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An island-wide assessment of the chronology of settlement and land use on Rapa Nui (Easter Island) based on radiocarbon data

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ABSTRACT

The archaeological landscape on Rapa Nui (Easter Island) contains a palimpsest of surface archaeological features reflecting a long history of settlement and land use. The popular narrative of societal collapse prior to European contact relies on chronometric data from the late pre-European contact period and also cites major settlement shifts as evidence for societal collapse and socio-political reorganization. This paper explores the archaeological evidence for proposed changes in settlement by assessing the spatial and temporal distribution of radiocarbon determinations collected from archaeological and landscape contexts. A corpus of over 300 determinations is placed into an island-wide GIS database and analysed. The results of this study suggest that Rapa Nui settlement and land use exhibit continuity rather than punctuated, detrimental change during the late pre-European contact period.

1. Introduction

The island of Rapa Nui is often portrayed in the popular and archaeological literature as a prime example of societal "collapse" (i.e., Diamond, 1994, 2005). The story of Rapa Nui's demise has been reified into orthodoxy in the archaeological literature and popular media, and authors have gone so far as to use this small, isolated island as an analogy for the planet in their interpretation of the "ecodisaster" that the Rapa Nui people brought upon themselves in the late pre-European contact period (e.g., Bahn and Flenley, 1992; Flenley and Bahn, 2002). Although some scholars have begun to challenge this narrative, Rapa Nui continues to be widely perceived as "the clearest example of a society that destroyed itself by over-exploiting its own resources" (Diamond, 2005:118).

A major debate concerning Rapa Nui chronology has to do with whether this supposed ecological and societal collapse occurred during the pre-European contact sequence or not. The palaeoecological data provide a general outline for palaeoecological change and human-induced deforestation, however, the timing of deforestation remains inconclusive based on palynological work by Flenley and colleagues (Butler and Flenley, 2010; Butler et al., 2004; Flenley, 1979; Flenley, 1993, 1996, 1998; Flenley and King, 1984; Flenley et al., 1991). Radiocarbon dates obtained from pollen cores in Rano Kau, Rano Raraku, and Rano Aroi have provided a very rough estimate of the process of deforestation having occurred from ca. AD 676 to AD 1550, but the causal link between deforestation and societal collapse remains unwarranted (see Hunt, 2007; Hunt and Lipo, 2008, 2009, 2011; Mulrooney et al., 2010).

Island-wide shifts in settlement have also been noted as evidence for a pre-European contact societal collapse. Stevenson (1997), Vargas Casanova (1998) and others have proposed the abandonment of inland areas late in the pre-European contact (pre-AD 1722) sequence as evidence for collapse. According to these researchers, inland areas containing intensified agricultural field systems were abandoned with the breakdown of the chiefly economy. Most recently, Stevenson and Haoa Cardinali (2008) have proposed a 5-phase model for island-wide settlement, and according to this model, areas in the uplands of Maunga Terevaka and some other localized interior areas were completely abandoned beginning at AD 1680 (Fig. 1). Their 2008 model draws from earlier work by Stevenson (1984, 1986, 1997, 2002) and others (Métraux, 1940; Vargas Casanova, 1998) and is applied in both island-wide contexts (Stevenson, 1997) and regional contexts (Stevenson and Haoa Cardinali, 2008).

Stevenson and Haoa Cardinali carried out a comprehensive regional study in the Hanga Ho'onu Project Area (HHPA), situated on the north coast of the island, from 1995 to 2008, and the current study builds on that research. This project area is optimal for exploring settlement and land use because it contains areas that were used in distinctive ways. Stevenson and Haoa Cardinali

