, Land Ownership and the Local Economy**

There would be no effect on land use or ownership or on the local economy. The existing conservation areas, established by local law, but never formally established, would continue to exist. If an island-wide HCP agreement was established, it would most likely include those local conservation areas and possibly include small additions.

**6.5.3. Quantity and Type of Visitor Use Opportunities**

There would be little or no effect on the quantity and type of visitor use opportunity. The capability of interpreting Rota's natural and cultural resources would be very limited.

**6.5.4. General and Comparative Consideration of Cost**

There would be no major additional costs connected with implementing this alternative of local conservation areas. However, there could be some increased management costs if an island-wide Habitat Conservation Plan is implemented. The funding to manage the existing conservation areas would remain with the CNMI (DLNR).

**6.5.5. Potential for Resource Improvement**

Under this alternative, little potential would exist for improving resources. The existing conservation areas on Rota are not legally protected due to the lack of boundary mapping and conservation area regulations.

## **7.0. FINDINGS**

### ***7.1. Position of CNMI and Rota Officials***

The Rota Legislative Delegation has stated they are pleased with the way the NPS has managed and operated American Memorial Park on Saipan. The delegation believes that a national park would provide for the professional management and long-term protection by law needed to protect their island's unique and significant resources for future generations. The delegation also sees the presence of a national park on Rota as a foundation for a sustainable economy based on tourism.

### ***7.2. Community Interest and Support***

The Rota Legislative Delegation has indicated there is strong local support from residents for conservation on that island. They cite the three land conservation areas and the one marine conservation area previously established on Rota during the 1990's (as well as other legislation) as evidence of this support.

### ***7.3. Large Natural Areas and Significant Cultural Sites***

Based on the foregoing evaluation of significance and a preliminary evaluation of suitability and feasibility, the following areas have been found to contain cultural or natural resources possessing the potential for being considered by Congress for inclusion in the national park system.

Figure 11 shows the general extent of a large natural area and four cultural sites on Rota to be feasible for park management as part of the national park system--or as the initial units of a Commonwealth park system legislatively established by the CNMI.

#### **7.3.1. Mochon Latte Stone Village**

Any national park area here should encompass at a minimum the 46 individual latte stone sites, the associated pottery and artifact scatters, the stone-lined water wells plus a sufficient buffer area to ensure the protection of the prehistoric village setting and where appropriate visitor use facilities could be developed. The area has potential to be managed and operated as an individual historic unit or as a sub-unit of a larger unit of the national park system. The national park area should also encompass the adjacent pristine white sand beach that provides nesting areas for the endangered hawksbill sea turtle. There are also examples of Rota's fringing coral reef found along this coast. The offshore waters and their benthic habitats should also be included in any national park unit.

The mayor of Rota and the CNMI Historic Preservation Office have proposed that approximately 50 acres of the ancient village site of Mochon be designated the Mochong Cultural Interpretive Site. About one-half of the present designated historic preservation site is in public ownership, acquired by CNMI as a land exchange with the owners.

#### **7.3.2. Taga Latte Stone Quarry**

Any national park area here should include all of the eight latte stone columns and the eight stone capstones--all in varying stages of being quarried out of the limestone rock, plus the adjoining trenches. The national park area needs to also include a sufficient amount of the surrounding land to preserve the visual integrity of the historic setting. Measures are also needed to ensure the public has access to the site through the surrounding lands.



This pristine white sand beach and tide pools adjoin the Mochong village.

This potential national park area could be managed as either a separate historic unit or as part of a larger, more extensive national park area. The area containing the stone columns and capstones is presently in public ownership and within a locally designated historic preservation site. However, the surrounding area consists of lands that are part of a proposed agricultural homestead project area. If agricultural homesteads were to be developed on these adjacent lands, the integrity of the quarry's prehistoric setting would be seriously compromised.

### **7.3.3. Chugai Pictograph Cave**

The entire 185-foot long cave, containing approximately 90 pictographs of prehistoric origin, plus the remains of the World War II Japanese quarters and associated artifact material located near the cave entrance would merit inclusion in any national park area. The trail and rock stairway currently providing access to the pictograph cave also should be included in the national park area, as well as the graded parking area located at the trailhead.

