

WHAT HOUSE POSTS TELL US ABOUT STATUS
DIFFERENCE IN PREHISTORIC TAHITIAN SOCIETY:
AN INTERPRETATION OF CHARCOAL ANALYSIS, SACRED
WOODS AND INTER-SITE VARIABILITY

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In this article we discuss the identification of the types of wood used to fashion house posts in prehistoric Tahitian society in order to test whether different types of trees were used in the construction of late prehistoric house sites of varying social status and function. We also explore in which, if any, contexts sacred or ritual tree species (as described in the ethnohistoric record) were used to fashion house posts. Finally, we discuss how this data may be used by archaeologists to interpret social organisation and the materialisation of social values in the prehistoric Tahitian society.

Our case study provides identifications of wood charcoal recovered from posthole features excavated at prehistoric house structures in the Windward Society Islands. After developing a protocol for differentiating charcoal fragments derived from original house posts and charcoal fragments derived from locations associated with background activities, we present interpretations of the types of wood used for the construction of nine late prehistoric house posts in the 'Opunohu Valley, Mo'orea. Comparative analyses of Society Islands ethnohistoric data demonstrate that the choice of wood used in house-post construction reflects differential access to certain economically important and symbolically valued tree species. The ritual importance of trees in Ma'ohi (Tahitian) society during the contact era articulated with varied aspects of social differentiation. We argue that these social and cultural beliefs were materialised in the construction of prehistoric dwellings. The archaeological data provides empirical support for the argument that variation in the types of wood used in prehistoric Tahitian house structures has social relevance; it can be used as another line of evidence to infer social status and site function.

Wood charcoal identifications have been under-utilised for making social interpretations about Polynesia. We address how such data can be used, particularly as a means of documenting inter-site variability related to status difference, site function and site specialisation. Ethnohistoric and

ethnographic data demonstrate that in many Polynesian societies, house posts were more than mere functional supports, but had ritual significance and symbolised the ancestors. We argue that in the late Society Island chiefdoms access to particularly important or spiritually significant raw materials used in the production of ritual artefacts—in this case sacred woods used to fashion ritual house posts or ceremonial objects—provides insights into the political economy and demonstrates how the materialisation of status distinctions served as a legitimisation of power.

WOOD CHARCOAL ANALYSIS IN EASTERN POLYNESIA: INVESTIGATING PREHISTORIC SOCIAL AND CULTURAL PRACTICES

Over the last several decades, wood charcoal identifications have become integrated into archaeological analyses in Eastern Polynesia to provide samples of short-lived species for radiocarbon dating and to reconstruct prehistoric environments. A less developed application is to understand which wood types were used to make particular kinds of wooden artefacts, including house posts and idols (Orliac 1990, Weisler and Murakami 1991). This second application has been most strongly developed in New Zealand, where studies of organic objects recovered from well-preserved contexts have documented which wood species were used for everyday-use objects in contrast to those used for finely made status and display objects; this research has also contributed to the identification of artefact function (Leach *et al.* 2000, Wallace and Irwin 2004, Wallace *et al.* 2004). Wallace (1982, 1989) argued that certain types of woods were used to make objects because of their physical properties (i.e., hardness or density), because of casual choices made to meet immediate needs or because of local availability. New Zealand studies also have a long history of incorporating charcoal analysis of wood recovered from postholes from a range of site types (Bellwood 1978, Damm and Sutton 1990, Leach *et al.* 2000, McFadgen and Sheppard 1984, Smith 1978, Sutton *et al.* 2003, Wallace and Irwin 2004 and others).

The present study draws on wood charcoal identification studies in Eastern Polynesia that address how the selection of wood, as part of material culture, reflects cultural values, domestic practices, ideology and ritual (Kolb and Murakami 1994; Orliac 1984a, 1984b, 1990). In articulating wood charcoal analyses with ethnohistoric data, these works have established that in certain Eastern Polynesian cultures, woods were imbued with significant cultural properties and were transformed into highly valued cultural items in both ritual and domestic contexts. Kolb and Murakami's (1994) analysis of wood charcoal recovered from burn features at Hawaiian war temples (*heiau*) and chiefly residences was one of the first to adopt such a stance. They identified

several taxa used for domestic purposes, distinguished from others used for ritual purposes, including woods burned to create ritual cleansing fires and others used to construct parts of temples and carved images. Orliac's (1990) analysis of sculpted objects from Eastern Polynesia provided material evidence for how some ethnohistorically documented sacred woods were used to make material objects, including adze handles, sculpted wooden plates and bowls, and tapa beating mallets. Wood from trees grown within and around *marae* 'ceremonial temples' was used to fashion posts and *fata* 'storage posts, offering platforms' found in the temple or its associated super-structures and to fashion ritual objects used in *marae* ceremonies, such as *ti'i* 'small wooden idols' and *unu* 'ornamental figures' (Orliac 1990).

Some Polynesian wood charcoal studies with a social slant have also investigated the types of wood recovered from sub-surface features to determine the features' specific function and to document the types of woods used for combustion (Kolb and Murakami 1994, Orliac and Wattez 1987, M. Orliac 1997). Building upon these previous works, we discuss charcoal identification analyses of charred wood fragments recovered from postholes as a means for documenting both intra-site variability and access to highly valued and economically important woods used as raw materials in house construction and in the making of ritually important objects.

THE IMPORTANCE OF HOUSE POSTS

There are several reasons to consider house posts as important objects of archaeological enquiry within Eastern Polynesia. Given the perishable nature of residential dwellings and other super-structures, postholes are among the most ubiquitous sub-surface features recovered in archaeological excavations in the region. In the poor preservation conditions which typify Island Polynesia, these circular features with interior charcoal and sediment fill often provide the only direct physical evidence of prehistoric dwellings and super-structures. Second, household archaeology excavations in Eastern Polynesia have demonstrated that posthole features vary in non-random ways, both in their size (e.g., Kahn 2005:330-31, Sutton 1990:188-91, Taomia 2000:147) and in the care taken in their original emplacement and replacement (represented as posthole packing or fill materials like clay and support stones) (see Kahn 2005:330-31). These data suggest that house posts were more than functional architectural components. Finally, as we describe further below, ethnohistoric descriptions refer to the sacred or ritual nature of house posts in the Society Islands, a pattern which can be demonstrated for many areas of Eastern Polynesia (Kahn 2005; see Firth 1957:77, 81; Green 1998a:129, 1998b:264; Kirch 1996:262; Kirch and Green 2001:251). As with other

functional and ritual objects made from wood, we hypothesise that the choice of wood used for ancient Tahitian house posts was a cultural one (after Kolb and Murakami 1994, Orliac 1990). Variation in the choice of woods used in prehistoric Ma'ohi house structures may then provide an important means for identifying the materialisation of status difference and access to resources (i.e., sacred woods) in areas lacking excellent preservation conditions.

