

DRAFT 2 -- November 9, 1982

Proposal to Develop a Traveling Museum Program Entitled

THE WAYFINDING ART: OCEAN VOYAGING IN POLYNESIA

co-authored by Will Kyselka, Lee Kyselka, and Cary Sneider
for submission to the National Endowment for the Humanities

INTRODUCTION

This proposal requests funds for a two-year project to develop a participatory museum program on the art of ocean voyaging in ancient Polynesia. The project would combine the knowledge and data collected by the staff of Hawaii's Bishop Museum and The Polynesian Voyaging Society with the expertise of Berkeley's Lawrence Hall of Science in developing participatory museum programs.

To generate interest and facilitate understanding, the museum program will focus on the voyages of the twin-hulled Hokule'a, a ten meter replica of an ancient Polynesian voyaging canoe. This vessel completed two successful round-trips between Hawaii and Tahiti in 1976 and 1980, using non-instrument navigation. These voyages were undertaken by modern Polynesians as a way of gaining insight into the minds of their ancestors.

The museum program would include three components: a planetarium presentation which enables the visitors to participate in activities to understand how ancient Polynesians may have used their knowledge of the sea and sky to navigate across long distances; 2) two interactive exhibits that communicate aspects of canoe building and navigation; and 3) an interpretive audio-visual program to accompany the exhibits that shows how the art of ocean voyaging has influenced past and present-day Polynesian culture.

THEME

No other peoples of ancient times have sailed so far and wide as the ancient Polynesians. This achievement was made possible by the development of two highly sophisticated traditions that astounded the first Western explorers: technology that allowed the construction of canoes which could be sailed close to the wind; and a profound knowledge of the environment that permitted accurate navigation over thousands of miles of open ocean. THE PROPOSED PROJECT WILL COMMUNICATE HOW THE TWIN TRADITIONS OF CANOE-BUILDING AND NAVIGATION WERE INTEGRATED INTO THE ART OF OCEAN VOYAGING, AND HOW THIS ART HAS INFLUENCED THE CULTURE OF ANCIENT AND PRESENT-DAY POLYNESIA.

CONCEPTS

The objective of the proposed combination of a planetarium presentation, exhibits, and interpretive program is designed to communicate the theme through the following specific concepts:

1. Pacific Prehistory -- Forty thousand years ago a people were poised at the eastern edge of Asia, ready for penetration of the Pacific. Yet, that exploration did not occur until just three thousand years ago, when the twin technologies of canoe building and non-instrument navigation were developed to a sufficiently high degree.

2. Physical Evidence -- We can trace the exploration of the Pacific through a variety of artifacts: fishhooks, poi pounders, heiau, and fishponds. These allow the establishment of the order and approximate times of settlement. Physical evidence alone, however, has not indicated how these widely separated islands were settled to begin with.

3. Oral Traditions -- Chant, legend, dance, song, and story have long told of more than occasional voyaging between Hawaii and Tahiti. However, when contact between these island groups was lost, nearly a thousand years ago, oral traditions related to navigation were lost as well. When Tevake of the Santa Cruz Islands died in 1970, the last non-instrument navigator left present-day Polynesians with only faint memories of their voyaging past.

4. Western Contact -- Two hundred years ago Captain Cook was amazed to find a people of common culture, language, and body type on islands scattered over a vast portion of the Pacific. Apparently without navigational instruments that Cook would have needed, the Polynesians had developed a wayfinding system that allowed successful landfall on tiny islands, thousands of miles apart. Periodic contact among the islands was suggested by the cultural integrity of the groups of island peoples.

5. Diffusion Hypotheses -- Two sets of hypotheses have been advanced to explain the settlement of Polynesia. The ACCIDENTAL VOYAGING hypothesis claims that the ancient Polynesians had neither the navigational skills nor the vessels to settle this region intentionally. Consistent with this hypothesis is the successful 1947 voyage of the Kon Tiki which showed that a balsa wood raft can drift from Peru to Polynesia. The alternative hypothesis of INTENTIONAL VOYAGING is consistent with findings in archaeology, anthropology, botany, and linguistics, as well as with several well-known studies of traditional navigation in Micronesia (Lewis, 19__, and Gladwin, 19__).

6. The Hokule'a 1976 Voyage -- To recapture the voyaging past, the Polynesian Voyaging Society (PVS) was organized. In 1976, PVS sponsored a voyage between Hawaii and Tahiti which showed: 1) that a replica of an ancient Polynesian double-hulled canoe could "hold close to the wind" and make successful landfall over the 10,000 km route; and 2) that navigation could be accomplished by non-instrument methods as applied by the Micronesian navigator, Mau Piailug.

7. The Hokule'a 1980 Voyage -- To replicate the 1976 voyage, under the direction of a Polynesian navigator, a second voyage was undertaken. The 1980 voyage, which was also successful, showed that the earlier trip was not simply good luck, and also revealed much about how the wayfinding art may have been practiced.

8. Learning the Wayfinding Art -- Nainoa Thompson was a young man of 23 when he came back from Tahiti aboard the Hokule'a in 1976. Intrigued with how his ancestors must have found islands without instruments, he came to the Bishop Museum planetarium in Honolulu. Over a period of three years he worked with planetarium lecturer Will Kyselka, and with Micronesian navigator Mau Piailug. With the resources of the planetarium, Nainoa was able to make hundreds of "dry runs" between Hawaii and Tahiti in preparation for the 1980 voyage.

9. The Navigational Problem -- Longitude can only be determined from instruments: a sextant, clock, and a set of tables. Only direction and latitude can be determined from the stars. The problem is compounded by the prevailing winds and currents that carry the sailor far to the west on a journey between Hawaii and Tahiti. The problem can thus be solved, in principle, by sailing to the east of the target island until the proper latitude is reached. Then, one can turn downwind and sail along the latitude line towards landfall.

10. Using the Stars -- A star compass surrounds the sailor at sea. Stars rise at discrete points on the eastern horizon, and set at corresponding points on the western horizon. The direction toward Tahiti is toward the bright star Antares, in the heart of the Scorpion rising. To judge the time when the latitude of Tahiti is reached is not simple. Nainoa developed two methods from his observations in the planetarium: by observing the proportional spacing between stars and the horizon, and by noting the synchronous rising or setting of pairs of stars. These methods can be illustrated in a planetarium, or in a computer-controlled exhibit.

11. Using the Sea -- How can the wayfinder maintain orientation when clouds cover the star compass, sometimes for days at a time? Mau Piailug has shown Nainoa how to identify ocean swells that have their origin in distant wind systems, and thus maintain direction for thousands of miles.

12. Using the Birds -- When landfall is near, but not yet in sight, one looks for certain types of birds: not those birds which live at sea for days at a time, but only those which are known to return to their nests each day at sunset. In addition, clues to land include the color of the clouds, floating objects, refraction of ocean waves, odors, and floating objects.