The pictograph cave is located within the I Chenchon Bird Sanctuary, although most of the trail accessing the sanctuary is located in a locally designated conservation area that currently does not have full legal protection status. The cave would not be feasible to manage as a separate national park area.

### **7.3.4. Alaguan Bay Ancient Village**

The more than 60 latte comprising the seven distinct residential areas of an ancient Chamorro village plus the associated artifact scatters have the potential to be managed as a historical area of the national park system. The sites' significance would make it worthy of being managed as a separate unit, but due to its location within a tall-canopy limestone forest it also could be managed as part of a large natural area, but where the protection and preservation of cultural resources would receive highest priority. The development of access and visitor use facilities to the site would be consistent with managing resources within a large natural area.

### 7.3.5. Native Limestone Forest

The portion of Rota beginning at the northeastern end of the island and extending around the eastern coastal cliff lines to include the I Chenchon Bird Sanctuary and the southern coastal cliff lines including all of the Alaguan area down to Puntan Haina, plus the extensive area surrounding the Sabana encompassing As Rosalia on the east, the steep slopes of Mananana and Uyulan Hulo on the north, Isang on the west, and the uppermost portions of the Takakhaya to the south possesses the natural resource values meriting management as a unit of the national park system. The offshore waters and their benthic habitats from the Mochon Latte Stone Village to Puntan Haina should also be included.

Within this area are the best examples of Rota's limestone forest, which is an excellent representation of what remains throughout the CNMI of the Mariana limestone forest. Also located within this area is most of what remains of the mature (closed canopy) native limestone forest. Nearly all of the locations that have been found to contain subpopulations of the endangered plant, *Serianthes nelsonii*, are within this area.

This expanse of native forest includes most of the area identified on Rota as critical habitat for the endangered Mariana crow and nearly all of the area identified as habitat for the endangered Rota bridled white-eye. Moreover, all of the locations identified on Rota as roosting areas for the threatened Mariana fruit bat are within this area, as are the locations providing habitat for species of native butterflies and snails. The existing I Chenchon Bird Sanctuary where several species of nesting sea birds are found is also within this area.

Other natural resources within the area are portions of the native strand vegetation along the north coast from As Matmos to the boundary of the I Chenchong Bird Sanctuary. There are also small stands of atoll forest along this coast. Rota has the most extensive stands of atoll forest, which are now quite limited on Saipan and absent on Tinian. Included also within this large natural area is a good representation of Rota's fringing coral reef and other benthic habitats.

In addition to its natural resources, this area contains important cultural resources. This entire coastal area from Mochon to As Matmos appears to have been the site of a major prehistoric settlement and is rich in archeological resources, including latte stone village sites and major areas of pottery shards from the latte and pre-latte periods. This area is being proposed for local designation as the Maya Historical District. Numerous archeological sites are dispersed among the eastern and southern coastal cliff lines of Rota, as well as inland from those cliffs. The most significant sites known around the eastern end of the island are the Chugai Pictograph Cave and the Taga Stone Quarry. Along Rota's southern coast there are important archeological sites, in particular the Alaguan area where surface scatters of cultural material are believed to be the most abundant on the island. This portion has been designated as the Alaguan Bay Historical District. In addition, several caves containing pictographs have been documented in the cliffs above that coast. This extensive area undoubtedly contains many other archeological sites and features, as yet undiscovered.

This entire area is on public lands that have been either already designated or proposed for designation as local conservation areas. Only a few private lands exist within the entire area identified here as existing or proposed conservation areas. As a potential national park, this entire area should be managed as a single cohesive, contiguous, ecological unit primarily for the long-term protection of a significant portion of Rota's native limestone forest as well as its threatened and endangered species such as the Mariana crow (available evidence indicates

this species is most abundant in native limestone forests). Wherever significant cultural resources are present in this area, they would be protected and managed as similar resources in separate historic areas.

