'A PÓ INLAND STATUE PROJECT: THE RAPA NUI YOUTH INVOLVEMENT PROGRAM 2008 REPORT

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Rapa Nui

INTRODUCTION

Since 2003, 'A Pó – The Rapa Nui Youth Involvement Program has provided high school students from the Rapa Nui community with the opportunity to participate directly in conservation and research projects on their own island. The program includes classroom, laboratory, and fieldwork components, and students are encouraged to take part in all aspects of projects — from design to execution to publication.

The goals of the 'A Pó program are to enhance awareness of cultural and natural resources, to further general education on the island, and to develop expertise in archaeology and related sciences. Projects within the 'A Pó program are designed specifically to be non-destructive (omitting excavation for the sake of sustainability). And in order to diversify student interests and experiences, projects include either a broad spatial scale or a broad application of various scientific fields.

Original field research by 'A Pó students has included projects dedicated to two- and three-dimensional mapping of the Puna Pau *pukao* (topknot) quarry as well as photogrammetric and lichenometric investigations at Ahu Vinapu (Rutherford, *et al.* 2008; Shepardson, *et al.* 2004; Shepardson, *et al.* 2006; Shepardson & Torres 2009; Torres & Shepardson 2005).

In 2008, students of 'A Pó began the program's most ambitious project to date — The Inland Statue Project. Over the course of the next three to five years, students will execute an island-wide archaeological survey intended to test the relationship between statues located in the interior regions of the island and the historic territorial boundaries documented by British ethnologist Katherine Routledge nearly a century ago (Figure 1).

PROJECT OVERVIEW

Research and conservation efforts, both responsible for and reflective of tourists' interests, have focused overwhelmingly on megalithic statuary at the Rano Raraku quarry and ceremonial sites along the island's perimeter. Only relatively recently have archaeologists made a concerted effort to formally document and analyze inland / upland areas of Rapa Nui (e.g., Bork, *et al.* 2004; Ladefoged, *et al.* 2005; Stevenson, *et al.* 2002; Stevenson, *et al.* 2007; Wozniak 2001). The bulk of these inland studies attempt to identify and describe prehistoric settlements and agricultural complexes. Systematic documentation and analysis of inland ceremonial sites, on the other hand, are far fewer. However, reconnaissance suggests that numerous inland ceremonial sites, including statues, do exist. Furthermore, spatial analysis of the most recent intensive survey of inland statue locations on the island has revealed a striking, and previously undocumented, correlation between the spatial distribution of dozens of *moai* (Shepardson 2005a, 2005b, 2006) and historic territorial divisions (Routledge 1919) recorded early in the 20th century.

The Inland Statue Project includes intensive survey and documentation of archaeological sites — both secular and ceremonial — along Routledge's documented territorial boundaries. The risks that these inland archaeological sites face are quite different from the impacts of concentrated tourism that threaten historic cultural resources along the coast. Over the course of the last century, tens of thousands of ungulate livestock and various invasive plant species have caused extensive irreparable damage to archaeological sites (Porteous 1981). In addition, of the nearly 7,000 hectares (17,300 acres) of the island once set aside as Chilean national parkland in the 1960s, thousands of hectares have already been converted to private and often poorly-monitored properties (Ramírez 2001). Repatriation of parkland to islanders — in theory a blessing to cultural conservation — in reality often leads to bulldozing, plowing, and agricultural development. And despite the evident destruction that livestock, invasive plants, agriculture, repatriation, and tourism have caused to archaeological remains, these elements continue to pose serious threats to historic sites at an accelerated rate. Within years, many more archaeological sites (especially the "low-profile" undocumented inland sites) may be at risk.

In past research, more than ninety *moai* located throughout inland regions of the island were classified as abandoned "in transport" (e.g., González, *et al.* 1988). This indiscriminate, and in some circumstances completely unjustifiable (see Routledge 1919; Shepardson 2007), interpretation of so many statues being simultaneously abandoned amidst social upheaval and environmental degradation looms large in sensationalized accounts of the island's chaotic collapse.

The current 'A Pó project assesses the distinct possibility, seemingly overlooked by archaeologists in the past, that many inland statues were not abandoned in transport amidst social / ecological catastrophe but rather were situated precisely as boundary or site markers in a historical socio-political organization.