The story of the voyages of the Hokule'a and the training of wayfinder Nainoa Thompson is documented in *An Ocean In Mind* by Will Kyselka, soon to be published by the University of Hawaii Press. Portions of that book will be used to develop the script for the planetarium program, and to design the exhibits. Material for the interpretive program will be contributed by the Polynesian Voyaging Society, and by the experts in Polynesian culture listed in the Personnel section.

COMPONENT #1 PARTICIPATORY PLANETARIUM PRESENTATION

The controlled environment of the planetarium makes it possible to simulate the journey from Hawaii to Tahiti, using sound and visual effects to

communicate something about what it's like to sail on a canoe for a month, weathering high seas and the doldrums.

By learning to identify a few constellations in the planetarium sky, the visitors will be able to make decisions about how to select directions and to determine when they have reached the latitude of Tahiti. If the visitors' group decisions are correct, they make landfall and celebrate on Tahiti; if large errors have been made, they sail off into the vast Pacific.

Preparations, significant events on the voyage, and landfall can be communicated through slides and prepared audio tapes. The program could be presented by other planetariums at low cost given a set of slides, tape cassetts, and script booklet.

COMPONENT #2 EXHIBITS

There are several exhibits which could complement the planetarium presentation described above. Exhibits would have the advantage of allowing visitors to learn on their own, without a lecturer or time schedule. Our plan is to select two of the following exhibit ideas for development after further feasibility studies.

Drift Voyage Simulator -- Ward, Webb, and Levison (1976) conducted computer simulations of the initial settlement voyages with the aid of a computer. Their programs could be adapted to allow the visitors to manipulate some of the parameters (number of voyages, time of year, etc.) and discover for themselves how these variables might determine the outcome of a series of voyages.

Hawaii to Tahiti Star Patterns -- The appearance of the sky at various points on the voyage can be stored on videodisc, allowing the visitor to observe the sky at any point during the journey. With the aid of a computer, a visitor could simulate aspects of the journey, using the stars to set direction, and to decide when the latitude of Tahiti (or Hawaii) is reached.

Ocean Swells -- A double-hulled canoe moves to the rhythm of ocean swells, and the nature of that movement is used to orient the canoe when the stars are no longer visible. This process can be made clear to the visitor either through a computer simulation of the movement, allowing the visitor to control the orientation of the canoe with respect to the swells. Game rules could govern the interaction, so work on the computer would allow the visitor to become better at orienting the canoe with practice.

Ripple Tank -- An alternative way to communicate how the swells affect canoe movement is to use a large ripple tank and an actual model of a sailing canoe. The model or the tank (or both) can be controlled by the visitor with the proper controls.

Canoe Building -- The genius of the double-hulled canoe builders is evident when one tries to float single-hulled models in rough waters. Components for both can be available for visitors to use and sail in a

ripple tank. Other components that might be constructed are ropes from coconut husks and pandanus sails.

COMPONENT #3 INTERPRETIVE PROGRAM

The interpretive program will consist of ancient artifacts (canoe, paddles, bailer) and a sound-slide show describing how these materials were used in the past, and their significance for modern Polynesia. The artifacts will be obtained from the collections of the Bishop Museum, The Lowie Museum, and the interpretive slide show will be developed with the advice of curators from these institutions.

SCHEDULE

FIRST YEAR

August, 1983 First Work Session at Bishop Museum

- o Bishop Museum Advisory Committee Meeting
- o Outline Planetarium Program
- o Draft Exhibit Plans
- o Agree on work assignments until next meeting

April, 1984 Second Work Session at Lawrence Hall of Science

- o Trials of Planetarium Program
- o Trials of Exhibits Mock-ups
- o LHS Advisory Committee Meeting
- o Assign responsibility to test materials further

SECOND YEAR

August, 1984 Third Work Session at Bishop Museum

- o Make final revisions on Planetarium Program
- o Discuss progress of exhibit development (at LHS)
- o Preliminary plans for distribution of programs
- o Bishop Museum Advisory Committee Meeting

March, 1985 Final Work Session

- o Prepare publicity and plans for dissemination
- o Prepare to present workshops
- o Present workshops at two host institutions

CONCLUSION

On his return to Hawaii, upon sighting the peak of Mauna Kea, Nainoa had that privileged moment of "looking through a window into my heritage", a moment when he was deeply in touch with the ancient Polynesians, with his roots. The planetarium presentation, exhibits, and interpretive program proposed here will allow Nainoa's insight to be shared with fellow Polynesians and with other Americans, so that they may better understand a little known people of great courage and intellectual competency.



HAWAII COMMITTEE FOR THE HUMANITIES 2615 S. KING ST., SUITE 211, HONOLULU, HAWAII 96826 PH: 947-5891

Application Cover Sheet

TYPE OF APPLICATION (check one) . . . PROJECT FOCUS (check one)
 Mini Grant . . . Public Policy Issue or Concern
 Regular Grant: . . . ☒ State, Local or Ethnic History
 preliminary . . . ☐ Humanities for Humanities Sake
 final

PROJECT SPONSOR (name, address, phone) Polynesian Voyaging Society c/o Charles E. Larson 1300 Kailua Road Kailua, Hawaii 96734 261-8534 (office) (home) Authorized Representative (name & title) Michael Tongg President, P.V.S.		PROJECT CO-SPONSORS, if any (names of organizations, only)	
signature: 		PRINCIPAL HUMANITIES SCHOLAR (name, address, office phone no.) ATTACH 1-3 PAGE RESUME Abraham Piianaia Director, Hawaiian Studies Porteus 432 University of Hawaii Honolulu, Hawaii discipline of the humanities: History & Cultural Anthropology signature: 	
PROJECT DIRECTOR (name, address, office & home phone nos.) ATTACH 1-3 PAGE RESUME Charles E. Larson (home) Waimanalo 261-8534 (office) (home)			
PROJECT TITLE: Aukai			
PROJECT TIME FRAME beginning date: March 1, 1982 ending date: June 30, 1982 no. of months: 4			
PROJECT SUMMARY (use only space provided): The canoe Hokule'a will be available for community use on Oahu beginning March 1982. In April it will then begin traveling to the neighbor islands. The focus of this project will be on the cultural significance of that double-hulled-canoe as it travels around the state. There is a vitality and a commitment among American Hawaiians to learn about their culture and a deliberate search is being made for Hawaiian identity. The Hokule'a has become a legacy and cultural symbol of Hawaii and is a success story that needs to be shared. In this project presentations will be made to rural communities in Hawaii that will utilize films, slides, lecturers and printed materials. The presentations will be made in conjunction with visits by the Hokule'a to rural communities. Discussions with community members will then focus on the history and culture of Polynesians and the significance of the Hokule'a in today's society. Humanities scholars will provide topics for discussion and lectures and will include in their presentations persons who have crewed on the Hokule'a and persons local to various rural Hawaiian communities knowledgeable in Polynesian history and culture.			
BUDGET Sponsor HCH Challenge TOTALS: Share 19,374 Share 13,691 Funds -0- Total 32,055			

NARRATIVE DESCRIPTION OF THE PROJECT

QUESTIONS

1. What kind of organization is the sponsor of the project?

Answer. The Polynesian Voyaging Society is a private, non-profit organization founded in 1973. Its purpose has been to do research work in Polynesian voyaging canoes, Polynesian navigational systems, Polynesian culture and all other arts and artifacts that made immigration and settlement of the Hawaiian Islands possible by the first settlers.