### **7.3.6. Concepts for Resource Management and Visitor Use**

The following concepts are intended to illustrate the basic management principles used by the NPS in operating units of the national park system. Broadly, in large natural areas, the NPS preserves biotic and geologic resources, as well as processes, systems, and values in an unimpaired condition, to perpetuate their inherent integrity and to provide present and future generations with the opportunity to enjoy them. In cultural areas where significant prehistoric sites and features exist, the NPS preserves and fosters appreciation of these resources, and in its management would demonstrate respect for those peoples who are traditionally associated with these resources.

**7.3.6.1. Large natural areas** Natural areas such as Rota's native limestone forest would be managed to preserve their inherent integrity as a functioning ecosystem. Resource management would focus on providing visitors with the opportunity to enjoy and benefit from observing natural systems evolve, with minimum influence by human actions. Landscapes disturbed by natural phenomena such as hurricanes, landslides or fires would be allowed to recover naturally. Natural resource values protected by the NPS include plants, animals, water quality, soils, geologic features, air quality, and scenic vistas.



Visitor walkways, similar to parks in south Florida, could be extended into the booby rookeries with careful access only in company with local guides



**7.3.6.2. Significant cultural sites** Cultural sites such as Mochon, Taga, Chugai and Alaguan Bay would be managed by the NPS for their long-term preservation and for visitor enjoyment. Though public access and interpretation would be provided to these sites, the preservation of significant prehistoric resources in their existing condition would receive primary consideration. The NPS would employ appropriate treatments and techniques to protect these sites and their cultural values from deterioration, overuse, theft and vandalism without compromising their integrity.

In managing and operating the above described natural areas and cultural sites, the NPS would develop appropriate public access and provide basic visitor services such as restrooms and parking. The NPS would also develop interpretive facilities and services such as wayside exhibits, publications, guides, park maps, and ranger talks and programs. No overnight facilities would be developed by the NPS within any of the areas. Rather, the NPS would rely on private enterprise to develop any lodging facilities or other commercial services needed for visitors outside the boundary of any national park system unit.

#### **7.4. Reconnaissance Survey Findings**

Inclusion in the national park system is one of the ways to ensure that the very best places in our nation are protected for the enjoyment of future generations. Of the alternatives, the establishment of a unit of the national park system appears to be the best way to ensure the long-term protection of Rota's most important cultural resources and the best examples of its native limestone forest. Management by the NPS ensures that these resources would be interpreted for visitors and appropriate facilities developed for visitor use. The NPS has a long tradition of managing cultural resources and large natural areas. If established by Congress as a unit of the national park system, the areas on Rota containing a representative and feasible sampling of its most significant resources would be eligible for both base and project funding on a sustained basis.

Kaloko-Honokohau National Historical Park in Hawaii provides a good example of the sustained funding which is available to units of the national park system. Congress established Kaloko-Honokohau in 1978 "to provide a center for the preservation, interpretation, and perpetuation of traditional Hawaiian activities and culture." Funding for base operations commenced in 1980. In that year, the park's total operating budget was \$122,000. That amount has steadily and significantly increased over the years. By 1985, it was \$206,000; in 1990, it was \$248,000; in 1995, it was \$572,000; and by 2000 the park's annual operating budget had reached \$1,000,000. This year, the operating budget for Kaloko-Honokohau totals about \$1,500,000.

In addition to annual base operating funds, Kaloko-Honokohau, like all units of the national park system, is eligible to compete for project monies for resource management, cyclic maintenance and interpretation. Over the years, the park has received funds for specific projects totaling nearly \$1,000,000.

Kaloko-Honokohau has also successfully competed for construction monies for the development of needed park facilities. Last year, construction was completed for visitor restrooms and parking. This development project was funded at about \$600,000. In 2007, Kaloko-Honokohau is scheduled to begin construction of a visitor center/museum. That project is currently funded at \$3.4 million.

Based on a long tradition beginning with Yellowstone National Park in 1872 the establishment of a unit of the national park system by Congress appears to be the best way to ensure the long-term protection of Rota's significant cultural and natural resources, including its limestone forests and endangered and threatened plant and wildlife species.