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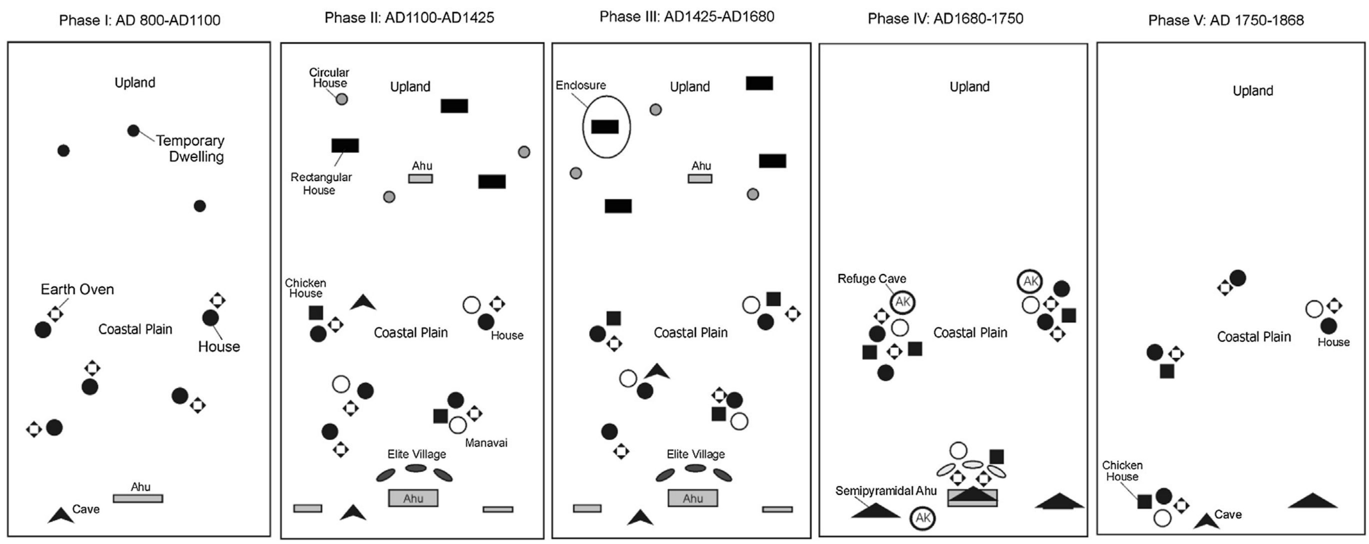

Fig. 1. Stevenson and Haoa Cardinali's generalized settlement model for Rapa Nui based on their findings from the Hanga Ho'onu Project Area and previous studies (after Stevenson and Haoa Cardinali, 2008:173, Fig. 6–2).

divided the area into four landscape zones that included two coastal zones and two interior zones. According to Stevenson and Haoa Cardinali (2008:175), the inhabitants of this region "did not have access to the upland regions of the island and had to intensify production in alternate ways." This intensification is manifest in the development of the Maunga Puko Puhi plantation area in the interior "Hilltop zone" of the HHPA. Therefore, according to the collapse scenario, this area, situated from 1 to 2.5 km inland from the coast, should show signs of abandonment. In relation to settlement shifts associated with the collapse scenario, Stevenson and Haoa Cardinali (2008:171) stated that: "If this pattern [the abandonment of the more upland area of Maunga Tari on Maunga Terevaka] were an island-wide phenomenon that correlated with the disintegration of the chiefdom reported to have occurred in the late 1600s, then it should be manifested in the Hanga Ho'onu area as well."

Stevenson and Haoa Cardinali's (2008) 5-phase settlement model was based on the results of chronometric dating carried out prior to 2008 in the HHPA and elsewhere. The model also draws heavily from previous interpretations of Rapa Nui prehistory that place the supposed cultural collapse at AD 1680 (cf. Lipo and Hunt, 2009; Mulrooney et al., 2009). In general, these and other researchers exploring settlement and land use have utilized previous cultural chronologies when assessing chronometric data. Stevenson initially presented his 5-phase cultural chronology in 1986, and this was refined in later settlement pattern analyses (Stevenson, 1997; Stevenson and Haoa, 1998; Stevenson and Haoa Cardinali, 2008). This 5-phase model was based on the 3-phase cultural chronology of Heyerdahl and Ferdon (1961). Heyerdahl and Ferdon's "Middle Period" (AD 1100–1680) was subdivided into the "Expansion and Development" (AD 1100–1425) and "Chiefdom Integration" (AD 1425–1680) periods and their "Late Period" (AD 1680 onwards) was divided into "Warfare and Fragmentation" (AD 1680–1750) and "Post-Contact Decline" (AD 1750–1868). Other cultural chronologies presented for the island (i.e., Ayres, 1975; Kirch, 1984; Lee, 1986; Van Tilburg, 1986) also present a three or four phase cultural sequence with "Decadent" (post-collapse) periods beginning at AD 1500 or AD 1650. However, these chronological models have not considered the reliability of the chronometric data on which they are based. Many have heavily relied on unreliable radiocarbon (^{14}C) determinations as well as obsidian hydration dates processed in the 1980s, 1990s and 2000s, which are questionable due to methodological limitations (see Hunt and Lipo, 2009; Mulrooney, 2012).