2. What are the objectives of your project?

Answer. The objectives of this project will be (a) to increase interest and involvement of members of the community-at-large in the history and culture of Polynesia by involving them in at least 9 discussions relating to Polynesian voyaging and discovery; (b) to disseminate information gathered by the Polynesian Voyaging Society and explain the concepts and techniques of Polynesian voyaging to at least 700 persons; (c) to give at least 1,000 people of Hawaii and especially those living in rural communities on the neighbor isles, the first-hand experience of boarding a replica of an ancient Hawaiian canoe; (d) to help guide Hawaiians back to their roots and give them insight into the awesome courage and intelligence of their ancestors, thereby helping to explode the myths and negative stereotyping about Polynesians.

3. What is the topic or focus of your project?

Answer. The canoe Hokule'a will be available for community use on Oahu beginning March 1982. In April it will then begin traveling to the neighbor islands. The focus of this project will be on the cultural significance of that double-hulled-canoe as it travels around the state.

There is a vitality and a commitment among American Hawaiians to learn about their culture and a deliberate search is being made for Hawaiian identity. The Hokule'a has become a legacy and cultural symbol of Hawaii and is a success story that needs to be shared.

In this project, presentations will be made to rural communities in Hawaii that will utilize films, slides, lecturers and printed materials. The presentations will be made in conjunction

ILLEGIBLE

with visits by the Hokule'a to rural communities. Discussions with community members will then focus on the history and culture of Polynesians and the significance of the Hokule'a in today's society.

The lecturers will include members of the Polynesian Voyaging Society, the principal scholar or scholars, persons who have crewed on the Hokule'a, and local persons knowledgeable in Polynesian history and culture.

The films to be used are those made by the National Geographic Society, Tip Davies and by the Polynesian Voyaging Society.

The slide presentations will be those developed by members of the Polynesian Voyaging Society as they describe the voyaging accomplishments of the Hokule'a.

4. What do you propose to do during the project? Describe the public presentations and events which are planned for the project and all planning and coordination activities which will precede the public events and all on-going evaluation activities..

Answer. On March 6 persons who will be involved in this project will meet for orientation at Heeia State Park. These persons will include the principal scholar, Abraham Piianaia, the project director, Charles Larson, the Hokule'a canoe coordinator, Nainoa Thompson, and the several Humanities Scholars resource persons who will act as local coordinators and lecturers for their communities. The local resource persons will represent Maui, Molokai, Hawaii and Oahu. On that day, participants will be familiarized with the resources of the Polynesian Voyaging Society which include books, films, slide presentations, artifacts and printed materials. Participants will also experience sailing on the Hokule'a and will learn basic information unique to this double-hulled canoe. Abraham Piianaia will share his bibliography of related resources with participants.

On March 13 and 27 well publicized lectures will be held at Heeia State Park on Windward Oahu where participants will view films and slide presentations, hear a lecture, have discussions regarding Polynesian voyaging and discovery and board the double-hulled canoe Hokule'a. Lecturers will be Will Kyselka, Nate Wong and Cecilea Lindo along with other resource persons.

During the first week of April, Nainoa Thompson and a crew will move the Hokule'a to Hilo where it will be moored at the Nani Loa Hotel dock. On April 10 at 10 a.m. a presentation

by Dave and Marian Lyman regarding Project Aukai will be given at the Nani Loa Hotel.

Thereafter, every two weeks, weather permitting, Nainoa Thompson will supervise a crew and move the canoe to a different location in coordination with Project Aukai public presentations.

On April 24 at 10 a.m., Gordon Piianaia will host a lecture at the Kamuela Library. B

On May 8 at 10 a.m., Will Kyselka with local crew persons will make a public presentation at the Kailua library.

On May 22 at 10 a.m., Abraham Piianaia will give a lecture at Lanai City at the Head Start classroom.

On June 12 at 10 a.m. at Kamehameha IV elementary school in Lahaina local resource persons will make a public presentation.

On June 26, Abraham Piianaia and other resource persons will make a presentation at the Kaunakakai public library on Molokai.

During the course of the project, information regarding the number of persons attending lectures and visiting the canoe, the type of audience (tourists, locals, etc.) and the availability of local resource persons will be gathered for evaluation purposes. Abraham Piianaia will provide an evaluation report at the end of the project.

5. In what specific ways will disciplines of the humanities--e.g., philosophy, history, comparative religion, etc.--contribute to the content of the project?

Answer. . Project Aukai will primarily involve itself in discussing the questions relative to the discovery and settlement of Hawaii by the ancient Polynesians. Central issues to these questions involve historical and anthropological conjecture that in large part originally led to the construction of the double-hulled canoe, Hokule'a.

Some of the questions are:

- Was Hawaii discovered by accident?
- Why did the Polynesians leave their home islands?
- Were they motivated to leave for political reasons?
- Why did the first settlers of Hawaii return to their home islands?
- How did the Polynesians make their way back and forth to Hawaii?
- How does current research by the Polynesian Voyaging Society contribute to answers to these questions?

The Polynesian Voyaging Society currently is analyzing data collected during its most recent voyage to Tahiti. Much of this information will be shared in HCH presentations. Nainoa Thompson, who is the canoe coordinator for this project, is the only Hawaiian in several hundred years to navigate between Hawaii and Tahiti without instruments. He has developed a method of non-instrument navigation that is different from that of his Micronesian tutor and uniquely appropriate to Hawaii's geographic isolation. Reference to his discovery will also be included in HCH presentations.

6. Who are the key humanities scholars and resource persons who will be involved in the project?

Answer. The key humanities scholar is Abraham Piianaia. He has been central in the planning of Project Aukai, has developed the main topics to be discussed and will be the lecturer for at least three of the public presentations.

Other humanities scholars committed to this project are:

Cecilia Kapua Lindo - Teacher of Hawaiian Studies and Language arts, Hongwanji Elementary School

Gordon Piianaia - Director of Hawaiian Studies Institute, Kamehameha Schools

Will Kyselka - Celestial Navigation Instructor, Planetarium Lecturer, Associate in Astronomy, Associate Professor of Education at University of Hawaii

Resource persons committed to this project include:

Nainoa Thompson - Seaperson and Polynesian Navigator

Michael Tongg - Attorney, seaperson, President of Polynesian Voyaging Society

Marian Lyman Mercereau - Counselor and lecturer on Hokule'a voyages

David Lyman - Port pilot, Captain of Hokule'a for 1978 trip to Tahiti

Nate Wong - Physician, lecturer on Hokule'a voyaging

7. What specific role will humanities scholars and resource persons play in the project activities?

Answer. The principal Humanities Scholar has developed the information central to the topics of discussion and will disseminate it to the conferees at the Heeia State Park conference. He will present the lecture at three of the public meetings and will put together a bibliography of resources to be given to participants and speakers.