The natural and cultural resources of the island of Rota are important not only to island residents and the CNMI, but to the entire nation. These resource values merit protection in their unimpaired condition for all time. The establishment of a unit of the national park system would assure a source of funding for base operations, plus provide the opportunity for securing project monies for natural and cultural resource management, inventorying and monitoring, carrying capacity studies, wayside exhibits, park guides and maps.

This reconnaissance survey has found that the nationally significant cultural and natural resources of Rota are presently not being adequately managed. There are only a few of the locally established conservation areas that have any management at all and this appears to be inadequate. The reason for the inadequate level of on-site management is the scarcity of public monies, not the absence of desire by the residents of Rota or the CNMI. In fact, Rota's legislative delegation has shown an extraordinary commitment to the protection of the island's environment through the introduction and passage of several bills. Despite these efforts, none of Rota's resources are guaranteed protection for future generations. The existing conservation areas and the prehistoric sites are not currently being operated and maintained by professional resource managers, nor are they being adequately interpreted for public enjoyment. None of the prehistoric cultural sites are being protected from vandalism and theft.

In summary, the establishment of a unit of the national park system appears to be the best way to ensure the long-term preservation of a significant portion of Rota's native limestone forest. Within the national park unit there would be opportunities for controlling the introduction and spread of non-native plants and animals, including active management to ensure the control of the brown tree snake. Under NPS management, archeological sites would be protected from damage by vegetation and soils aggregation.

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## **9.0. PREPARERS AND CONTRIBUTORS**

Gary Barbano, Park Planner, NPS (retired)

Raychelle Daniel, Marine Work Group Research Facility, Research Corporation University of Hawaii

Pete "June" Duenas, CNMI Historic Preservation Office

Mike Ernest, Senate Legal Counsel, CNMI Legislative Bureau

Tom Fake, Landscape Architect, NPS

Bryan Harry, Pacific Area Director, NPS (retired)

Senator Paterno S. Hocog, Rota Legislative Delegation, CNMI Legislature

Senator Paul A. Manglona, Rota Legislative Delegation, CNMI Legislature

Loyal Mehrhoff, Botanist, NPS

Martin Mendiola, Assistant to the Mayor of Rota

Greg Schroer, Scientist and Planning Consultant, Resources Northwest

Senator Diego M. Songao, Chairman, Rota Legislative Delegation, CNMI Legislature

## 10.0. APPENDIX

### 10.1. Site Visit

On Sunday morning, June 13, 2004, Pacific Area Director Bryan Harry and Park Planner Gary Barbano flew to Rota to accompany Senator Diego M. Songao, Senator Paterno S. Hocog and Senator Paul A. Manglona all members of the Rota Delegation of the CNMI Legislature on a tour of the island of Rota. Mr. Michael L. Ernest, legal counsel to the CNMI Legislature; Martin Mendiola, representing the Mayor of Rota; Mr. Greg Schroer, the CNMI consultant preparing a Habitat Conservation Plan for Rota; and Pete "June" Duenas, representing the CNMI Historic Preservation Office were also members of the tour group.



Left to right--  
Greg Schroer,  
Gary Barbano,  
Senator Diego  
Songao, Pete  
"June" Duenas,  
Senator  
Paterno Hocog,  
Martin  
Mendiola, Bryan  
Harry, Senator  
Paul Manglona.  
Photo by Michael  
Ernest.

At the beginning of the tour, the members of the Rota Delegation passed on their concerns with the manner in which public land is currently being distributed and developed on Rota. Mindful that Rota is home to endangered plant and animal species as well as ancient Chamorro cultural sites and features, the senators believe that CNMI residents and all U.S. citizens would best be served if some land on the island could be set aside and protected as a park or conservation area for future generations. They explained that the reason for inviting NPS planning professionals to see Rota's natural and cultural resources was to initiate a dialogue as to how this could best happen.

The first site visited was the I Chenchon Bird Sanctuary, home to a wide variety of nesting seabirds. The sanctuary, taking in coastal cliffs extending along the entire length of Rota's eastern coastline, is comprised of what appeared to be undisturbed native limestone forest. The sanctuary is accessible via a boardwalk and at the sanctuary wayside exhibits have been installed by the FWS to provide on-site interpretation of the sea bird species found there. The next site visited was the Taga Latte Stone Quarry, remarkable for the enormous size of its latte stones. The quarry possesses what appeared to be complete site integrity. The quarry is of major importance to the Chamorro culture and is thought to be unique.