WOOD CHARCOAL IDENTIFICATIONS FROM POSTHOLE FEATURES IN THE 'OPUNOHU VALLEY, MO'OREA

Postholes features are the material remains of a particular activity, i.e., digging a hole for a post. Posthole features were easily identifiable in Kahn's recent excavations at five late prehistoric 'Opunohu Valley house sites, a project investigating inter- and intra-household variability in the late prehistoric Society Islands chiefdoms (Kahn 2005). Diverse forms of evidence—including distributional data for artefacts and sub-surface features, access to raw materials used in adze production, and the degree of architectural elaboration in house architecture—provided information allowing for precise interpretations of both house site function (residential versus specialised) and occupants' status (high status versus commoner). Round-ended house site ScMo-170 served as a high status residence, rectangular houses ScMo-171B and ScMo-171C were commoner residences, round-ended house site ScMo-120B served as a specialised locale for storing and manufacturing ritual wooden objects, and rectangular house site ScMo-123A was used for ritual activities and/or as a temporary residence for elite ritual practitioners. Given that robust interpretations concerning site function and site occupants' status were already available, analysis of the woods used to fashion house posts in these 'Opunohu Valley archaeological sites was carried out to test whether access to certain wood species varied according to these two variables, site function (sleeping houses versus specialised-use houses) and site status (elite versus commoner).

In the 'Opunohu Valley household excavations, postholes were delineated by oval to circular pits with interior "staining" and high frequencies of charcoal in the interior fill (see Table 1). Mid-line house posts were more substantial than lateral ones, a pattern suggested by Green's previous excavations (Green *et al.* 1967) and ethnohistoric data on Ma'ohi house construction (Orliac 1982:273). Specialised house sites (ScMo-120B, ScMo-123A) had larger and more substantial house posts than house structures used as primary residences or those associated with adze production activities (see Kahn 2005:330, Figure 5.20; Oakes 1994:79-85, Tables 4.3, 4.4). Care was taken in both the original post emplacement and in post replacement, and the archaeological remains suggested that offerings may have been left at pits dug around the post bases (Kahn 2005:330-31).

Methodological Considerations

Few previous studies have investigated the wood used in Polynesian house posts or in posts found in other contexts (but see Damm and Sutton 1990:58, Table 3.1; Leach *et al.* 2000; Orliac 1990; Sutton *et al.* 2003: 260-61, Appendix 2; Wallace and Irwin 2000; Weisler and Murakami 1991). Much of this work concerns the analysis of exceptionally well-preserved uncarbonised posts or carbonised post butts. In poor preservation conditions such as the wet, windward environment of the 'Opunohu Valley, *in situ* remains of original house posts are sometimes recovered as charred butt ends, in the form of charcoal concentrations recovered at the base of posthole features. We infer that these represent remains of house posts whose butt ends have been burnt before their emplacement in the ground, a practice known from Tahitian ethnographic observations.¹ In other cases, posthole features lack *in situ* carbonised post remains but have frequent charcoal flecking in their interior fill. House post wood identification in these contexts is somewhat more challenging. It requires that wood charcoal fragments originating from the original house post and recovered in the posthole sediment fill be differentiated from small fragments that were swept into the top of the posthole during house cleaning and sweeping. Because Ma'ohi house interiors were covered with mats or grass flooring which were periodically replaced when house interiors were swept clean (Corney 1913 [I]:294, Davies 1851[1823]:145,156, 242), it is likely that small organic remains filtered through this flooring as it decomposed and were then swept while the flooring was removed and/or replaced. These cleaning activities would displace small material remains that could become lodged into the upper posthole fill during this time or be swept to the side walls of the house. Hence, we propose the following:

1. Charcoal samples recovered from the posthole fill and representing the original charred ends of house posts will have 1-3 tree species represented. This allows for post replacement episodes, which were well-documented in the 'Opunohu Valley excavations by double or triple posthole features (Kahn 2005).
2. Samples taken from the surrounding posthole fill are expected to have a higher number of species represented because they will contain pieces of the original house posts and burnt organic remains which had filtered down from the house floor or were swept into the posthole.
3. Charcoal from excavation units adjacent to the postholes will be used as comparative samples to provide a picture of the "background" charcoal composition from floor sweeping. These comparative "background charcoal" samples—or scattered charcoal fragments and chunks not

directly associated with postholes and not in direct association with in-situ burning or cooking activities—should have charcoal deriving from deliberate burning activities (e.g., hearths, combustion features for producing insect-repellent smoke and/or heat and light, etc.) that was re-deposited into secondary contexts through site maintenance activities such as sweeping (after Thompson 1994). We hypothesise that these background samples should represent more species than the posthole samples and that they are likely to represent fewer species of those types of wood recorded in the ethnohistoric literature as being “sacred”.

Posthole Sample Selection

Because of the time-consuming nature of charcoal identification, only a small overall number of samples could be included in the present study. Several factors guided sample selection. The main objective was to demonstrate whether the wood used for house posts varied between domestic-use versus specialised-use house sites and low status residences versus high status residences. Accordingly, Kahn sampled postholes from four prehistoric house contexts of varying rank, status and function (Kahn 2005:217-333). As previously mentioned, specialised house contexts include ScMo-120B and ScMo-123A; the first is interpreted as a *fare ia manaha* or ‘house of sacred treasures’ (Henry 1928:135), a locale where ritually charged items were stored and where sacred wooden objects were sculpted and carved; the second is interpreted as a temporary residence for ritual functionaries during *marae* ceremonies. Both locales would have been used by social/ritual elites, rather than the general commoner population. Residential house contexts include ScMo-170, interpreted as a high status sleeping house, and ScMo-171B, interpreted as a somewhat lower status sleeping house.

Table 1 describes the size, morphology and particular context of the sampled postholes. The postholes are of medium to large size (after Kahn 2005:181) and the majority had associated postmoulds of packing clay or interior supporting stones. Postholes with clear evidence for post replacement (overlapping postholes, double or triple posthole features) were deliberately excluded in the present study. Because other postholes excavated by Kahn had multiple episodes of use, we cannot rule out that the sampled postholes were at some time replaced with different posts, given that evidence for post replacement can be difficult to clearly identify.

Postholes were sampled from locations within and outside of houses (Table 1). Exterior residential spaces adjacent to houses were important arenas of social interaction, where guests from the greater community were entertained (Kahn in press). We hypothesise that posts both within the house, as well as those in exterior areas, may have been used as visually public media for

Table 1: Posthole context and morphology.

Site	FeatureNumber	Location	Size (cm)	Description
120B	Feature 1	House Exterior	20 x 30	Oval posthole, high charcoal content. Postmold of Layer C packing clay. Vesicular basalt support stones.
120B	Feature 7	House Exterior	22 x 18	Deep posthole, isolated charcoal flecks/chunks fill. Two large support stones.
120B	Feature 9	House Exterior	24 x 20	Deep posthole, two interior support stones. Frequent charcoal flecks/chunks in fill.
123A	Feature 5	House Interior	28 x 25	One interior support stone. Postmold of Layer C packing clay. Interior to curbstone alignment and slightly off of mid-line. Possible <i>fata</i> (storage post).
123A	Feature 2	House Interior	20 x 21	Round posthole, single interior support stone. Found just interior to curbstone house alignment. Corner post.
171B	Feature 4	House Interior	16 x 18	Medium size oval posthole, frequent charcoal flecking. Two vesicular basalt support stones.
171B	Feature 5	House Exterior	14 x 16	Small posthole with frequent charcoal flecks/chunks.
170	Feature 10	House Interior	19 x 22	Shallow posthole, frequent charcoal flecks. Mid-line post in the house interior.
170	Feature 11	House Interior	22 x 21	Medium-size, postmold of Layer C packing clay. Mid-line post in house interior (aligns with Feature 11 along the house mid-line).