Other humanities scholars will serve as lecturers and consultants at the various public presentations.

The principal Humanities Scholar participated in the planning of the project by developing the name and principal topics of discussion for the Aukai project. He also suggested names of other scholars and resource persons to be involved.

Resource persons will be used to coordinate local presentations and to participate in lectures by sharing their knowledge and experiences.

8. Identify that segment of the general public which will be reached by the project and explain how this audience will be integrated into the project.

Answer. It is expected that a broad segment of the general population of Hawaii will be attracted to the lectures regarding Polynesian voyaging. It is likely that a large number of tourists will also be attending. The Hokule'a is well known throughout Hawaii and the mere presence of that vessel in local waters has always gained notoriety. Press releases to local newspapers, contacts with local canoe clubs, posters and radio announcements will notify the general public of times and places of lectures.

At each presentation, besides the principal speaker, persons living in that locality will be invited to share their experiences and knowledge regarding the subject. For example, at Kona, Tava Taupo, a Tahitian, will share his experience of voyaging in a double-hulled canoe. At Lahaina, Sam Kaai will display some of his personal collection of artifacts.

At each public presentation members of the audience will be encouraged to ask questions, share their own experiences relative to the subject and participate by boarding the Hokule'a.

11

They will be given a bibliography of related subjects and introduced to books and materials available through the Polynesian Voyaging Society.

It is estimated that at least 100 persons will attend each lecture and at least 150 persons will be involved with seeing the Hokule'a at each presentation.

PROJECT BUDGET - HCH Grant Application

Computation for Column D
 Amt. of 3rd party gifts x 1.85 =
 Amt. of challenge funding.
 \$ _____ x 1.85 = \$ _____

A. BUDGET CATEGORIES	B. SPONSOR SHARE (Indicate if cash by asterisk notation)	C. HCH SHARE	D. CHALLENGE FUNDING (if applicable)	E. TOTAL
1. Personnel (specify positions, rate of compensation, length of employment)				
Project Director, 9.50/hr.x120 hrs.x 4 months	1,520	3.040		4,560
Canoe Coordinator, 9.50/hr.x120 hrs.x 4 months	1,520	3.040		4,560
6 crew members, x 21 days @ \$50/day each	6,300			6,300
Principal Humanities Scholar, 3 dialogue sessions @ \$50 each		150		150
10 hours preparation		100		100
Evaluation		250		250
Secretary, 120 hrs.@\$5/hr.	600			600
Subtotal	9,940	6,430		16,370
2. Stipends (specify number and rate)				
a. Humanities Scholars				
9 dialogue sessions @ \$50/each		500		500
b. Resource Persons				
9 dialogue sessions @ \$50/each		500		500
Subtotal		1,000		1,000

A. BUDGET CATEGORIES	B. SPONSOR SHARE (indicate if cash by asterisk notation)	C. HCH SHARE	D. CHALLENGE FUNDING (if applicable)	E. TOTAL
3. Operational Expenses				
a. Supplies	50			50
b. Office Equipment Rental	80			80
c. Office Space Rental	200			200
d. Telephone, long distance charges		140		140
e. Postage	20			20
f. Copying Costs (excludes duplication of promotional and informational materials)	25	25		50
Subtotal	375	165		540
4. Travel (specify if airfare, per diem, mileage, etc., and rate)				
6 RT for conf. at Heela State Park	300			300
3 RT Hilo-Oahu	150			150
6 trips Hilo to Oahu	150			150
2 RT Kaunakakai-Oahu	60			60
6 trips Oahu to Lahaina	150			150
17 trips Oahu to neighbor islands		700		700
per diem				
6 crew members 21 days @\$44/day	5,544			5,544
Mainoa Thompson 30 days @\$44/day		1,364		1,364
Charles Larson 21 days @\$44/day		924		924
9 resource persons 2 days each @\$44		792		792
Abraham Piianaia 4 days @\$44		176		176
Car rental 14 days @\$25	200	150		350
mileage for 500 miles @\$21	105			105
Subtotal	6,659	4,106		10,765

A. BUDGET CATEGORIES	B. SPONSOR SHARE (Indicate if cash by asterisk notation)	C. HCH SHARE	D. CHALLENGE FUNDING (if applicable)	E. TOTAL
5. Project Promotion and Information				
Posters		200		200
Subtotal		200		200
6. Media Component				
Subtotal				

A. BUDGET CATEGORIES	B. SPONSOR SHARE (indicate if cash by asterisk notation)	C. HCH SHARE	D. CHALLENGE FUNDING (if applicable)	E. TOTAL
7. Other Expenditures (specify)				
Canoe rental 25 days @\$100 per day	1,300	1,200		2,500
Gasoline and canoe supplies		500		500
Docking fees 10 days @\$18 per day	100	80		180
Subtotal	1,400	1,780		3,180
Total sponsor cash contribution				
Total sponsor in-kind contribution	18,374			
TOTAL SPONSOR SHARE (cash & in-kind)	18,374			
Subtotal HCH grant funds requested (Col. C)		13,681		
Subtotal challenge funds requested (Col. D)				
TOTAL FEDERAL FUNDS REQUESTED (Col. C & D)				13,681
TOTAL COST OF PROJECT (Col. E)				32,055

ATTACH BUDGET NARRATIVE

BUDGET NARRATIVE

1. Personnel

The Project Director will work from March through June and will coordinate all phases of the project which include crewing on the canoe, organizing and supervising all public presentations, accounting, publicity, purchasing, transportation and communication. He will work 120 hours per month and will spend at least 21 days away from Oahu in his duties.

The Canoe Coordinator will work from March through June and will be responsible for the care and preparation of the canoe Hokule'a. He will supervise the canoe crew, will be responsible for the canoe's maintenance and will move the canoe as needed for this project. He will work 120 hours per month and will spend at least 30 days away from Oahu.

The Principal Humanities Scholar will prepare the subject material for the lectures and present the topics at the organizational meeting of participants at Heeia State Park on March 6. He will write a bibliography of related readings to be given to project participants and to the general public. He will give the public presentations at Kaunakakai and Lanai City and will spend four days away from Oahu. He will write the final evaluation report.

The Secretary will coordinate office activities and will assist with correspondence, publicity and record keeping.

Other Humanities Scholars will participate in at least 9 dialogue sessions and receive stipends of \$50 for each session.

Other resource persons will participate in at least 9 dialogue sessions and receive stipends of \$50 for each session.

2. Operational Expenses

The Polynesian Voyaging Society will provide all stationery, postage and copying costs. Their office will be used at a rate of \$50 per month for four months and they will donate use of their office equipment at the rate of \$20 per month. Long distance telephone charges are estimated to cost \$140 and copying costs are estimated at \$50.