Although Hunt and Lipo (2006), Martinsson-Wallin and Crockford (2002), and Wilmshurst et al. (2011) have assessed radiocarbon dates to explore the initial colonization and settlement of the island, to date, no inclusive analysis of the large corpus of radiocarbon dates from Rapa Nui has been attempted. Here, I present the results of an island-wide analysis that includes 298 previously published radiocarbon dates from archaeological contexts together with 15 dates that were recently collected from the HHPA (Mulrooney et al., 2009; Mulrooney, 2012). These data are analysed in order to test one component of the collapse scenario, which proposes demographic collapse coupled with a major settlement shift in late prehistory as inland areas were abandoned due to the breakdown of the chiefly economy. Radiocarbon determinations are assigned reliability classifications, calibrated, and assessed spatially and temporally. In the present analysis, samples collected from "inland" contexts (more than 1 km from the coast) are isolated and analysed in order to test the widely accepted settlement model (Stevenson and Haoa Cardinali, 2008) that proposes the abandonment of such areas prior to European contact. The results suggest that the use of some "inland" areas of the interior containing highly intensified agricultural features persisted into the post-European contact period, contrary to the expectations of the collapse scenario. Radiocarbon dates from the far interior ("upland") region (>3.5 km) located on the slopes of Terevaka do not show a strong late prehistoric presence, but this area remains under-sampled for chronological information.

2. The radiocarbon database

The current analysis is performed on a standardized GIS (geographic information systems) database that was compiled in 2012. The overall database contains 453 previously published ^{14}C determinations (298 from archaeological contexts, 3 from museum objects, and 152 from palaeoecological contexts) and 15 additional determinations from recent stratigraphic excavations in the HHPA (Mulrooney, 2012). The goal is firstly to present, standardize, and assess the published ^{14}C dates for Rapa Nui, and secondly, to analyse the distribution of dates across the island. By placing this dataset into a GIS, it is possible to examine spatial and temporal associations of ^{14}C determinations in an island-wide assessment of settlement and cultural change.

A total of 313 determinations from archaeological contexts were isolated for analysis. Dates from palaeoecological contexts (122 dates from sediment cores and 30 dates from landforms) were excluded, as were 3 dates from artifacts in museum collections. These data were omitted due to limiting factors such as inversions in dates from pollen cores, the lack of associated archaeological activities for some dates from landforms, and a lack of contextual information for museum objects.

Fig. 2 shows the spatial distribution of the 313 samples collected from archaeological contexts that have been investigated using the radiocarbon dating method. Overall, there has been a sampling bias towards coastal features, with 228 dates (72.8% of the total sample) coming from excavated contexts situated less than 500 m from the coast (Table 1). Over ¼ of the total sample (89 of 313 dates) of dates from archaeological contexts come from the area of Hanga Rau in 'Anakena on the north coast, which highlights the spatially restricted nature of most archaeological research endeavours on the island.

Table 1
Areas of distance bands and counts of corresponding radiocarbon dates.

Distance band	Total area (km^2)	% SA	Class 1	Class 2	Class 3	Total# of ^{14}C dates
0–500	32.87	19.97	32	145	51	228
500–1000	28.82	17.51	2	17	1	20
1000–1500	26.60	16.16	4	11	3	18
1500–2000	22.24	13.51	7	15	2	24
2000–2500	15.78	9.58	3	2	5	10
2500–3000	12.96	7.87	0	2	0	2
3000–3500	10.03	6.09	0	3	0	3
3500–4000	7.65	4.65	0	4	0	4
4000–4500	5.27	3.2	0	0	0	0
4500–5000	2.30	1.4	3	1	0	4
5000–5500	0.09	0.05	0	0	0	0

3. Methods

In order to assess island-wide settlement and land use, dates were firstly assigned reliability classifications, and then subsets of the most reliable dates were examined. Radiocarbon determinations were calibrated using OxCal 4.1.7 (ShCal 04 calibration curve used for terrestrial samples and Marine04 curve used for marine samples). The spatial and temporal distributions of calibrated dates were compared to artificial datasets in order to empirically assess the proposed pre-contact collapse scenario in space and time.