displaying aspects of group identity. This seems particularly likely for *fata*, the storage posts used for hanging baskets of food, household utensils and other items out of the reach of rats (Davies 1851:82; Morrison 1935:197, 1966:164; Orliac 2000:62; Wilson 1799:341). *Fata* used as storage posts were often found near the mid-line of the sleeping house interior (Moerenhout 1959 [II]:89), but *fata* also functioned as supporting scaffolds or altars where offerings were left for the gods (Corney 1914 [II]:209-10, Eddowes 1991:86-90, Henry 1928:135). *Fata* serving as storage posts and those used in offering platforms could be situated outside the house (Forster 1968:336). Henry (1928:135) notes that these posts had ritual significance: "Beneath each post of the altars was buried a small stone, covered with a leaf or two of the most sacred *miro*, which was called the *iho* [essence] of the sacred altar". According to Ellis (1831 [I]:192), *fata* were "considered an ornament to the house" and "a great deal of work [was] paid to this piece of furniture", which suggests that it was possible if not likely that they were fashioned from special woods and/or ornamented by polishing or carving. Orliac (2000:60) has posited that elite houses had two to three *fata*, and that these were fashioned from valued woods, including *Fagraea berteriana* and *Neonauclea forsteri*. The postholes sampled in the present study include posts interpreted as supports for the house super-structure (corner posts and mid-line posts), and those likely serving as *fata*, from house interior and exterior locations (see Table 1).

Two to three posthole features per house site were studied, each in conjunction with a comparative control sample taken from the house floor (Table 2). Charcoal samples analysed from the posthole fill are of two types: (i) Type PP, or point provenienced samples taken from within the fill, typically at the base of the posthole, and thought to represent burnt *in situ* post ends, and (ii) Type FS, or small charcoal fragments recovered from flotation sediments taken from the posthole fill.² Whenever possible, Type PP were selected for macro-botanical identification, but the small size of the wood charcoal fragments frequently necessitated the identification of samples recovered from Type FS samples as well.

Control samples from adjacent or surrounding excavation units provide comparative samples of "background charcoal". These control samples were chosen from excavation units in close proximity to the posthole,³ and represent point plotted charcoal from the Layer B cultural deposit (PP), charcoal recovered from screening Layer B deposits (SC), and small charcoal fragments recovered from the flotation of bulk sampling of Layer B sediments (FS). Overall, 32 wood charcoal samples recovered through the above techniques were analysed. Charcoal identification was carried out on a total count of 182 individual charcoal fragments (Coil 2005).

Table 2: Wood charcoal samples analysed from posthole features and comparative control samples taken from the house floors or exterior areas.

Sample Number	Site	Context	Provenience	Sample Type
1	120B	Control	N100 E101, Layer B1	SC
2	120B	Control	N100 E101, Layer B1	FS
3	120B	Posthole	N100 E101, Feature 9	FS
4	120B	Posthole	N100 E101, Feature 9	PP
5	120B	Posthole	N100 E101, Feature 9	PP
6	120B	Control	N100 E100, Layer B1	FS
7	120B	Control	N100 E100, Layer B1	FS
8	120B	Control	N100 E100, Layer B1	SC
9	120B	Posthole	N100 E100, Feature 7	FS
10	120B	Posthole	N100 E100, Feature 7	PP
11	120B	Posthole	N100 E100, Feature 7	FS
12	120B	Control	N104 E101, Layer B2	PP
13	120B	Control	N104 E101, Layer B2	SC
14	120B	Posthole	N104 E101, Feature 1	PP
15	120B	Posthole	N104 E101, Feature 1	FS
16	123A	Control	N104 E107, Layer B2	SC
17	123A	Control	N104 E107, Layer B1	SC
18	123A	Control	N104 E107, Layer B1	FS
19	123A	Posthole	N104 E107, Feature 5	FS
20	123A	Control	N108 E108, Layer B1	FS
21	123A	Control	N108 E108, Layer B1	SC
22	123A	Posthole	N108 E109, Feature 2	FS
23	171B	Control	N99 E101, Layer B1	SC
24	171B	Posthole	N99 E101, Feature 4	PP
25	171B	Control	N101 E101, Layer B2	SC
26	171B	Control	N101 E101, Layer B2	PP
27	171B	Posthole	N100 E102, Feature 5	PP
28	171B	Posthole	N100 E102, Feature 5	FS
29	170	Control	N105 E98, Layer B2	SC
30	170	Posthole	N106 E100, Feature 10	FS
31	170	Control	N99 E101, Layer B1	PP
32	170	Posthole	N99 E102, Feature 11	FS

SC- Recovered from 1/4 inch and 1/8 inch screened deposits

FS- Recovered from bulk sediment samples that were floated

PP- Individual charcoal fragments that were point provenienced and bagged separately

Wood Charcoal Identification Methodology

James Coil completed the wood charcoal identifications. Individual charcoal fragments of sufficient size (generally $-2\ \phi$ or larger) were examined with two microscopes: a Wild M5a stereoscopic (12-50x) and an Olympus BHS-2 metallurgical (50-500x). Methods used to examine the charcoal follow those described by Leney and Casteel (1975). The wood anatomy characteristics preserved in the unknown archaeological charcoal fragments were compared with those recorded from the study of Pacific Island wood reference materials curated at the UC Berkeley Oceanic Archaeology Laboratory, and with photomicrographs and descriptions found in published sources (primarily Detienne and Jacquet 1999).

RESULTS

Table 3 presents the results of the wood charcoal identifications, with two quantitative summations given for types within individual assemblages. First, the number of fragments is provided for each identified type and, second, the percentage by weight of total identified wood for each type is given (e.g., 4/50 percent). The wood charcoal identifications were primarily constrained by size; this in turn constrained overall sample sizes because many of the recovered charcoal fragments, particularly those from interior posthole fill, were too small to identify ($0\ \phi$ or smaller).

Between 1 and 28 fragments of wood charcoal were identified per sample. Nine wood types were identified; these include both introduced Polynesian cultigens and trees that were elements of the native vegetation. Nine other dicotyledonous wood types could not be matched with confidence to available reference materials—these were recorded as Unknown Types A to I and may potentially be more specifically identified if a more diverse reference collection is available in the future. Many of these unknown types likely represent taxa derived from Mo‘orea’s native vegetation, since these native plants (especially shrubs) are more poorly represented in the current reference materials. In addition to wood charcoal, the samples occasionally contained other charred materials including nut shells, bark and seed tissues. These, along with wood charcoal fragments that were too small, damaged or distorted to assign to any type, are recorded as “Unid.” in Table 3 and these, along with the other non-wood components, are not included in weight percentage calculations.

First, we briefly describe the economic tree species identified in the wood charcoal.⁴ *Nono*, or cf. *Morinda citrifolia*, is found in the Society Islands both as a casual cultigen and as a weed and is also naturalised in native forests (Whistler 1991). The tree’s bark and roots were used to dye tapa cloth, and

its fruit was a famine food and used in traditional medicines (Pétard 1986 [1957]:280-84). Cf. *Premna* sp. is a small species typically found at lower altitudes. The tree's inflorescence was used in hair ornamentation and parts of the tree were used in traditional medicine (Pétard 1986 [1957]:265). *Syzygium* sp., a Polynesian introduction, produces a small apple-like fruit that was being eaten at the time of European contact. The tree probably became established in interior valley locations with the help of humans and charcoal from *Syzygium* sp. has been identified from proto-historic agricultural sites in the 'Opunohu Valley (Lepofsky 2003).