After the visit to the quarry, the group visited a cave containing ancient pictographs of animals on its interior walls. June Duenas from the Historic Preservation Office informed the NPS that the pictographs were believed to be more than 3,000 years old. Following the visit to the cave, the group drove to the ancient village of Mochon where there are the remains of over forty discrete sets of latte stones. There is no comparable site on any of the other islands of the Mariana chain.

Following lunch, the group visited the Alaguan Overlook located along the island's southern coast. Some of the best examples of old-growth Pacific limestone forest in the entire Mariana Archipelago are found along the coastal cliffs here. There are cave openings in the cliffs, some of which may contain cultural sites or features. Further along the south coast the group stopped to examine a coastal gun emplacement containing a still-mounted World War II Japanese cannon. The tour culminated with a drive across the Sabana, a high elevation plateau where additional examples of old-growth forest remain. The Sabana contains species of endangered trees and provides habitat for endangered animals. The Sabana has been set aside by local ordinance as watershed lands.

During the site visit, discussions took place and specific questions were posed by the NPS regarding the legality of the Park Service's being able to acquire interests in CNMI lands on the island of Rota that would be sufficient to obtain support for the establishment of a unit of the national park system. Senator Songao instructed Senate Legal Counsel, Michael Ernest, to give a legal opinion in response to that question. Mr. Ernest's written response to that request is:

**10.2. Letter From CNMI Legislative Bureau Legal Counsel**



**Legislative Bureau**

P.O. BOX 500586  
SAIPAN, MP 96950

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DIRECTOR (670) 664-5643  
ADMINISTRATIVE OFFICER (670) 664-1341  
CLERKS:  
HOUSE (670) 664-5659  
SENATE (670) 664-5103  
FACSIMILE:  
HOUSE (670) 322-0993  
SENATE (670) 664-1342

LEGAL COUNSEL-  
HOUSE (670) 664-4338  
(670) 664-0991  
SENATE (670) 664-5104  
LEGISLATIVE ASSISTANTS:  
HOUSE (670) 664-0992  
SENATE (670) 664-5103

Mr. Bryan Harry  
Pacific Area Director  
National Park Service  
Pacific Area Office  
300 Ala Moana Boulevard  
Honolulu, HI 96850

Mr. Gary F. Barbano  
Park Planner  
National Park Service  
Pacific Islands Support Office  
300 Ala Moana Boulevard  
Honolulu, HI 96850

Dear Sirs,

I have been instructed by the Honorable Diego M. Songao, Chariman of the Rota Legislative Delegation (First Senatorial District) of the Fourteenth Commonwealth Legislature, to give a legal opinion as to the possibility of the National Park Service acquiring interest in lands on the island of Rota sufficient to support the creation of a National Park. Before I begin, allow me to express my gratitude for your visit to Rota on Sunday, June 13, 2004. It was indeed my pleasure and honor to tour the island with you. I certainly learned a great deal. I trust that, should you decide to once again visit Rota or the Commonwealth, you will contact me, as I will be happy to help in any way I can.

Per our discussions on June 13, two questions need be answered:

1. Can the National Park Service (U.S. Government) legally acquire interest in lands on the island of Rota sufficient to support the creation of a National Park (used in this Opinion as "any area of land administered by the National Park Service")?

**Short answer: Yes.**

2. Can the National Park Service (U.S. Government) legally obtain fee simple interest in these lands for a national park?

**Short answer: No.**

The U.S. Government could not, however, obtain a fee simple interest in this land. This is due to the enormous cultural significance land has to the people of Northern Marianas descent, who value it so much that they have taken the unusual step of constitutionally requiring a clean and healthy environment, so that their lands will not be spoiled.

Each person has the right to a clean and healthful public environment in all areas, including the land, air, and water. Harmful and unnecessary noise pollution, and the storage of nuclear or radioactive material and the dumping or storage of any type of nuclear waste within the surface or submerged lands and waters of the Northern Mariana Islands, are prohibited except as provided by law.