The Inland Statue Project may help to challenge prevailing interpretations of the spatial distribution of inland statuary and, more generally for research and conservation purposes, our valuation of inland archaeological sites. Finally,

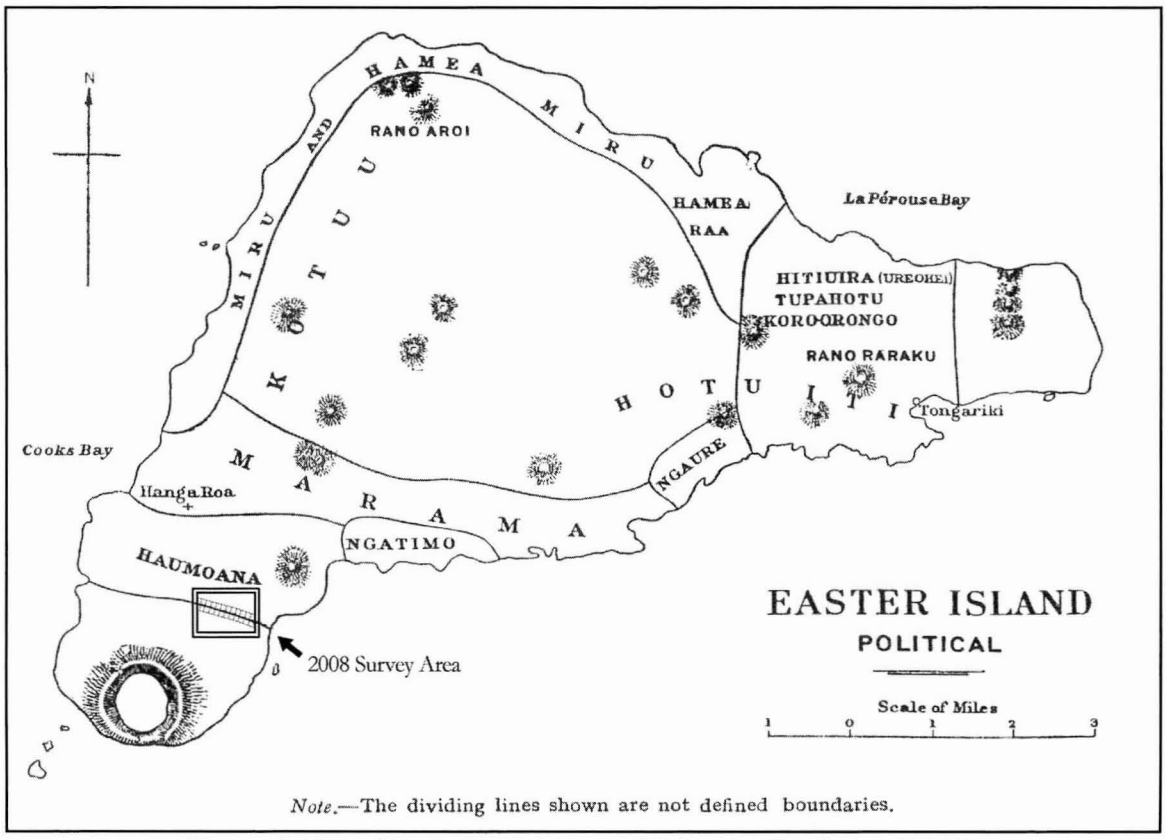

Figure 1. Map of territorial divisions published by Routledge (1919) with inset of 'A Pó 2008 survey area.

the project may serve as a novel vein of empirical research, recently called for by a number of scientists (*e.g.*, Hunt & Lipo 2001; Mulrooney, *et al.* in prep - A; Rainbird 2002; Shepardson 2006; Young 2006), to critically re-evaluate the validity of the increasingly popular "collapse" hypothesis for Rapa Nui prehistory.

Fieldwork

Our project goal is to survey the lines that Routledge believed to be territorial boundaries between familial clans across the island. Our current survey covers a 200 m (219 yd.) swath along a geo-rectified version of Routledge's boundaries (Shepardson 2005a) in an attempt to determine whether or not repetitive patterns of statue and settlement locations exist across the island's interior.

Our locational data were collected with a Trimble Recon handheld unit and backpack antenna that were donated to the Museo Antropológico Padre Sebastián Englert and 'A Pó by the Chilean winery Viña Santa Rita. In almost all cases (>95%), our data locations have a radius of error of less than 1 meter (1 yd.).