17

3. Travel

Because of unpredictable price changes in air fares, all air fares were figured conservatively at \$25 one way between any island. Air travel is necessary to return the crew coordinator and the project director to their homes on Oahu between public presentations on the neighbor islands. It is needed to bring participants to Oahu for the organizational meeting at Heeia on March 6. It is needed to return crew members to their homes and to provide transportation for humanities scholars and resource persons to participate in public presentations. As much as possible, local residents on neighbor islands will be used to reduce transport costs.

Hawaiian Air has donated 8 round trip airfare's for this project and Air Molokai has donated 2 round trip air fares. If air fares are donated by Aloha and Mid Pacific airlines, the cost of this project will be further reduced.

4. Per Diem

All per diem is figured at \$44 per day. Six crew members will spend at least 21 days away from their homes in moving the canoe to various project presentation sites.

Nainoa Thompson will spend at least 30 days away from Oahu moving the canoe and supervising its maintenance.

Charles Larson will spend at least 21 days away from Oahu assisting in moving the canoe and with all other activities involving this project.

Nine other resource persons will spend at least 18 days away from their home islands participating in this project. Abraham Piianaia will spend four days away from Oahu for this project.

5. Car Rental

At Kawaihae, Lanai and Kaunakakai it will be necessary to rent cars. At all other locations cars will be loaned for participants' use. Rental rate is figured at \$25 per day. Mileage is estimated to be 500 miles.

18

Gordon Pi'ianāi'a
Captain, Hōkūle'a 1980
Polynesian Voyaging Society

Director, Hawaiian Studies Institute
The Kamehameha Schools
Kapalama Heights
Honolulu, Hawaii 96817



HOKULE'A

September 10, 1980

Mr. Abraham Ah Hee

(Letter sent to all crew members)

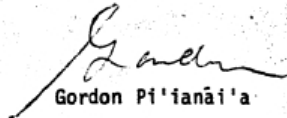
Lahaina, Maui, Hawaii 96761

Dear Abraham:

The PVS is holding a fund-raising activity on Sunday, September 21 from 3:30 PM to 7 PM at the Bishop Museum and I hope you can be part of it. Many people wish to talk and chat with the crew members of the Hōkūle'a. I think it's neat that they feel this way.

Please join the rest of the PVS in its first fund-raising to keep things going. Let's participate in this event.

Mahalo,


Gordon Pi'ianāi'a

Submitted by

Lough Draft

Studies

1980?

y school teachers, and
area of Polynesian voy-
ding of ethnic identity,
s and the process of

SPECIFIC OBJECTIVES:

1. To establish five regional Polynesian voyaging resource centers at Honolulu, Windward O'ahu, North Shore O'ahu, Kealia on Kaua'i, and Piahi on Maui.
2. To train resident resource persons in Polynesian voyaging at each of the five satellite resource centers.
3. To use the Hokule'a as a floating classroom to be temporarily berthed near each of the five resource centers.
4. To have the five regional Polynesian voyaging resource people train elementary school teachers and other professionals in ethnic studies to:
 - a. Identify Polynesian voyaging resources and resource people.
 - b. Explain the concepts and techniques of Polynesian voyaging.
 - c. Demonstrate the value of a multi-ethnic approach by explaining the unique components of Polynesian voyaging and culture.
 - d. Effectively use the curriculum materials provided by the Polynesian Voyaging Society.

APPROACH:

The project is organized to provide resource materials and training in two stages.

The first stage is to organize the curriculum materials and train persons to permanently operate one main resource center and four satellite resource centers. The second stage is to train personnel and teachers of elementary school aged children in the use and availability of Polynesian voyaging resources and its relevance for understanding ethnic identity, interethnic communication and relations and the process of American multi-culturalism.

AMOUNT OF FUNDING REQUESTED: \$59,960.00

*ROUGH DRAFT*ABSTRACT

FOCUS: Area I. Training of Persons in Ethnic Studies

Level: Elementary Education

Overall Objective: To train elementary school teachers, and other ethnic studies personnel in the area of Polynesian voyaging so as to enhance their understanding of ethnic identity, interethnic communication and relations and the process of American multi-culturalism.

SPECIFIC OBJECTIVES:

1. To establish five regional Polynesian voyaging resource centers at Honolulu, Windward O'ahu, North Shore O'ahu, Kealia on Kaua'i, and Piahi on Maui.
2. To train resident resource persons in Polynesian voyaging at each of the five satellite resource centers.
3. To use the Hokule'a as a floating classroom to be temporarily berthed near each of the five resource centers.
4. To have the five regional Polynesian voyaging resource people train elementary school teachers and other professionals in ethnic studies to:
 - a. Identify Polynesian voyaging resources and resource people.
 - b. Explain the concepts and techniques of Polynesian voyaging.
 - c. Demonstrate the value of a multi-ethnic approach by explaining the unique components of Polynesian voyaging and culture.
 - d. Effectively use the curriculum materials provided by the Polynesian Voyaging Society.

APPROACH:

The project is organized to provide resource materials and training in two stages.

The first stage is to organize the curriculum materials and train persons to permanently operate one main resource center and four satellite resource centers. The second stage is to train personnel and teachers of elementary school aged children in the use and availability of Polynesian voyaging resources and its relevance for understanding ethnic identity, interethnic communication and relations and the process of American multi-culturalism.

AMOUNT OF FUNDING REQUESTED: \$59,960.00

20

Polynesian Voyaging Society (PVS)
Resource and Training for Multi-Cultural Education

ETHNIC HERITAGE STUDIES PROGRAM
October 1, 1979 - September 30, 1980

Budget Justification

6.a. Personnel Salaries	Rate/ Month	Months of Effort	Approximate % of Effort	Cost
Project Director	416.00	12	25.00	5,000.00
Trainer/Curriculum Developer	1,000.00	12	100.00	12,000.00
Trainer/Administrative Assistant	1,000.00	12	100.00	12,000.00
Crew Supervisor	1,000.00	12	100.00	12,000.00
Satellite Trainers:				
from Seagull School	850.00	3	100.00	2,550.00
from Rainbow School	850.00	2	100.00	1,700.00
from Island School	850.00	2	100.00	1,700.00
from Piahi School	850.00	2	100.00	1,700.00
		Subtotal		48,650.00

c. Travel

Airfare - Interisland

1 RT Kauai-HNL-Kauai	50.00
1 RT Maui-HNL-Maui	50.00
4 RT HNL-Kauai-HNL (\$50.00 X 4)	200.00
4 RT HNL-Maui-HNL (\$50.00 X 4)	200.00

Per Diem

HNL: \$30.00/day X 4 days X 2 trainers	240.00
Kauai: \$30.00/day X 5 days X 3 staff	450.00
Maui: \$30.00/day X 5 days X 3 staff	450.00
Kauai: \$30.00/day X 10 days X 1 crew supervisor	300.00
Maui: \$30.00/day X 10 days X 1 crew supervisor	300.00