In terms of ubiquity (number or percentage of samples in which a given type is present in any quantity), three wood types scored substantially higher than the rest: *Artocarpus* sp., breadfruit, (21 of 32 samples), *Hibiscus tiliaceus* (11 of 32) and *Inocarpus fagifer* (9 of 32). The other wood types occurred in three samples or less. The ubiquity of *Artocarpus* sp., *Hibiscus tiliaceus* and *Inocarpus fagifer*, particularly in the control samples derived from "background charcoal", relates to their economic use as well as make-up of the prehistoric vegetation in the valley. Lepofsky's previous charcoal identifications (1994, 2003) identified breadfruit wood charcoal from exposed stream profiles and agricultural sites in the 'Opunohu Valley. Breadfruit's ubiquity reflects the tree's central importance to Ma'ohi society—its fruit was an essential subsistence staple, its bark was used in tapa production and its wood was used to fashion sacred items, house posts and platforms associated with temple sites (Lepofsky 2003). *Inocarpus fagifer* and *Hibiscus tiliaceus* are commonly found taxa in the Society Islands (Florence 2003). Wood charcoal from these taxa has been recovered from prehistoric archaeological contexts and proto-historic agricultural contexts in the 'Opunohu Valley (Lepofsky 1994:290-91, 2003). *Hibiscus tiliaceus* is commonly found in successional forests (Whistler 1991) and its soft wood was used for a variety of construction purposes (Pétard 1986 [1957]:214-16). The large seed of the *Inocarpus* tree was used as a famine food and its tender wood was used to construct various everyday objects. Lepofsky (1994:290-91) infers that *Inocarpus* was less dominant within the 'Opunohu Valley's vegetation makeup in the past than it is today, while *Hibiscus tiliaceus* formed a dominant component of the valley's prehistoric vegetation. Wood charcoal of other cultivated species, including several identified in the present study (*Artocarpus* sp., *Cocos nucifera*, *Syzygium* sp.) were also recovered by Lepofsky from stream profiles and agricultural contexts, but at a lesser rate than species inferred to represent background vegetation (1994:290-91). The recovery of these cultivated species from agricultural contexts in the 'Opunohu Valley indicates that they were part of the proto-historic tree-cropping system (Lepofsky 2003).

Table 3: Quantification of wood charcoal types. First numeral is fragment count, second is percentage of identified wood charcoal by weight. Letters in the unknown wood types column show the distribution of 9 unknown wood types. The final column lists other charred components of samples not included in weights, including unidentifiable dicotyledonous wood (Unid.). SC- Recovered from 1/4 inch and 1/8 inch screened deposits, FS- Recovered from floated bulk sediment samples, PP- Individual charcoal fragments that were point provenienced and bagged separately

ScMo-120B	n=	Artocarpus sp.	Calophyllum troylium	Casuarina equisetifolia	cf. Cocos nucifera	Hibiscus tiliaceus	Inocarpus fagifer	cf. Morinda citrifolia	cf. Premna sp.	Syzygium sp.	Unknown wood types	Also in sample
Feature 9												
Sample 1: Control, N100 E101, Layer B1 (SC)	12	10/89%	2/11%								1/16% (I)	Unid.
Sample 2: Control, N100 E101, Layer B1 (FS)	9	7/74%	1/11%								3/12% (B)	Unid., nut shell
Sample 3: Posthole Ftr. 9, N100 E101 (FS)	28	24/88%					1/1%					
Sample 4: Posthole Ftr. 9, N100 E101 (PP)	6	6/100%										
Sample 5: Posthole Ftr. 9, N100 E101 (PP)	4	1/34%									3/68% (A,B)	

ScMo-171B	n =	<i>Atocarpus</i> sp.	<i>Calophyllum troyanum</i>	<i>Casuarina equisetifolia</i>	<i>Cecoc myctera</i>	<i>Hibiscus thiacens</i>	<i>Inocarpus fagifera</i>	<i>Momonga citrifolia</i>	<i>Premna</i> sp.	<i>Syzygium</i> sp.	Unknown wood types	Also in sample
Feature 5												
Sample 25: Control, N101 E101, Layer B2 (SC)	7	1/14%				1/10%	4/65%				1/10% (H)	
Sample 26: Control, N101 E101, Layer B2 (PP)	4					4/100%	4/100%					
Sample 27: Posthole Ftr. 5, N100 E102 (PP)	1					1/100%	2/100%					
Sample 28: Posthole Ftr. 5, N100 E102 (FS)	2											
ScMo-170												
Feature 10												
Sample 29: Control, N105 E98, Layer B2 (SC)	13					10/74%				3/26%		Unid.
Sample 30: Posthole Ftr 10, N106 E100 (FS)	2						2/100%					Nut shell
Feature 11												
Sample 31: Control, N99 E101, Layer B1 (PP)	1									1/100%		Unid.
Sample 32: Posthole Ftr. 11, N99 E102 (FS)	3	1/22%				1/22%				1/56%		Unid.

*Comparison of Sample Types*⁵

If we exclude unidentified fragments and unknown wood types, a comparison of the number of species represented in the different sample types is broadly consonant with our expectations. While several control samples have only one or two species represented, a moderate number (c.30 percent) have over three species represented. In contrast, none of the point plotted posthole samples, and only one of the posthole flotation samples (c.14 percent), have over three species represented. This supports our initial hypothesis that the control samples derive from background charcoal and accordingly have a more diverse composition than posthole fill samples that derive mainly from posts and, to a lesser extent, from background charcoal that has filtered into the features.

Of equal import is the species composition within the posthole samples. Again, excluding unidentified fragments and unknown wood types, the point plotted posthole samples have either one (75 percent) or two to three species (25 percent) represented. The floated posthole samples have equal numbers of samples with either one or two to three samples represented (at c.43 percent each) and a single sample with over three species represented (c.14 percent). Overall, the posthole flotation samples have a higher number of species represented than the point plotted posthole samples. This lends support to our original hypothesis that the point plotted samples represent portions of the original charred posts, while the surrounding posthole fill samples include wood charcoal from the original house posts and burnt organic remains that have filtered down or been swept into the posthole. Following this, a comparison of both posthole sample types will be instrumental for establishing the wood used for the original post. The point plotted samples provide the most accurate data, but the flotation samples offer an additional line of evidence for comparison, particularly when the point plotted charcoal samples contain few identifiable fragments or have more than one species represented.

The Wood Used for the House Posts

In interpreting the significance of the woods identified in the macrobotanical analysis, we cite references to sacred woods in the ethnohistoric records, which describe how certain highly valued woods were used to fabricate ritually significant objects and were sometimes used in house construction (see Table 4).

ScMo-120B, Post 9. Point plotted samples 4 and 5 provide the best evidence concerning the original house post, and both samples only contain *Artocarpus* sp. wood. We infer that this post was fashioned from breadfruit wood, a highly prized wood noted for its use in elite dwellings (Table 4). The control sample

assemblages, which represent background charcoal, also contain *Calophyllum inophyllum*, described as a sacred tree used in canoe manufacture and the production of various wooden objects (Table 4). Sample 3, floated from the posthole interior, also overwhelmingly contained breadfruit wood and an additional piece of *Inocarpus fagifer*, which we interpret as background charcoal that has filtered into the posthole.