Between the months of September and November of 2008, 'A Pó students surveyed an area approximately 1.4 km by 200 m (0.87 mi. by 219 yd.) between Ahu Vinapu and the Te Manavai crater (see Figure 2). Surveying roughly 280,000 m^2 (335,000 $yds.^2$), our team recorded qualitative information, quantitative information, and took digital photographs for all archaeological remains encountered. To make our survey truly detailed and comprehensive, and to make our data useful for both archaeological and conservation purposes, our team compiled all of this information in a digital geographic information system (GIS). Furthermore, for all structural remains encountered, students created even smaller-scale detailed maps that were then digitally scanned, traced, and geo-rectified to fit our larger GIS. The end result is a map which allows users to seamlessly investigate at any scale, from island-wide to individual stone details (Figure 2). All data is freely available on the 'A Pó website, *www.terevaka.net*.

With our 2008 survey area, the 'A Pó team documented 197 archaeological sites (Figures 2 & 3). Our survey commemorates the 40th anniversary of Patrick McCoy's survey of the same region of the island. McCoy's 1968 survey, however, recorded only eight archaeological sites in the same 1.4 km by 200 m (0.87 by 219 yd.) swath of land (McCoy 1976). Some of the discrepancy between the number of sites between these two surveys likely has to do with the intensity of the surveys. Students of 'A Pó recorded even solitary *poro* (water-worn beach cobbles) and *paenga* (quarried basalt), whereas McCoy recorded mostly larger or more complex remains.

Another reason for the large discrepancy between the number of sites in the area is that McCoy included multiple

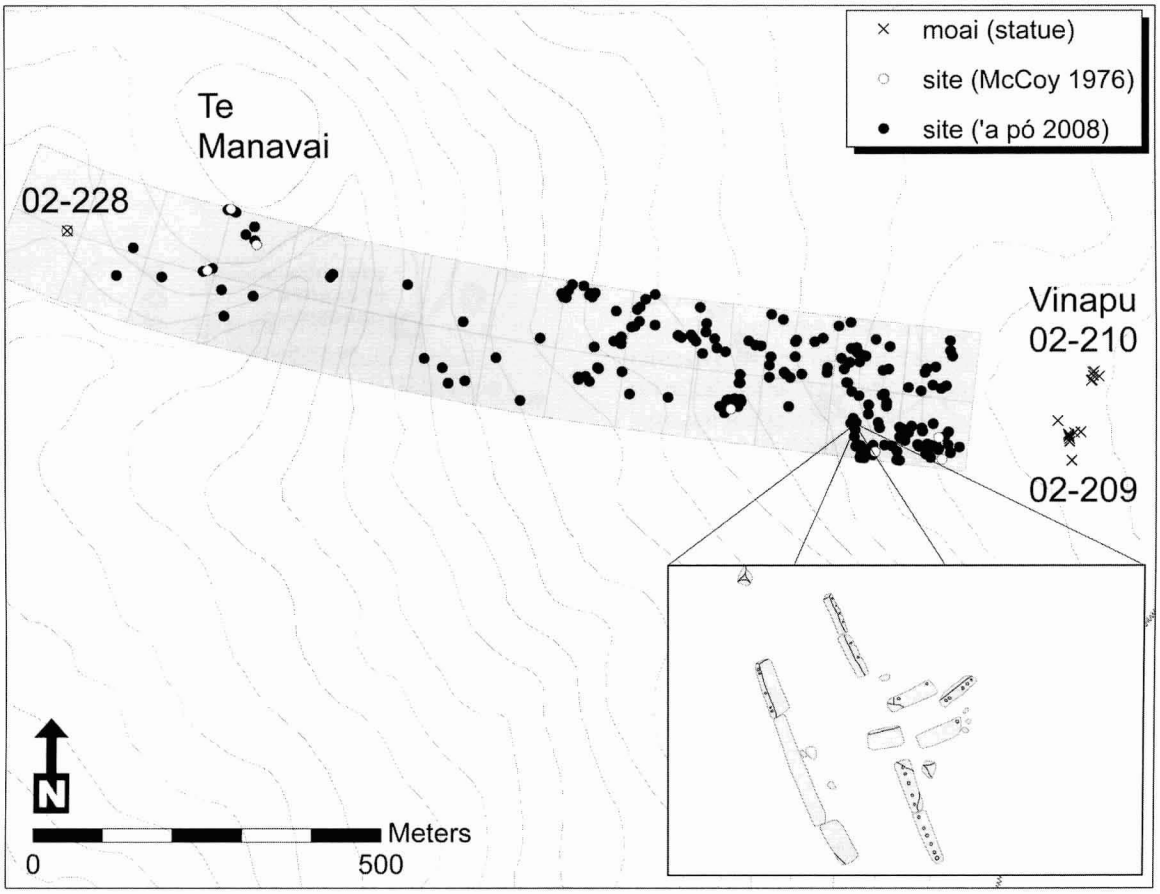

Figure 2. 2008 survey grid centered along a territorial boundary. Inset shows an example of detailed structural maps drawn by 'A Pó students.