Mileage: 3,000 miles X \$.15	450.00
------------------------------	--------

Subtotal	2,690.00
----------	----------

26

6.e. Supplies

1. Office Supplies	300.00
Subtotal	300.00

f. Contractual

Consultant in Polynesian Culture	1,000.00
Air Travel	100.00
Per Diem 2 days @ \$30.00	60.00
Consultant - Evaluation	2,000.00
Air Travel	100.00
Per Diem 2 days @ \$30.00	60.00
Consultant - Photographer	1,000.00
Subtotal	4,320.00

h. Printing

1. Printed materials	
2,000 copies of work booklet and evaluation sheet	1,000.00
Subtotal	1,000.00

* i. Indirect Charges	3,000.00
Subtotal	3,000.00
TOTAL	<u>\$59,960.00</u>

* Indirect Charges - fiscal management will be provided by the executive committee of the Polynesian Voyaging Society. Costs were figured at approximately .05% of \$56,960.00. The committee consists of:

Michael A. Tongg - President and attorney
 Anthony Guerrero, Jr. - Treasurer and Vice President
 First Hawaiian Bank
 Kaipo Kauka - Vice President and Community Heritage
 Coordinator for Hawaii Foundation for
 History and Humanities

PART IV - BIOGRAPHIC NARRATIVE

1. OBJECTIVES AND NEED FOR THIS ASSISTANCE

In 1778, when Captain James Cook rediscovered Hawai'i, he estimated 300,000 native Hawaiians. By 1840, the Hawaiian race dwindled down to 20,000 people.

When Cook, the missionaries, immigrants and others came to the Hawaiian Islands tremendous and tragic changes took place. The islands, isolated from the outside world, were suddenly invaded by an influx of people. Diseases were introduced, the kingdom was overthrown by foreigners, and the culture was uprooted. Such rapid transition had devastating effects which proved almost fatal to the entire Hawaiian race.

In the 1840's, the popular saying of the day was "Na kanaka o ku'u wale aku no i ka uhaue. ("The people freely gave up their souls and died.") Physical and psychological death had been the choice of many Hawaiians who could not cope with the despair that overwhelmed them.

The calamitous results of the past still plague many Hawaiians today. They have the highest incidence of poverty, high school drop-outs, and unemployment of any racial group in Hawai'i. Preventive measures have to be implemented and applied. When people have inadequate education, a limited knowledge of their cultural roots, poor self esteem, and where families are disoriented, societal problems escalate. Education therefore is the key to building up self-worth, self-sufficiency, and self-direction.

Along with the social ills, the 1970's show a resurgence of interest and hope for the Hawaiian culture among Hawaiians. There is a desperate vitality and commitment among American Hawaiians

23

to learn about their culture, to uplift themselves and their heritage through education. A deliberate search is being made for Hawaiian identity. Regrettably, Hawaiian culture has been regarded irrelevant in the past. However, on November 7, 1978, voters of Hawai'i realized their need and voted on promoting and implementing Hawaiian studies into the school system and community. This was an amendment proposed by members of the Constitutional Convention of 1978.

A renaissance in Hawaiian culture is evidenced by the founding of the Polynesian Voyaging Society in 1973. Its purpose has been to do research work in Polynesian voyaging canoes, Polynesian navigational system, Polynesian culture and all the other arts and artifacts that made migration and settlement of the Hawaiian Islands possible, by the first settlers. Multi-racial members of the society built the *Hokule'a*, a double hulled canoe, in 1974, trained a crew in 1975, and sailed from Hawai'i to Tahiti in 1976. The three year plan became a life-size reality which received strong community support.

The 60 foot, twin hulled canoe called *Hokule'a* was designed to answer the question of whether the ancient Polynesians regularly navigated the 3,000 mile course between Hawai'i and Tahiti. Multi-racial builders of the canoe found that centuries before Columbus, Polynesians found voyaging canoes had explored a huge triangle of the earth's surface, with Hawai'i, Easter Island and New Zealand as its outer limits. Guided by the stars, currents, and ocean swells, they accomplished incredible feats of navigation and seamanship as they sailed across thousands of miles of open ocean.

24

Though Hokule'a was built mainly of modern materials, such as plywood and fiberglass, her lines were authentic and reconstructed from sketches by explorer Captain James Cook and other explorers. Her sails, copied from ancient Hawaiian rock paintings were shaped like crab claws. This design proved more practical than modern sails that were tried because the crab claw contour minimized stress and spilled the wind during squalls.

In 1976, seventeen men who made up the crew of Hokule'a, sailed her to Tahiti. One of the key men was the navigator, Mau Piailug, from the Satawal atoll in Micronesia. Mau, a strong 44 year old, became a full fledged navigator at the age of 18, and roamed far and wide through the central Carolines without relying on any navigational instruments. Mau was assisted by Rodo Williams, a Tahitian and former schooner captain, and David Lewis, a Caucasian who had studied with traditional navigators in Tonga and Micronesia. None of the three used any instruments during the voyage, nor did they receive any hint of their position from the escort vessel that accompanied Hokule'a on this 3,000 mile journey. Half of the crew who went on the voyage were Hawaiians. Hokule'a reached Tahiti after 34 days and was received by a jubilant crowd of 15,000 Tahitians, the largest crowd in the memory of that island.

Hokule'a received national and international acclaim because the National Geographic Society filmed the magnificent and historic journey. They also published 3 separate articles about Hokule'a in their magazine. Hokule'a has become a legacy and symbol of Hawai'i, a success story that needs to be shared. Slides, pictures, and logs were taken when Hokule'a made her incredible trip.

25

All these materials need to be made more readily available. Hokule'a can be used as a floating classroom. The experience for students and teachers to feel, touch, and see an authentic Polynesian replica of the canoes that brought the first settlers to Hawai'i would be an unforgettable and valuable educational tool. It could help guide Hawaiians back to their roots and give them insight into the awesome courage and intelligence of their ancestors. It can also explode the myths and negative stereotyping about Polynesians.

2. RESULTS OF BENEFITS EXPECTED

* This proposal seeks to promote the contributions which Polynesian Americans and by implication, other ethnic groups can offer in making America a truly pluralistic and culturally diverse society.

More specifically, this proposal is to train elementary teachers so as to enhance their understanding of ethnic identity, inter-ethnic communication and relations, and the process of American multiculturalism. To this end, the proposal focuses on:

- a. Establishing five permanent satellite resource centers with trainers.
- b. Training approximately 170 elementary school teachers and other professionals in ethnic studies to become familiar with the area of Polynesian voyaging so that they will be able to:
 1. Identify Polynesian voyaging resources and resource people.
 2. Explain the concepts and techniques of Polynesian voyaging.

3. Demonstrate the value of a multi-ethnic approach by explaining the unique components of Polynesian voyaging, crafts, artifacts.
4. Effectively use the curriculum materials provided by the Polynesian Voyaging Society.
- c. Providing an opportunity for approximately 3,490 children from 5 geographical areas to experience boarding and learning about a replica of a 60 foot Polynesian canoe.
- d. Developing with the assistance of the Department of Educational Psychology an evaluation of this project to determine the overall training effects of the course.