ScMo-120B-Post 7. Wood identifications from the point plotted posthole sample 10 indicate that this post was fashioned from *Hibiscus tiliaceus*. The posthole fill (sample 9) and two of the three control samples contain *Artocarpus*, which we interpret as background charcoal. Sample 11, floated from the posthole fill, had the only *Casuarina equisetifolia* found, which we interpret as background charcoal that has filtered into the posthole. This species is noted in the ethnohistoric literature as a sacred tree used to sculpt god images, war weapons and other items (Table 4).

ScMo-120B-Post 1. Point plotted sample 14 from the posthole provides the best data for interpretation and it has both *Artocarpus* and *Hibiscus tiliaceus* wood represented, while the associated posthole fill had another wood fragment identified as breadfruit. A conservative interpretation would suggest that the feature was a “double posthole”, where the remains of the original post were replaced, thus both *purau* (*Hibiscus tiliaceus*) and breadfruit posts are represented. One could also interpret the data as indicating that the original post was fashioned from breadfruit and that the *purau* fragments represent “background charcoal” intrusive into the posthole feature. Control sample 13 contained *Calophyllum inophyllum*, similar to control samples 1 and 2.

ScMo-123A, Post 5. The interpretation of the post and the control sample results are constrained by small sample sizes. All samples contain breadfruit wood, while some of the control samples contain unidentified wood and bark. The data tentatively suggest that *Artocarpus* wood was used to fashion this interior post, which possibly served as a *fata* ‘storage post’ (Kahn 2005:296-97, Table 5.10). The presence of breadfruit wood in the background charcoal suggests that this wood was also used for other purposes at this site.

ScMo-123A, Post 2. Interpreting these results, particularly of the post charcoal, is constrained by small sample sizes. The post sample contains only *Artocarpus* wood, suggesting it was fashioned from breadfruit timber. The control samples contain *Artocarpus* and several other species found as components of the upper valley vegetation or cultivated within the tree cropping system (*Cocos nucifera*, *Hibiscus tiliaceus*, *Inocarpus fagifer*).

ScMo-171B, Post 4. While the sample size is small, the data suggest that this interior post was fashioned from *Hibiscus tiliaceus*. The background charcoal is comprised of cultigens and successional species (*Artocarpus*, *Syzygium* sp., *Hibiscus tiliaceus*).

Table 4: Ethnohistoric data for traditional uses of several woody taxa.

Tahitian Name	Taxa ⁶	Use	Source	Notes
<i>mape</i>	<i>Inocarpus fagifera</i>	firewood, house fences, artifacts	Henry 1928:46	wood mostly used for fire wood and for making fences, 'axe' handles
<i>purau</i>	<i>Hibiscus tiliaceus</i>	house rafters and posts	Corney 1918 (III):30; Ellis 1831; Orliac 2000:31; Parkinson 1784	for ordinary house posts
<i>niu</i>	<i>Cocos nucifera</i>	artifacts, house construction, house posts	Henry 1928:44	used for "royal houses"
<i>'uru</i>	<i>Artocarpus</i> sp.	house construction, house posts, idols and temples	Corney 1918 (III):23; Eddowes 1991:180; Henry 1928:39, 133; Orliac 1984a:109	"wood is prized", sometimes planted on marae, house posts, doors, ridge poles, temple altars (<i>fatarau</i>), ornamental figures (<i>aniu</i>) in temples and on canoes, <i>marae</i> images (<i>ti'i</i>)
<i>mara</i>	<i>Neonauclea forsteri</i>	canoe, artifacts, idols, temples, <i>fata</i>	Orliac 1987:13, 2000:61; Pétard 1986:276	valued wood, used to fashion paddles, canoes, cloth anvils, adze handles, sacred drums, <i>fata</i>
<i>'aito, toa</i>	<i>Casuarina equisetifolia</i>	idols and temples, artifacts	Corney 1918 (III):235; Henry 1928: 57; Kooijman 1964; Orliac 1984a:107;2000:109	sacred tree near marae, essential to marae consecrated to 'Oro, used to make 'Oro images, war weapons, tapa beating mallets
<i>'atae</i>	<i>Erythrina</i> sp.	ritual (fires)	Henry 1928: 133; Orliac 1984a:107	sacred trees of <i>marae</i> grounds, used in sacred fires to char ritual images

Tahitian Name	Taxa ⁶	Use	Source	Notes
<i>miro, 'amae</i>	<i>Thespesia populinea</i>	house posts, idols and temples, artifacts	Corney 1918 (III):235; Davies 1851:281; Eddowes 1991:180; Henry 1928:190n, 382n; Orliac 1984a:107	sacred to the god Tane, grown in the courts of <i>marae</i> , favoured tree of the god Ro'o who inspires priest's devotions, handles of tools, house posts, <i>unu, ti'i</i> , shelters on <i>marae</i>
<i>ti'a'iri</i>	<i>Aleurites moluccana</i>	artifacts	Bligh 1986(II):13-14; Orliac 1984a:187; Pétard 1986:196	trees grown in <i>marae</i> , bark used to colour tapa cloth and mats, nuts burnt for lighting
<i>tou</i>	<i>Cordia subcordata</i>	artifacts	Emory 1933:23	grown within <i>marae</i> precinct, used in preparation of red dye for tapa cloth decoration, bark cloth batters
' <i>ati</i> or <i>tamamu</i>	<i>Calophyllum inophyllum</i>	canoes, artifacts	Emory 1933:23; Orliac 1982:17, 1984a:107	trees grown in <i>marae</i> , devoted to god Ta'arua, canoes, pillows, stools, dishes, trays
<i>mati</i>	<i>Ficus tinctoria</i>	tapa cloth	Orliac 1984a:107; Pétard 1986:150	trees grown in <i>marae</i> , used in preparation of red dye for tapa cloth
' <i>ora</i>	<i>Ficus prolixa</i>	tapa cloth	Lepofsky 2003:29; Orliac 1984a:107	trees grown in <i>marae</i> , ritual significance
<i>pua, tiare</i>	<i>Fagraea berteriana</i>	idols, temples, <i>fata</i>	Lepofsky 2003:24; Orliac 1984b:4, 1984c, 2000:61	hard wood highly valued, sacred wood devoted to the god Tane, <i>ti'i</i> , drums, posts for offering platforms

ScMo-171B, Post 5. Again, while the sample sizes from the posthole contexts are small, from the wood identification of the point plotted posthole sample 27 we infer that the post was likely fashioned from *Hibiscus tiliaceus*. The two fragments of *Inocarpus fagifer* from the posthole fill sediment likely represent background charcoal, which is also represented by *Artocarpus*, *Hibiscus tiliaceus*, and *Syzygium* sp.

ScMo-170, Post 10. Noting again that the sample size from the posthole context is small, the data nonetheless indicate that the post was fashioned from *Inocarpus fagifer*. While we lack ethnohistoric references for this tree's use in house post fabrication, it is referred to as a wood used in other parts of house construction (Table 4). The background charcoal is comprised of species noted as components of the valley's vegetation (*Hibiscus tiliaceus*, *Premna* sp).

ScMo-170-Post 11. The charcoal recovered from the posthole fill (Sample 32), likely represents both fragments of the original post and background charcoal, which has filtered into the feature. Because of small sample sizes, both for the identified charcoal recovered from the posthole feature and that recovered from the control sample, the results are inconclusive. We can note, however, that the control sample for Feature 10, taken from excavation unit N105 E98, demonstrates the presence of *Hibiscus tiliaceus* and *Premna* sp. within the site's background charcoal. Thus, the *Artocarpus* fragment identified from the posthole fill (Sample 32) may represent part of the original house post, as this species was not identified in the background charcoal assemblage from ScMo-170.