features or architectural units within each "site". We chose to refine our scale of data collection to smaller units. Our point is not to suggest that McCoy's work was inaccurate or insufficient but rather to demonstrate the remaining potential in Easter Island archaeology to learn from non-destructive survey work and surface archaeology. McCoy (1976:155) very astutely recognized decades ago that survey work may be of paramount importance on Rapa Nui:

> Therein lies the greatest value of site surveys in archaeology. No matter what may happen to those sites in the future, we always will be in a position to make informed interpretations about the composition, layout, and general pattern of living at the household and community level, and about the broader patterns of exploitation and settlement in a region.

Considering recent growth in tourism on Easter Island, and the rate at which island residents are developing *parcelas* (government-repatriated plots of land), there may be little time left for large-scale survey efforts on the island.

Analysis

Our long-term objective is to test what we consider to be our null hypothesis, that inland statues were abandoned simultaneously and haphazardly amidst island-wide catastrophe.

We believe that exposing three types of geographic patterns might help to refute the "abandoned-in-transport" hypothesis. First, patterns between or amongst inland statuary, such as regular spacing or intervisibility, may suggest deliberate placement of statues rather than abandonment (Shepardson 2007). Second, patterns between inland statuary and critical natural resources (*e.g.*, potable water sources) may suggest premeditated placement of statues and/or related settlements. And third, patterns between inland *moai* and other types of archaeological remains (*e.g.*, habitation, agricultural) may imply a sociopolitical organization that included, rather than abandoned, inland statues.

If any of these patterns exist, they will likely become apparent at later stages of the project. And all of these patterns must also be considered with reference to chronology. However, we believe that any excavation work that might help to elucidate chronology should be informed by, and thus come after, intensive survey and data analysis.

In terms of patterns amongst inland statuary, the data are probably much too limited to propose any significant relationships. We note here that the there is no direct intervisibility between statue 02-228 and *ahu* 02-209 or 02-210. However, we also note that there exists a small area near the proposed territorial boundary that is visible from both the coastal statues and statue 02-228 (hereafter *indirect inter-visibility*), and this common area of visibility spans less than 10 m (11 yds.). This area of common visibility is on the eastern rim of the Te Manavai crater, and eucalyptus forests now impede visibility for statue 02-228 from this area. So if statue 02-228 was actually used as a boundary marker, and this remains a rather big "if", we might have reason to believe that: (1) statue 02-228 was placed quite efficiently at a near-maximum distance from the coastal statue sites 02-209 and 02-210, while still maintaining indirect intervisibility; and (2) that this system of intervisibility and/or territoriality post-dated at least partial deforestation on the island.

Studies on Rapa Nui have often appealed to island topography and natural resources for classification purposes or to attempt to identify recurring spatial patterns among surface archaeological remains. Specifically, the coastline of the island has played a central role in the definition of archaeological patterns. Researchers have drawn both spatial and temporal correlations between the distribution of archaeological remains and their distances from the nearest stretch of coast (McCoy 1976; Mulrooney, *et al.* in prep. - B; Stevenson 1997; Stevenson & Haoa 1998). Our fieldwork and database allow us to do the same (Figure 4). Whether we consider sites indiscriminately (regardless of form or function) or consider sites composed of materials that are normally associated with ceremonial architecture (*e.g.*, *poro*, *paenga*), archaeological remains appear to conform at a very general level to McCoy's (1976:154) findings in the same region that, "site density decreases with increasing distance from the shoreline", and that, "a sharp drop in density was noted between 1,000 to 1,500 m from the shoreline".

We stress, at this point, that correlations with McCoy's findings are preliminary, and perhaps premature, for three reasons. First, our 2008 survey did not extend all the way to the 02-209 and 02-210 coastal statue sites, omitting a potentially significant portion of the coastal-inland transect. We avoided the coastal area to minimize our impact on intensively-touristed sites, but further analysis may warrant thorough survey even in these areas in upcoming fieldwork. Second, our survey area covers a transect of the island that we suspect may be unique in that it may trace a historic territorial boundary. Patterns found along such boundaries may be significantly under-represented in larger or more general surveys. Third, the data in Figure 4 may appear to be a simple inverse relationship but might also represent a roughly bimodal distribution (with modes around 450 m and 1350 m [492 yds. and 1467 yds.] from the coast) or an even more complex relationship that is not yet discernible.