3. APPROACH a.

The Polynesian Voyaging Society intends to disseminate its knowledge of Polynesian migration, (open sea voyaging and double hulled canoes) discovery and settlement to the population and particularly elementary school teachers and children of five large areas in Hawai'i. In this application we are proposing to make major changes in the direction of the society - - from one whose purpose has been to test theories regarding Polynesian voyaging to one that will serve as a floating classroom for children throughout the Hawaiian Islands. To accomplish this it hereby plans to hire two persons to act as teacher trainers and curriculum consultants and a crew supervisor to manage the canoe and related instructional use. The trainers will coordinate the development and use of curriculum materials and the training of four regional trainers to train teachers of public schools in Polynesian voyaging.

Our plan is to establish five permanent satellite curriculum resource centers with resident trainers and to temporarily station the canoe at five different locations so that teachers and groups of elementary school aged children will have the experience of using the materials already developed by the Polynesian Voyaging Society, seeing the visual presentations, participating in the workshops and boarding the canoe. Member schools of the Hawaii Association of Rural Private Schools (HARPS, all private, non-profit organizations) will assist in providing facilities for the five regional resource and training centers and will help host the canoe as it voyages from port to port. As hosts, the schools will provide one staff person each to be trained as trainers in Polynesian voyaging. The HARPS schools will hold public seminars, will coordinate the scheduling of elementary school classes visiting the canoe and will serve as permanent resource centers for the distribution and storage of curriculum materials.

During October and November, the two trainers and crew supervisor will organize the educational materials of the Polynesian Voyaging Society and plan the curriculum that will be implemented at the five regional sites selected for the distribution of curriculum materials. In October, the Polynesian Voyaging Society will distribute information regarding the availability of instructional materials regarding Polynesian voyaging. This will be done through the Department of Education channels and through a one day workshop to be held at Kamehameha Schools on Discoverer's Day, October 8. During November and December the Polynesian Voyaging Society trainers will develop the educational materials while hosting visits from elementary school teachers and classes in the

28

ILLEGIBLE

Honolulu area. Also during December, four staff persons from the four participating HARPS schools will meet on O'ahu for 4 days of training regarding use of Polynesian voyaging curriculum materials. They will take back with them to their schools the materials and information developed by the Polynesian Voyaging Society and will establish permanent satellite resource and training centers regionally. They will advertise locally their functions in this project and will schedule schools, teachers and various organizations to visit the canoe as it visits their region.

In January 1980, the canoe will sail under the supervision of the crew supervisor from Honolulu Harbor to Kaneohe Bay on the Windward side of O'ahu. It will be berthed at the Heeia Kea pier next to Heeia State Park through March. At this site a trained staff person from Seagull School with the assistance of the two Polynesian Voyaging Society trainers will coordinate the visitation and instruction of teachers and students on the Windward side of O'ahu. The canoe will stay at He'eia until the end of March when it will be sailed to Haleiwa Harbor on the North Shore of O'ahu where a trained staff person from Rainbow Elementary School will serve the function of trainer and coordinator for elementary school teachers and their students. At the end of May the canoe will sail for Kaua'i and will be berthed at Nawiliwili Harbor where the canoe will be hosted and visitations will be coordinated by Island School. During the summer months when schools are on vacation, emphasis will remain on elementary school aged youth by arranging for organizations such as Scouts, 4H, and summer fun type recreational programs to visit the canoe. At the end of July

29

the canoe will sail to Kahului Harbor on Maui where Piahi School will host and coordinate canoe activities.

The dates given as sailing times are approximate and will be influenced by weather and condition of the canoe. The scheduling of the visits of the canoe is also affected by the seasons. The channels between the islands are usually much more difficult to cross during the winter months, therefore, interisland sailing will be accomplished during the summer. If the canoe is unable to keep appointments for the aforementioned reasons, training can be done without the use of the canoe.

At each of the training sites, public and private schools and youth organizations from that geographical area will schedule visitation times with the host schools. In advance of its visitations, local teachers will have the opportunity to borrow curriculum materials from the resource center and receive training in their use from the regional trainer.

Staff from the Polynesian Voyaging Society will spend at least 15 days cumulative time at each of the satellite centers on Maui and Kauai to supervise and evaluate trainers. On O'ahu as much time as necessary will be spent for training and evaluation of centers at the Windward and North Shore centers. The crew supervisor will spend at least 10 days at each of the locations of the canoe.

20

3. APPROACH b.

QUANTITATIVE MONTHLY PROJECTIONS OF NUMBERS OF PERSONS
SERVED AND TRAINED -

Month

Activity Schedule

October

Two trainers and the crew supervisor will organize the curriculum materials with assistance from the curriculum consultant. A one day workshop will be held for the public and especially public school teachers regarding the availability of this project on Discover's Day.

November

Twenty teachers from the Honolulu District will be trained by the Polynesian Voyaging Society staff and approximately 400 children may be scheduled to visit the canoe.

December

Fifteen teachers from the Honolulu District will be trained and approximately 300 children may visit the canoe. Four satellite resource center trainers will attend a four day workshop in Honolulu to be trained for this project.

January

Fifteen teachers from the Windward O'ahu District will be trained at Kaneohe Bay by the Seagull School satellite trainer with assistance from the Polynesian Voyaging Society staff. Approximately 330 children may visit the canoe.

ILLEGIBLE

31

February

Same

March

Same

April

Fifteen teachers from the North Shore District of O'ahu will be served at Haleiwa boat harbor by the Rainbow School satellite trainer with assistance from the Polynesian Voyaging Society staff. Approximately 300 children may use the canoe facilities.

May

Same

June

Fifteen adults from Kauai will be trained by the Island school satellite trainer with assistance from the Polynesian Voyaging Society staff. Approximately 300 children will use the canoe facilities.

July

Same

August

Fifteen adults from Maui will be trained by the Piahi School satellite trainer with assistance from the Polynesian Voyaging Society staff. Approximately 300 children will use the canoe facilities.

September

Same

3. APPROACH c.

Evaluation will be contracted to Dr. Frederick T. Bail of the Educational Psychology Department of the University of Hawai'i.

Evaluation will be accomplished by:

1. Observing the operation of the five regional centers.
2. Interviewing the resource people.
3. Interviewing a sample of elementary school teachers trained by the resident resource people.
4. Developing, administering, and evaluating the results of a questionnaire for the regional resource people.
- * 5. Developing, administering and evaluating the results of a questionnaire for the teachers serviced by each of the regional resource people.

Interim and final reports will be coordinated by the project coordinator. This will be done quarterly and will include:

1. A fiscal report
2. Information regarding number of trainees served
3. Numbers of persons utilizing satellite resource centers
4. Number of visitors to the canoe
5. Information gathered for evaluation
6. Report from meetings with the advisory council
7. Photographs of training

3. APPROACH d.

Cooperating Institutions

1. Department of Education
State of Hawaii

Nature of Effort

They will disseminate publicity and information regarding the availability of the satellite resource centers and the Hokule'a

2. Kamehameha Schools

They will provide facilities for holding workshops and for doing maintenance on the canoe. They will also assist in the cost of printing and producing materials.

3. Bishop Museum

They will provide office space at below market value.

4. Alu Like

They will provide copying service.