Discussion

Our results demonstrate that a sacred and economically important tree species, breadfruit, was used in certain contexts to fashion house posts. Its use seems to vary both by site type and by house occupants' status, as both specialised houses (ScMo-123A, 120B) and the high status dwelling (ScMo-170) have posts fashioned from breadfruit wood, while the lower status sleeping house (ScMo-171B) does not. Other species, such as *Calophyllum inophyllum* and *Casuarina equisetifolia*, were recovered from non-posthole contexts at ScMo-120B, and these are described as important woods for sculpting ritual wooden objects. Clearly, the presence of highly valued and/or sacred woods differs among the sampled house sites, as rectangular house ScMo-171B, the only commoner sleeping house studied, lacked such types of wood. We relate this to the perceived cultural value of the woods and differential access to them according to rank and social status, which we reconstruct below using varied types of ethnohistoric data. Because few sources specifically mention house posts or refer to traditional uses of woods or house construction materials used in Ma'ohi society, it is necessary to draw data from several types of ethnohistoric literature.⁷

RITUAL, COSMOLOGICAL AND ECONOMIC SYMBOLISM OF SOCIETY
ISLAND HOUSE POSTS

Table 5: Tahitian terms describing ritualized house construction and house posts.

Tahitian term	Gloss	Reference
<i>pei</i>	a ceremony formerly observed in the dedication of a house	Davies 1851:182, 194
<i>muofare</i>	the consecration of a new dwelling house	Davies 1851:148
<i>fao, hao</i>	the dedication of a new <i>marae</i> or house; a prayer, ceremonies used at the dedication a new house, or of a canoe	Davies 1851:81, 97
<i>mu'o'o</i>	a branch presented on a <i>marae</i> on commencing the building of a new house	Davies 1851:148
<i>faatomo</i>	to cause an entrance into a house or other place, to cause the first entrance or public opening of a place of worship	Davies 1851:77
<i>onihu</i>	prayer, or words used in planting the post of a house	Davies 1851:165
<i>pou</i>	post, pillar, also a log of wood, to descend from a high place	Davies 1851:204

The construction of contact-era houses (post-A.D.1767) followed diverse ritual practices and included the special treatment of house posts. Missionary texts and Tahitian lexicons note a variety of ceremonies dedicated to the construction or opening of a new Ma'ohi house (see Table 5), particularly elite residences and houses of specialised ritual function situated near *marae*. Prayers (*onihu*) were spoken with the ritualised “planting” of the house posts (*pou*). On January 14, 1814, Davies described the consecration of an “elegant and costly” sacred house near a *marae* on Tahiti, a ceremony that related to the middle and end house posts.

The god's house being finished yesterday its consecration began in the evening & was as follows; a number of Priests and old men assembled at the house, also all the chiefs, men & women.... then the sacred drums began to beat & prayers commenced in the marae where the house stands.... one of the Priests gave orders for a cocoanut branch to be brought, this being done a number of the leaves were platted into small bunches, these are called Tapau & were in

number 5 according to the number of gods, a Priest then gave orders to a young man to climb to the top of the house & put the tapaus on the ridge outside where the end & middle posts were standing....The prayer being ended the drums were laid down & the gods were taken into the house & laid down by the 2 posts over which the tapaus were placed outside on the house top.... (Davies Journal [1808-24] February 1810, cited in Newbury 1961:127-28)

In describing the consecrated house, Davies also notes how the house posts are elaborately decorated.

... [the] posts [are] well wrought...[and] are curiously wrapt round with matting & sinnet of various colours, almost most of the rafters are wrapt nearly to the top with the same, the making of this matting and sinnet has been chiefly the work of the women & it has cost them much time. (Davies Journal [1808-24] February 1810, cited in Newbury 1961:128).

The centrality of house posts in Ma'ohi contact era consecration rituals provides support for the ritual and symbolic importance of these architectural features. That varied forms of decorative treatment drawing attention to house posts (polishing, carving, dyeing, or wrapping in cordage or barkcloth) are described in the earlier European voyager accounts (Beaglehole 1962 [I]:364) provides evidence that such practices were not a post-contact development.

References to the ritual nature of houses and house posts are also embedded in Ma'ohi oral traditions. Origin myths recorded in the early 1800s refer to the creation of the first god's house and other house structures by Ta'aroa, the creator god. Different versions of the creation chants focus on the transformation of Ta'aroa's body into parts of the god house, including its ridgepole, or parts of the dwelling house, including named pillars (posts) associated with different activities.

...Ta'aroa was a god's house; his backbone was the ridgepole, his ribs were the supporters.... (Henry 1928:336, f.1; dictated in 1822 by counselors and high priests of Porapora and Mo'orea)

Ta'aroa fixed the dome of the sky, the shell Rumia, upon pillars. He said "O Tumu-nui and Paparaharaha, bring forth pillars, let there be a front pillar, let there be a front pillar and a back pillar." And there were brought forth pillars; Hotu-i-te-ra'i (Fruitfulness of the sky or Life-Supporting Tree) for a front pillar, and Ana-feo (Coral Aster) for a back pillar.... and there were the pillar to stand by, the pillar to sit by, the pillar to blacken by, the pillar to debate by, the elocution pillar, and the pillar to exit (Henry 1928:342-43, f.23; recited in 1822 by High Priests of Pora Pora and Tahiti).

The association of Ta'aroa with house beams provides support for the idea that Ma'ohi house posts served as important social symbols, embodying relations between the living, the ancestors and the gods.

Thus, like post size (Morrison 1966:163-64), post decoration and perhaps the very wood from which the post was fashioned were important material symbols of household rank and status in protohistoric Ma'ohi society. Turning to the ethnohistoric data referring to the use of sacred woods, we establish whether this body of evidence suggests that the choice of woods used in house posts or house construction had ritual, cosmological or economic importance.

THE USE OF SACRED WOODS IN ANCIENT MA'OHİ SOCIETY

Varied forms of ethnohistoric data document the use and social value of woods in Ma'ohi society (see Table 4). These include early European voyager accounts and later texts, strengthening the supposition that these cultural practices date to the early proto-historic era and were likely practised in prehistory. Following this, we use ethnohistoric data concerning the ritual nature of certain woods to interpret the wood charcoal identifications from the 'Opunohu Valley archaeological contexts.

Ethnohistoric texts and drawings illustrate that special, sacred or ritual trees were grown in the precincts of Society Island *marae* (Eddowes 1991:180-81, Henry 1928:151, Orliac 1984c, 1987, 1990). Early and later European explorers' accounts (Corney 1918, de Bovis 1863:235) and traditional chants (Henry 1928:395-97) describe how these trees grown within temple enclosures attracted birds which were considered symbols and emanations of gods and spirits. Wood from many of these sacred trees was used to make sacred and ritually significant objects (i.e., god idols, ornamental temple figures, etc.) and to construct parts of houses (Table 4). Because *Casuarina equisetifolia*, *Thespesia populnea*, *Calophyllum inophyllum* and *Fagraea berteriana* were considered sacred owing to their affiliation with important deities, it is likely that the use of these woods in constructing houses or in making ritual objects had social and symbolic meaning (see Orliac 1990). We infer that the limited recovery of *Calophyllum inophyllum* and *Casuarina equisetifolia* from background charcoal contexts at ScMo-120B provides material evidence that these taxa were among the woods of high cultural value used to sculpt *tapu* 'sacred' wooden objects for use in prehistoric Ma'ohi rituals. This house had already been interpreted as a ritual wood sculpting locale and storage area for ritual paraphernalia (Kahn 2005) and the wood charcoal data support and strengthen this functional interpretation.

