





Describe the proposed research in some detail on pages six and seven. Relate what you propose to do to previous and current work on the subject by yourself or others. (Cite references to published work.) Include a description of any special techniques that will be used.

This proposal is for archaeological survey and excavations at Nan Madol, the largest site complex on Ponape, Micronesia. Nan Madol offers an exceptional opportunity to study the relationship between archaeological remains and the development of a complex socio-political organization because this site represents the end point of a trend in megalithic architecture reflecting local political centralization. Considerable ethnographic and ethnohistoric data (e.g., Bernart 1977, The Book of Luellen) substantiate Nan Madol's position as the pre-eminent political and religious center on the island. Details from ethnographic sources when coordinated with available archaeological data can form a basis for archaeologically testing models of political development. Nan Madol and the island of Ponape, then, can serve in testing factors underlying Micronesian chiefdom development much the same way as Hawai'i has served for testing Polynesian models.

According to oral traditions the site was the seat of the Sau Deleur dynasty which united all of Ponape's estimated 25,000 people in later prehistoric times. The dynasty was overthrown by invaders reportedly from Kusaie (Kosrae), an island 300 miles to the east.

Nan Madol forms a complex archaeological district built up on the coastal reef flat east of a small island, Temwen. The site core is a stone walled enclosure (1.5 km long by .5 km wide) which contains nearly 100 major architectural units (stone and coral platforms) and which served as the main residential and ritual area for the highest ranking members of the society. Our first season of research will focus on this central section.

Despite Nan Madol's obvious significance, very little archaeological work has been done there. The German ethnographer Hambruch (1936, Ponape, Vol. III, Die Ruinen) mapped the major ruins in 1910. Three radiocarbon dates--which place one stone structure's use between A.D. 1200 and 1400--are known from a 1963 Smithsonian Institution study. Two historic preservation surveys were done in the late 1970's (Saxe et al. 1980 "The Nan Madol Area of Ponape," and Athens 1980 "Archaeological Investigations at Nan Madol").

I conducted preliminary excavations and survey mapping at two Nan Madol platforms and did stabilization-oriented reconnaissance in Summer, 1981. A considerable number of artifacts and prehistoric pot sherds were recovered and evidence of complex stratigraphic and architectural development was found. Radiocarbon samples from several structural levels are being processed.

No archaeological work had been done on the main island before I started archaeological survey there in 1977 (see references proposal item 3.). I defined artifact sequences and established a detailed architectural classification system based on survey data. Consequently, Nan Madol can now be placed within an island-wide context on the basis of the archaeological phase sequence, the community organization models, and the political evolution outline formulated from this earlier research.

The aims of this project are 1) to develop a cultural historical framework for Nan Madol, which is necessary to understand the building sequence and to relate this to the main island; 2) to document Ponapean relations with other Micronesian islands--trade goods, such as pottery, are likely to be found at Nan Madol is anywhere on the island; 3) to archaeologically examine the use of specific living areas and platforms and to compare these findings with information in oral traditions; 4) to determine the amount of control the resident chief exercised over resources and their redistribution, as reflected in trade items, tribute, and corvee labor for construction; and 5) to gather data relevant to site conservation.

The first year of the fieldwork will concentrate around the Sau Deleur residential



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compound at Pahn Kadira and on the priestly complex at Usendau; these are the major platforms in "Lower" and "Upper" Nan Madol respectively. Clusters of Lower Madol platforms adjacent to Pahn Kadira (Reilap, Likinsou, Pilenleng, Palakapw) and the southeast corner of the enclosing wall (Pahnwi) will be surface collected and test excavated.

Two participants, McCormick and Mauricio, plan further study of oral traditions and ethnohistoric documents. Mauricio, a native Ponapean, is translating and analyzing legends recorded by Hambruch; his work will be drawn upon in designing specific archaeological investigations.

Mapping is an important part of the research. Detailed maps, already completed for two platforms, will be drafted for each structure in order to record architecture and artifact locations. Local residents will help clear vegetation to facilitate mapping. Surface artifacts are being plotted and food refuse is being recorded within a random-based, systematic interval sample design. Artifact and refuse patterns are expected to reflect differences in platform function; this then will be tested against references in oral traditions to their use, e.g., Peinaring platform, which was reportedly used for coconut oil preparation. Computer mapping and correlation studies will be performed for artifact, food refuse, and architectural feature distributions. A computer aided study of over 1500 main island stone structures is now underway and will be enlarged to include Nan Madol architecture.

Excavations are designed to provide information on: 1) architectural plans and layout, much of which is obscured at present, 2) construction methods, 3) artifacts, other cultural remains, and datable materials from stratigraphic contexts, and 4) architectural stratigraphy and history.

Sorting out the differences in stone construction methods and architectural style (varying use of basalt prismatic columns, amorphous boulders, and/or coral blocks and slabs) will facilitate defining building sequences and the expansion of the original settlement which appears to have been on low, sandy reef islets. Geological sourcing of the building stone will begin by comparing samples from traditionally identified quarries with specimens from Nan Madol platforms. Microscopic examination of stone thin sections will be necessary.

Variations in ceramics use will be recorded; some platforms have surface and sub-surface pottery sherds while others have none. Even though small, the present pottery collections indicate diversity in style and perhaps also in origins. A much larger sample of sherds is needed to reconstruct the pottery traits on which reliable comparisons with other western Pacific pottery can be based.

Artifact comparisons--e.g., of prestige items such as shell ornaments and rank-related stone architecture, particularly tombs--are expected to define the status of the Nan Madol chiefs relative to others on the island. Estimates of construction costs in terms of time, personnel, and materials will give a concrete basis for comparison of "public works" projects undertaken at various chiefly levels. Because chiefly hierarchies are an important mechanism through which access to land is regulated on people-rich but resource-poor Pacific island habitats, determining Nan Madol's position within the broader Ponapean and Micronesian setting is necessary to define general relationships among population growth, sociopolitical integration, and resource distribution.

Because of the site's magnitude and the complexity of the archaeological problems to be addressed here, a three-year continuing project is planned; this proposal covers the first year. Four months of fieldwork will be followed by laboratory analysis and writing at the University of Oregon during the remainder of each project year.

All work undertaken as part of this project will be coordinated with the Ponape and Federated States of Micronesia Historic Preservation Programs, the chiefs and other leaders of Madolenihmw District, and other local individuals. All artifacts removed from the island for analysis will be returned to the Ponape Historic Preservation Committee upon completion of the project.