Potable water sources and natural stone quarries may also provide at least partial explanation for the distribution of inland statuary and/or other archaeological remains. According to McCoy's (1976) documentation of the area, a natural obsidian quarry exists just north of statue 02-228, but the nearest natural potable water source is approximately 400 m (438 yds.) to the north of sites 02-209 and 02-210. A more extensive survey of potable water sources on the island will compose a later portion of the island-wide survey of territorial boundaries.

Even without complete knowledge of critical natural resources across the island, we may be able to identify patterns based on the relationship between statues and other types of archaeological sites. Site distribution data in Figure 4 may more closely approximate a bimodal pattern related to statue locations rather than a simple decreasing trend related to the coastline. The 450 m (492 yd.) mode in Figure 4 is approximately 270 m (295 yds.) from the nearest statues (sites 02-209 and 02-210), and the 1,350 m (1,477 yd.) mode from Figure 4 is approximately 250 m (273.5 yds.) from the nearest statue (site 02-228). This peak in site distribution between 250 and 300 m (273.5 and 328 yds.) from statuary (Figure 5) may be an important trend to continue to look for as we survey interior regions of the island in upcoming stages of this project. Such spatial patterns may suggest that inland statues found with similar contextual sites do not fit archaeological expectations for an "abandoned" site. Chronological analyses will undoubtedly affect our understanding of inland sites as well.

Conclusion

First and foremost, the goal of our continuing survey of inland statues and territorial boundaries, as with all other 'A Pó projects, is education. During 2008, ten local Rapa Nui high school students completed the classroom portion of the 'A Pó program. Six of these students (co-authors) also participated in the field training and research phases. Thus, the project has not only helped to make young island residents aware of resources, goals, and techniques in both archaeology and conservation, but these students have also made an important contribution to archaeological research without any invasive techniques and at a fraction of the cost of most foreign-based research projects on the island.

Although data provided by this portion of the long-term project may be insufficient for island-wide conclusions, the 2008 portion of the project demonstrates an interesting new avenue of research to challenge the "abandoned-in-transport" explanation for inland statuary. And in a more general context, this line of investigation may serve as a partial empirical test of the ever-popular "collapse" hypothesis for Rapa Nui prehistory.

The 'A Pó program continues in 2009 funded entirely by donations. For access to our data, updates on program/project activities, or to make a contribution in support of our educational outreach effort, please visit *www.terevaka.net* or contact *terevaka.net@gmail.com*. Tax-deductible donations to support 'A Pó can be made to the Easter Island Foundation.

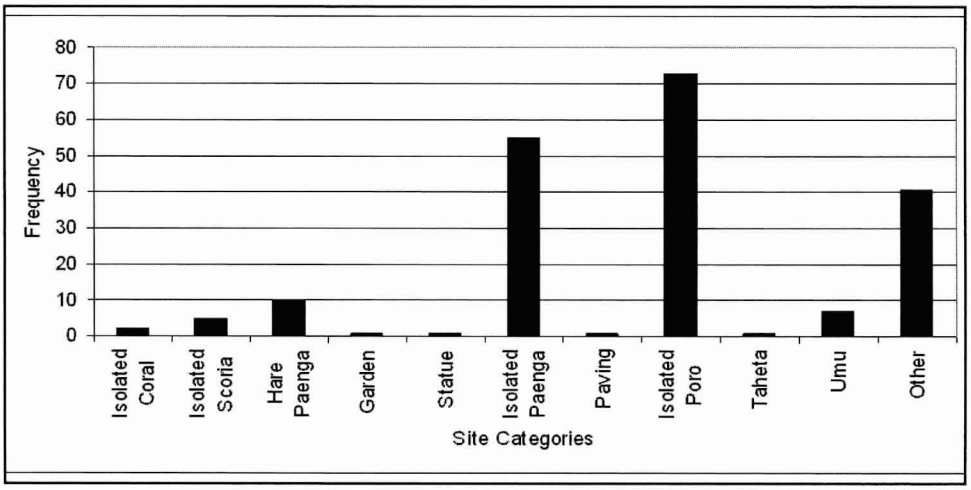

Figure 3. Histogram of site categories as recorded by 'A Pó students in 2008 survey area.