N.M.I. Const. art. 1, § 9.

Because of this cultural significance, the people of the Commonwealth have restricted the alienation of land to peoples of Northern Marianas descent, *see* N.M.I. Const. art XII § 1, such that a person not of Northern Marianas descent may not own “freehold interests and leasehold interests of more than fifty-five years including renewal rights,” *id.* at §5. This provision has been upheld by the federal courts. *See Wabol v. Villacrusis*, 958 F.2d 1450, 1462 (9th Cir. 1990), *cert. denied*, 506 U.S. 1027 (1992), (holding that Article XII of the Commonwealth Constitution does not violate the equal protection clause of the United States Constitution).

The United States recognizes the cultural significance placed on their land by the people of Northern Marianas descent.

The United States will continue to recognize and respect the scarcity and special importance of land in the Northern Mariana Islands. If the United States must acquire any interest in real property not transferred to it under this Covenant, **it will follow the policy of seeking to acquire only the minimum area necessary to accomplish the public purpose for which the real property is required, of seeking only the minimum interest in real property necessary to support such public purpose, acquiring title only if the public purpose cannot be accomplished if a lesser interest is obtained**, and of seeking first to satisfy its requirement by acquiring an interest in public rather than private real property.

Covenant Article 8 §806(a) (emphasis added).

It bears noting that, while seeking minimum interests in land may be the general policy of the United States, at the time the CNMI entered into the Covenant with the United States, it did not appear to be the policy of the United States to include such language in a formal political status agreement. *See* Section by Section Analysis of the Covenant to Establish a Commonwealth of the Northern Mariana Islands pg. 119 (Marianas Political Status Commission 1975). Per the Covenant, the United States will only seek the “minimum interest in real property necessary to support” the national park. Thus, if a national park may be created on land where the United States possesses an interest less than fee simple, the United States **may not** seek or obtain a fee simple interest without violating the Covenant.

It is apparent that the United States, through the National Park Service, is able to obtain less than fee simple interests in lands it administers. For example, the Federal Register lists the types of lands on which its park regulations apply:

The regulations contained in this chapter apply to all persons entering, using, visiting, or otherwise within:

(1) The boundaries of federally owned lands and waters administered by the National Park Service;

(2) The boundaries of lands and waters administered by the National Park Service for public-use purposes pursuant to the terms of a written instrument;

...

(5) Other lands and waters over which the United States holds a less-than-fee interest, to the extent necessary to fulfill the purpose of the National Park Service administered interest and compatible with the nonfederal interest.

36 CFR 1.2.

Further, it is clear that a National Park may be created/built/maintained on leased lands. Such is the case with National Park of American Samoa. "Park lands are on three separate islands; Tutuila, Ofu and Tau, and total 9,000 acres. All of the lands are leased from the respective villages." <http://www.nps.gov/npsa/> (visited June 23, 2004).

In fact, one need not even look outside the CNMI to realize that the National Park Service will administer lands in which it does not own a fee-simple interest. Currently, the National Park Service maintains a presence in American Memorial Park. The land on which the park rests is owned by the CNMI, and has been leased to the United States, which, in turn, leased the land back to the CNMI:

From the property to be leased to it at Tanapag Harbor on Saipan Island the Government of the United States will make available to the Government of the Northern Mariana Islands 133 acres (54 hectares) at no cost. This property will be set aside for public use as an American memorial park to honor the American and Marianas dead in the World War II Marianas Campaign. The \$2 million received from the Government of the United States for the lease of this property will be placed into a trust fund, and used for the development and maintenance of the park in accordance with the Technical Agreement.

Covenant Article 8 section 803(e). In other words, not only can the National Park Service operate on lands in which it does not own, it may also operate on land which it has leased to another entity.

As you are aware, the Commonwealth of the Northern Mariana Islands (CNMI) is an exceptional member of the American Political Family in that it is neither state nor territory.