A second topic addressed in the ethnohistoric sources is the relation between persons of high social or ritual status and access to sacred woods or highly valued woods. Sacred trees grown within temple sites were feared by the general population. Evidence of the special regard held for these trees is described in the early European voyager accounts (Beaglehole 1962 (1):290). Bligh (1986[1789](II):13-14) tells of a European sailor who removed a branch from a *tia'iri* tree growing in a *marae* that was then brought to a house. Thereafter the house was considered *tapu* and Bligh notes that “anything taken from the *marae* gives a great offence to their gods” (see also Corney 1918 [III]:66). Ethnohistoric texts describe how branches from sacred trees were used in a ritualised manner to carve ceremonial idols and posts for constructing public-use specialised house structures (*fare 'arioi*) and elite residences (Henry 1928:382). These trees were chosen according to ritual constraints and only cut or worked by high status specialists (*tahu'a*) (see Henry 1928:560; Morrison 1966:115, 170; Orliac 2000:29).

Woods with sacred connotations were not the only ones that were highly esteemed. Coconut and breadfruit woods were used for house posts in exceptionally large elite dwellings (see Table 4; Corney 1918 [III]:23, Orliac 1987:19). Coconut was an important economic tree, but the ethnohistoric accounts lack references to its sacred nature. Breadfruit was both an economically important and ritually significant tree, and its wood was highly prized and used to fashion diverse objects, many of which were material expressions of social relations, i.e., temple altars (*fatarau*), ornamental figures (*unu*) in temples and on canoes, *marae* images (*ti'i*). Coconut and breadfruit stand in contrast to other species, such as *Hibiscus tiliaceus*, which is referred to as an “ordinary” wood, presumably because of its wide availability and the lack of ritual constraints surrounding its use.

The use of breadfruit for fashioning house posts at ScMo-123A, ScMo-120B and ScMo-170 can then be seen as an expression of social relations, given the aforementioned connections between house posts, the ancestors, the gods and the residential group. We postulate that the choice of breadfruit wood for house post construction at these sites signals the increased “sacredness” that came with being of high, chiefly rank and/or part of the religious or social elite.

INTERPRETATIONS

Our Society Islands case study, while based on a small amount of overall data, effectively demonstrates that there is inter-site variation in the wood used to fashion late prehistoric house posts, which we can relate to differences in household status and site function. Only specialised house sites (ScMo-120B, ScMo-123) used for sacred activities and high status elite residences (ScMo-

170) had house posts fashioned from breadfruit wood, an economically important and symbolically charged tree species. In contrast, the lower-status sleeping house (ScMo-171B) had posts constructed from *purau* and *mape* (*Inocarpus fagifer*),⁸ widely available, commonly used woods lacking symbolic properties or great economic value. As in many archaeological contexts, there is no one to one correlation between access to resources (i.e., sacred woods) and site function or household status. While house beams made from sacred woods were found only at specialised and/or high status houses (and conversely were not found at lower status residences), posts were also sometimes fashioned from common woods at specialised and/or high status houses. Thus, the significance of the woods used in house post construction must be interpreted in a comparative manner. It is particularly important that several posts be compared across house sites situated in different contexts and chosen because of their inferred association with different social classes.

It is also necessary to employ an explicit comparative protocol for analysing concentrations of wood charcoal point plotted within post features, floated from posthole fill and recovered from surrounding excavation units, to distinguish charred wood fragments originating from house posts from those originating from other activities and redeposited by site maintenance activities. In this way, we are able to confirm the use of *Artocarpus* wood for fabricating house posts in elite and specialised contexts. Our results suggest that care was taken in fashioning posts in varied locales; for example, at ScMo-123A, both interior and exterior house posts, including a feature interpreted as an interior mid-line post and another interpreted as an exterior *fata*, were constructed from breadfruit wood. This supports the notion that in late prehistoric Ma'ohi residences, both the house interior and adjacent exterior area had important architectural features used as visually public mediums for displaying group identity (Kahn in press). In addition, the wood charcoal analyses provide evidence for particular activities carried out and/or raw materials worked at specific sites. The recovery of *Calophyllum inophyllum* and *Casuarina equisetifolia* at ScMo-120B strengthens the functional interpretation of this site as a wood sculpting locale; consequently, the wood charcoal data provide physical confirmation that ethnohistorically described woods were sculpted for ritual purposes.

Finally, our archaeological data demonstrate that the particular choice of woods used to construct house posts was a symbol of household status and identity, as well as a semi-public display of wealth and sanctity. Both specialised houses associated with ritual activities and/or ritual persons, had evidence for houses posts fashioned from highly valued woods (breadfruit). Of the sleeping houses studied, only the high status residence (ScMo-170) had evidence for house posts fashioned from highly valued woods (breadfruit).

Members of the elite class were linked to divine descent (Oliver 1974:783), thus, the residents of this house would have been attributed relatively greater *mana* (power, influence) and sacredness (*ra 'a/mo 'a*) than lower status individuals, such as those residing at ScMo-171B.

In the complex Society Islands chiefdoms, ideology played a key role in creating internal variation within and between kin groups (Kahn 2005:189-90) and in establishing a ritual and social elite that controlled access to community and regional-wide religious ceremonies. Embedded within the rigid hierarchical socio-political formation was an ideology linking household wealth and status to increasing sacredness. Indeed, the earliest recorded Tahitian lexicon specifically refers to the sacred nature of chiefly residences and specialised house structures reserved for the activities of the ritual elites (certain skilled craft specialists and ritual practitioners) (see Kahn 2005: Table 3.7, Orliac 2000). Our case study provides archaeological evidence for the materiality of social power, demonstrating how breadfruit, a ritually and economically important wood, was used in the construction of elite residences and houses in highly sacred residences and other ritualised contexts (e.g., priest houses and ritualised craft activity areas near *marae*) (Kahn 2005:456-58; see also Orliac 2000:32, 87). We then view house posts as a form of non-utilitarian luxury item (Costin and Earle 1989), as symbols and stores of elite wealth and control that vary with house function, status, and identity.

* * *

Our case study demonstrates the utility of using wood charcoal analysis as a means for reconstructing cultural values and social behaviour in late prehistoric Tahitian society. Future investigation of the woods used in prehistoric house sites in Eastern Polynesia are clearly warranted to aid in investigating inter-site variability and its association with site function and site status in areas with poor preservation. Such analyses can also demonstrate the presence of special woods which can be associated with fairly specific activities, such as the recovery of woods used for fashioning ritual objects at ScMo-120B. Wood charcoal identification, in concert with detailed ethnohistoric analyses, proves effective for reconstructing varied activities, not only from the presence of particular sacred woods, but from their specific contexts of recovery (see also Kolb and Murakami 1994, Orliac and Watez 1987).