5. Hawaii Association of Rural Private Schools (HARPS)

Each of the HARPS school will provide staff persons with 4 days of paid release time for training in December. They will provide transportation for Polynesian Voyaging Society staff and consultants while on Maui and Kauai. They will donate facilities for the permanent storage of curriculum materials and after the project year will continue to act as resource persons.

6. Department of Transportation Harbors Facilities

They will provide assistance and facilities for the berthing of the canoe Hokule'a.

24

POLYNESIAN VOYAGING SOCIETY

A VERY SPECIAL FUND-RAISING INVITATION SUN., SEPTEMBER 21 FROM 3:30 PM-7 PM AT THE BISHOP MUSEUM

The Polynesian Voyaging Society cordially invites you to a fund raiser at the Bishop Museum on Sunday, September 21 from 3:30 p.m. - 7:00 p.m.

Come and meet the crew of the Hokule'a and talk with them about their most recent round trip voyage to Tahiti.

There will be refreshments, of course, lots of pupus, beer, wine, and soft drinks.

The highlight of the event will be a talk given by Hokule'a navigator Nainoa Thompson. He will recount how he used the ancient polynesian navigational methods to raise Tahiti without the aid of modern instruments. At the same time the very celestial information visible to the Hokule'a during the trip will flash across the planetarium heavens to give you a firsthand experience. Planetarium lecturer Will Kyselka will assist with additional comments on the ancient methods.

This is an event you don't want to miss. If you are an ocean adventurer at heart or would like to touch a part of Hawaii's past brought to life, please join us. You can feed your spirit on vivid accounts of adventure on the high seas and the trials Hawaii's forefathers must have encountered exploring the Pacific with only the heavens and a profound connection with the ocean to guide them. And at the same time, you can make your opu happy too, with ono kaukau.

The donations will be used to further the valuable educational and public service efforts of the Polynesian Voyaging Society. Price: \$10 donation per person, \$15 for two, children under 15, \$3.

A reminder: Because planetarium seating is limited, Nainoa Thompson and Will Kyselka have scheduled several presentations of their talk to make sure all who are interested are comfortably accommodated. Please indicate on the attached form whether you would like to attend the 4 p.m., 5 p.m., or 6 p.m. showing.

RETURN THIS PORTION WITH ATTACHED ENVELOPE

YOUR TICKET TO EXPERIENCE HAWAII'S VOYAGING PAST AND PRESENT

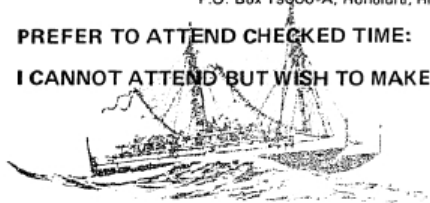
YES, I WANT TO ATTEND! ☐ \$10 PER PERSON ☐ \$15 FOR TWO ☐ \$3 UNDER 15 YRS.

Make checks payable to...Polynesian Voyaging Society
P.O. Box 19000-A, Honolulu, HI 96819

TOTAL AMOUNT ENCLOSED \$

PREFER TO ATTEND CHECKED TIME: ☐ 4 P.M. ☐ 5 P.M. ☐ 6 P.M.

I CANNOT ATTEND BUT WISH TO MAKE A CONTRIBUTION \$



NAME _____

ADDRESS _____

CITY _____

THE POLYNESIAN VOYAGING SOCIETY IS A NONPROFIT ORGANIZATION. DONATIONS TO THE SOCIETY ARE TAX DEDUCTABLE.



VALUABLE DISCOUNT COUPON

\$1.00 DISCOUNT

GOOD FOR REGULAR ADULT ADMISSION
TO THE BISHOP MUSEUM ANY DAY OF THE
WEEK DURING NORMAL HOURS.

Visit the museum often. There's always something new
because it's been preserving and exploring the cultural and
natural history of Hawaii since the turn of the century.

2 ADULTS PER COUPON MAXIMUM
OFFER EXPIRES OCTOBER 30, 1980

P.O. BOX 13000-A, HONOLULU, HI 96819



POLYNESIAN VOYAGING SOCIETY

Nonprofit Org.
U.S. POSTAGE
PAID
PERMIT NO. 770
Honolulu, Hawaii

DOCUMENTS CAPTURED AS BEING



POLYNESIAN VOYAGING SOCIETY

The Polynesian Voyaging Society is a research organization. It invested heavily in the 1980 voyage of Hokule'a as a way of learning more about non-instrument navigation as well as the sailing performance of the double-hulled voyaging canoe.

For three years Nainoa Thompson and Will Kyselka searched the Bishop Museum Planetarium sky for clues on the use of stars in navigating between Hawaii and Tahiti. Mau Piailug joined us in September to teach the Hokule'a crews of his way with the sea and stars.

Data became information as Nainoa found patterns. The information became knowledge as he internalized it. The ultimate test of such knowledge was the sea voyage.

So with only mind and senses to guide him, Nainoa sailed Hokule'a, with Gordon P'ianai'a as captain, ten-thousand kilometers over the

sea in two successful landfalls. No such navigational feat has been performed in several centuries.

A preliminary report on the research findings of this remarkable venture is now ready, including an exciting demonstration of non-instrument navigation by Nainoa Thompson and Will Kyselka.

Dixon Stroup, University of Hawaii Professor of Oceanography and chairman of the Society's Research Committee, will present a slide show and discussion on such fascinating aspects of the research and documentation as...

...effective use of winds and current patterns encountered on the voyages
...tracking Hokule'a via satellite throughout the trips

...documentation of Nainoa Thompson's observations and non-instrument navigational techniques

all of which were part of the research and rediscovery of how early Polynesians navigated their canoes over the trackless expanses of the Pacific.

We invite you to become a member of the Polynesian Voyaging Society and take part in our efforts to rediscover ancient Polynesia through continued research and education.

MEMBERSHIP CATEGORIES

<input type="checkbox"/> Hoe wa'a (paddler) student	\$2
<input type="checkbox"/> Hoe wa'a (paddler) adult	\$10
<input type="checkbox"/> Holopanihi (sailor)	\$15
<input type="checkbox"/> Kalai wa'a (canoe maker)	\$25
<input type="checkbox"/> Uli (steersman)	\$50
<input type="checkbox"/> Ho'okele wa'a (navigator)	\$100
<input type="checkbox"/> Kahuna Kalai wa'a (master canoe maker)	\$250
<input type="checkbox"/> A'o hoku (astronomer)	\$500
<input type="checkbox"/> Makua mea lokomaika'i (benefactor)	\$1000

MEMBERSHIP APPLICATION

NAME	_____
ADDRESS	_____
STATE	ZIP
CATEGORY	AMT. ENCLOSED <input type="checkbox"/> YES <input type="checkbox"/> NO
OCCUPATION	VOLUNTEER <input type="checkbox"/> NO <input type="checkbox"/> YES
SPECIAL SKILLS	PH: _____

Annual Memberships are renewable on your anniversary date. Renewal notices will be mailed.