The relationship between the United States of America and the CNMI is governed by The COVENANT TO ESTABLISH A COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS IN POLITICAL UNION WITH THE UNITED STATES OF AMERICA (the Covenant), 48 U.S.C. § 1801 note, *reprinted in* CMC at B-101 et seq. The Covenant reads:

[t]he relations between the Northern Mariana Islands and the United States will be governed by this Covenant which, together with those provisions of the Constitution, treaties and laws of the United States applicable to the Northern Mariana Islands, will be the supreme law of the Northern Mariana Islands.

Article 1, §102.

A plain reading of the Covenant reveals that the United States may acquire interest in the land which comprises the CNMI, and, if necessary, may do so by eminent domain, provided certain requirements are met. Section 805 states:

§ 805(b) The United States may, upon prior written notice to the Government of the Northern Mariana Islands, acquire for public purposes in accordance with federal laws and procedures any interest in real property in the Northern Mariana Islands by purchase, lease, exchange, gift or otherwise under such terms and conditions as may be negotiated by the parties. The United States will in all cases attempt to acquire any interest in real property for public purposes by voluntary means under this Subsection before exercising the power of eminent domain. No interest in real property will be acquired unless duly authorized by the Congress of the United States and appropriations are available therefor.

§ 805(c) In the event it is not possible for the United States to obtain an interest in real property for public purposes by voluntary means, it may exercise within the Commonwealth the power of eminent domain to the same extent and in the same manner as it has and can exercise the power of eminent domain in a State of the Union. The power of eminent domain will be exercised within the Commonwealth only to the extent necessary and in compliance with applicable United States laws, and with full recognition of the due process required by the United States Constitution.

Article 8 §§ 805 (b), (c).

Thus, the U.S. Government may obtain an interest in Commonwealth lands to create a national park as long as the creation of such a park is deemed to be a "public purpose" as required by section 805(b). Since the statutory purposes of national parks are "to conserve scenery, natural and historic objects, and wildlife, and to provide for the enjoyment of those resources in a manner that will leave them unimpaired for the enjoyment of future generations," 36 CFR 1.1, there can be no doubt that the creation of a national park fulfills the public purpose requirement of section 805(b).

Because the National Park Service can (and does) operate a National Park without obtaining a fee simple interest in the land on which the park is located, it is precluded from asking for or obtaining a fee simple interest in Commonwealth land for the purpose of establishing a park if it is to conform to the requirements of the Covenant.

Even if one were to disagree, and somehow read the plain language of the Covenant differently than I, it is beyond dispute that, were the United States to attempt to obtain a fee simple interest in Commonwealth lands, it would be violating the spirit of the Covenant.

Reading the Covenant, one cannot help but notice that, in every instance, the United States has ensured that title of the land remained with the people of the Commonwealth. The United States recognizes the cultural importance of land in the Commonwealth, and in essence, suspended the Equal Protection Clause of the United States Constitution to allow restrictions on the alienation of land based on descent. In fact, it not only allows the restriction, it actually **mandated** that the CNMI restrict land alienation for 25 years. See Covenant Article 8 § 805. The United States leases the land it needs for defense purposes. See *id.* §§ 802, 803. It even goes so far as to run American Memorial Park with the National Park Service on land it not only doesn't own, but has leased back to the Commonwealth.

As can be seen, the CNMI is unlike just about every other member of the American Political Family in its relationship with the United States of America. That said, the CNMI does share a willingness to protect its land and natural and cultural resources so it may be enjoyed by future generations.

You graciously accepted an invitation to tour Rota to witness, firsthand, its many natural and cultural resources, with an eye towards helping formulate a protection plan. I hope this Opinion will be helpful in that regard.

If you have any comments, questions or concerns, or if I can in any way be of service to you, please do not hesitate to contact me.

Sincerely,



Michael L. Ernest  
Senate Legal Counsel

### ***10.3. Abbreviations Used in the Reconnaissance Survey***

CNMI (Commonwealth of the Northern Mariana Islands)

DLNR (Department of Land and Natural Resources)

ESA (Endangered Species Act)

FWS (U.S. Fish and Wildlife Service)

HCP (Habitat Conservation Plan)

ITP (Incidental Take Permit)

MPLA (Marianas Public Land Authority)

MPLC (Marianas Public Land Corporation)

NOA (National Ocean Administration)

NPS (National Park Service)