Our research affirms the notion that understanding the choice of wood used for making particular objects in Eastern Polynesia is important because wood had cultural value. This supports previous findings in Polynesia (Kolb and Murakami 1994, Orliac 1990) and elsewhere (Asouti 2003a, 2003b; Hastorf and

Johannessen 1991; Lentz *et al.* 2005; Morehart *et al.* 2005) that wood charcoal, as a class of archaeological data, has relevance for understanding social and ideological issues. Wood charcoal identification analysis not only has relevance for investigating the ritual woods used in temple ceremonies but also has import in domestic contexts, particularly for differentiating elite and commoner residences, and specialised-use houses from everyday-use residences.

Our study demonstrates that the materials used to construct Ma'ohi dwelling structures (i.e., wooden posts, ridge poles, etc.) were more than functional elements, but also served as ideological symbols of the residents' wealth, status, and identity. Access to highly valued and sacred woods, similar to the use of other rare or spiritually animated raw materials used in ritual artefact production, provides one line of evidence for how the materialisation of status distinction, embodied in degree of sacredness, served as a legitimisation of power in the late Society Island chiefdoms. Our work supports the renewed interest in studying seemingly mundane everyday activities such as digging postholes and placing posts (Pauketat and Alt 2005), as these activities have social meaning and cultural relevance, and as we argue, are particularly useful sources for reconstructing material variation in areas with poor preservation.

On a final note, there is significant ethnographic and ethnohistoric evidence suggesting that the societies of Polynesia shared a cultural belief in the sacred nature of house posts (Firth 1957; Green 1998a, 1998b; Kirch 1994, 1996; Kirch and Green 2001). There is a widespread association of house posts with ancestors and gods among speakers of Austronesian/Oceanic languages. Because proximity to the ancestors and gods are key sources of socio-political and economic power in prehistoric Polynesian chiefdoms, we can expect house post construction and emplacement practices to express the materiality of social power. However, how this was expressed in the varied local contexts of Island Polynesia, and how this changed through time, warrants continued archaeological study, work which will require both methodological rigour in the field (detailed recording of form and morphology of posthole features) and the application of wood charcoal analyses to determine the woods used in post construction.

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NOTES

1. During the 2000-2001 'Opunohu Valley house excavations, dense charcoal concentrations directly inside and at the bottom of several posthole features were recovered. In these instances, wood charcoal specimens were point provenienced and collected individually from charcoal in the remaining feature fill. These dense concentrations of charred wood were hypothesised to be *in situ* remains of the burnt ends of house posts. Later archival work confirmed that earlier excavations in the valley (Davidson 1967:132-133) reported similar *in-situ* chunks of burnt wood within sub-surface postholes, which appeared to represent *in situ* samples of original house posts. Ethnographic observations (Davidson 1967) illustrate that the burning of house post ends before their placement in the ground was a technique used by Tahitians to moderate rotting, supported Kahn's original field observations as well as those by Davidson. Following this, Kahn surmises that the dense charcoal concentrations found within 'Opunohu Valley posthole fill represent charred post butt fragments.
2. All of the sediments recovered from the interior of each posthole were floated for the recovery of small charcoal fragments and other micro-artefacts.
3. Wherever possible, control samples were taken from the same unit in which the posthole was situated, from deposits exterior to the posthole which were excavated and screened separate from the posthole fill. If control samples of this type were unavailable (either because they lacked sufficient charcoal for identification or pieces large enough for identification), control samples were taken from excavation units adjacent to the unit where the posthole was located.
4. A detailed consideration of Society Islands ethnobotany is beyond the scope of the present work. We draw from available synthetic works which include Lepofsky 2003, Pétard 1986 [1957] and Whistler 1991.
5. In the discussion of number of species represented per sample, we discount samples where only one wood fragment was large enough for identification. We also exclude counts of unidentified or unknown woods and thus, refer specifically to counts of species represented per sample based on the identified taxa.
6. Scientific names listed in Table 5 are after Lepofsky (2003) and Pétard (1986 [1957]).
7. The Society Islands ethnohistoric sources used throughout the article are critically reviewed in Kahn 2005. Because few sources specifically refer to house construction materials or specifically mention house posts, data must be drawn from a number of source types. The first are European voyager (explorer) accounts, which are invaluable firsthand observations but contain biases

because the events portrayed are filtered through an 18th-19th century European worldview. The European voyagers typically witnessed elite lifestyles and events, rather than everyday events in the lives of commoners. Rare are descriptions of domestic contexts, and these sources tend to focus on house size and, infrequently, on the materials used in house construction. The texts typically describe elite houses, specialised meeting structures and elite activities, rather than the lives or houses of the average “commoner” Tahitian (Orliac 2000). Early European voyager accounts (1767-1789) used for this article include texts by Joseph Banks (Beaglehole 1962), Captain Bligh (Bligh 1986), Rodriguez’s account (Corney 1918) and Morrison’s beachcomber account (1935, 1966). Later voyager accounts (1789 on) occasionally offer information about Ma’ohi dwellings, but they must be used critically to assess the degree of post-contact transformation in residential structures. Those used in the present study include de Bovis (1863). The second type is missionary texts, many of which offer a level of ethnographic detail rarely found in the voyager texts. However, these descriptions of Tahitian life are filtered through the missionaries’ moral agendas and ideological perspectives. Some missionary texts provide descriptions of house structures constructed in a native or traditional fashion, but because missionaries introduced new ideas about “appropriate” dwelling types and new methods of house construction, these sources must be used in a critical fashion. We use missionary descriptions of Ma’ohi houses and house activities only when the description could be crosschecked in another document, ideally an explorer account dating to the early contact period. Davies’ “*A Tahitian and English Dictionary with Introductory Remarks on the Polynesian Language and a Short Grammar of the Tahitian Dialect with an Appendix,*” first published in 1823, is a missionary source which provides the earliest thorough compendium of Tahitian words. While the work is not without imperfections, it is the most comprehensive Tahitian dictionary recorded within the early historic period and contains important information about traditional Ma’ohi practices and beliefs unrecorded elsewhere. Other missionary texts used in this article include various Spanish missionary accounts (Corney 1913, 1914), those of Ellis (1831) and those described by Newbury (1961). The third type of account is Tahitian oral histories, including chants, legends, myths, and genealogies, recorded from Tahitian informants. These traditional Ma’ohi histories were often collected well after European contact, but offer a native perspective not found in the other documents. Although rare, information about house construction, the ritual nature of the house and landscape use are sometimes embedded within the passages of these legends and chants, and they are key sources for understanding symbolic and ritual aspects of material culture, activities and the use of space. Those used in this study include Henry (1928) and Emory (n.d., cited in Oliver 1974). Finally, the later memory ethnographies, notably writings by E.S.C. Handy, have not been used as they describe Tahitian culture after significant transformations had taken place following European contact; they also rely to a great extent on the earlier ethnohistoric accounts. The available secondary sources offering syntheses of the ethnohistoric literature and pertinent to the study of Ma’ohi houses and households are Oliver’s 1974 three

volume opus *Ancient Tahitian Society*, Orliac's dissertation (1982) and later book *Fare et Habitat à Tahiti* (2000), and Eddowes 1991. We have used these secondary sources as reference guides to the primary sources.

8. While *mape* was an economically useful tree, as its seeds were roasted and eaten, it is mainly referred to as a famine food, rather than an important foodstuff providing a significant contribution to the diet. We attribute to both *mape* and *purau* wood everyday, common or widespread use since the trees' timber does not appear to have been highly prized, nor was the timber in restricted use because of any high economic value or ritual significance.

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