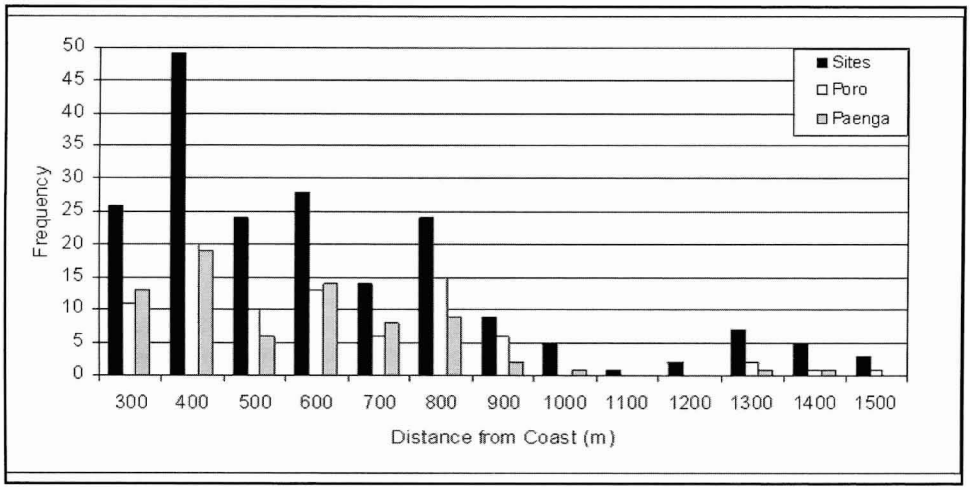

Figure 4. Histogram for distance from coastline for: all sites (black), isolated *poro* (white), and *paenga* (grey).

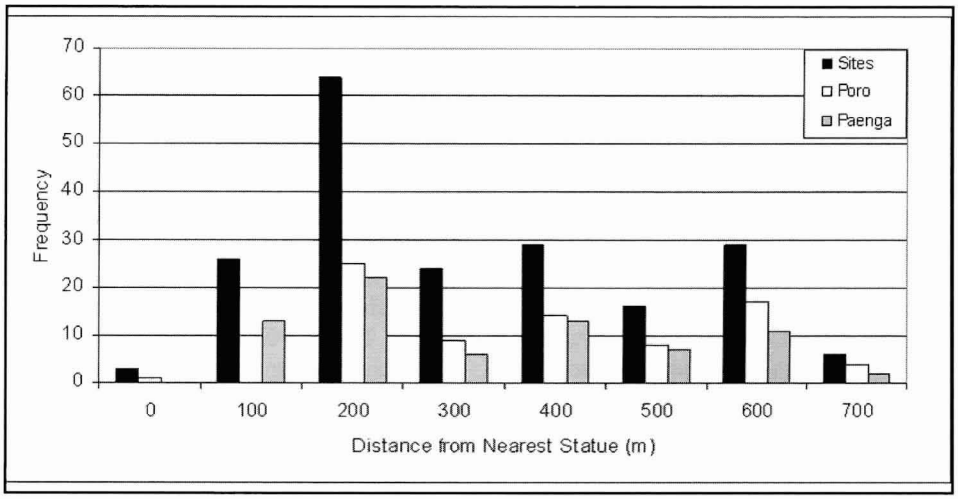

Figure 5. Histogram for distance from the nearest *moai* for: all sites (black), isolated *poro* (white), and *paenga* (grey).

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May this part of Easter Island's past never be forgotten...

ARMADA DE CHILE
Ira. ZONA NAVAL
JEFATURA MILITAR ISLA DE PASCUA

A U T O R I Z A C I O N.

AUTORIZASE a Zelma TUKI pakarati para que pueda ir al campo, objeto XXXcocinar al Sr. Maziere a contar del 18 de Agosto hasta fines de Septiembre.

Isla de Pascua, 17 de Agosto de 1964.

JEFATURA MILITAR ARMADA DE CHILE ISLA DE PASCUA

Jorge FORTILLA Urrego
Cap.de Corb.(T.G.A/S)
JEFE MILITAR

DISTRIBUCION
1. Interesado
2. Arch.J.M.

FACSIMILE OF A SPECIAL PERMIT, COMPULSORY FOR ALL NATIVE EASTER ISLANDERS IN 1964, WHO WISHED TO PASS THROUGH THE GATES OF HANGA ROA TO VISIT ANY OTHER PART OF THE ISLAND

...so that it may never happen again.