3.1. Assessing the reliability of radiocarbon dates

Since the publication of Spriggs and Anderson's (1993) chronometric hygiene protocol, many archaeologists working in the Pacific region have assigned reliability classifications to radiocarbon

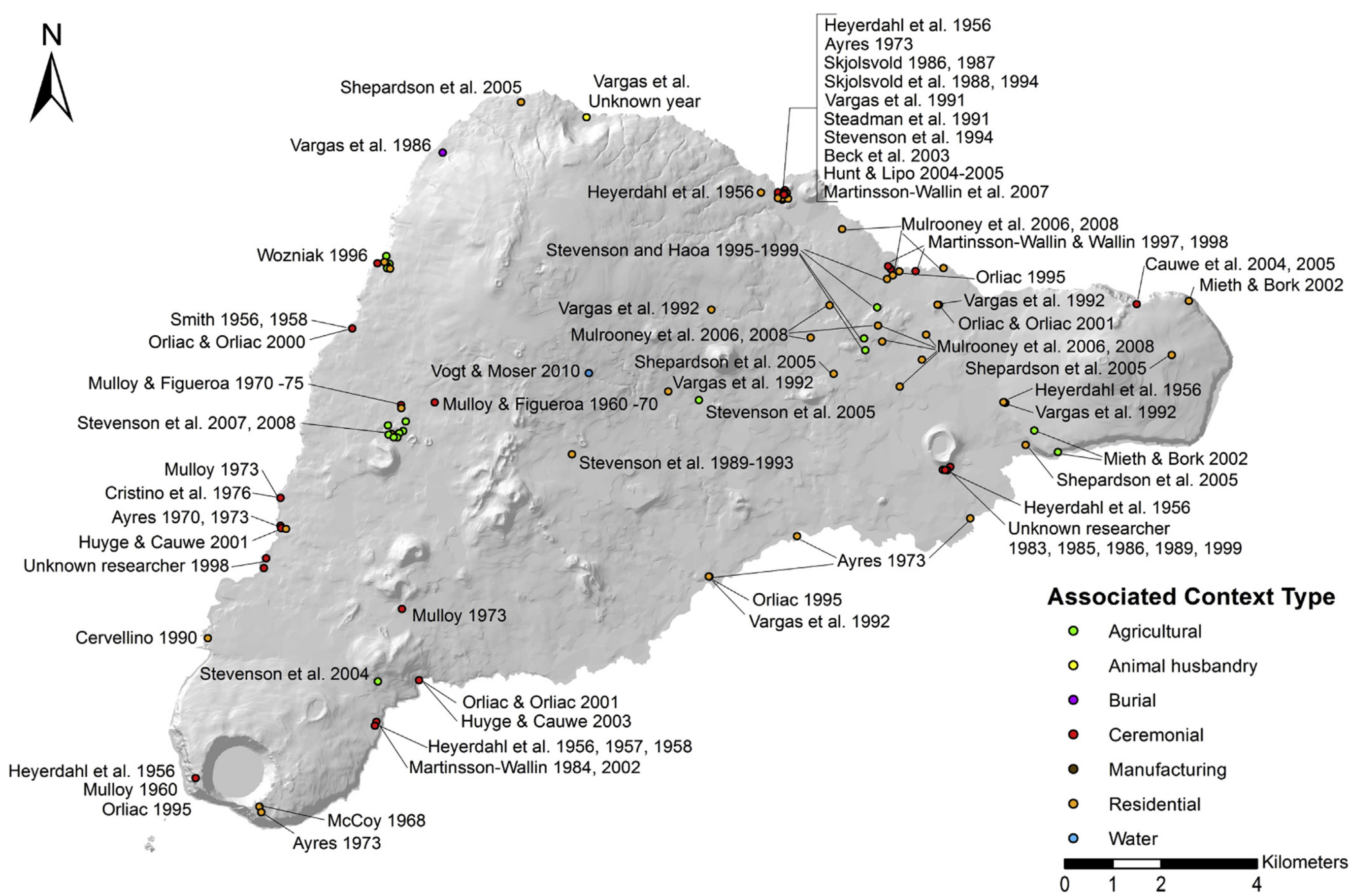

Fig. 2. Radiocarbon dates from archaeological contexts, with researchers and field collection dates listed. Note that many features overlap.

data. Approaches that incorporate components of Spriggs and Anderson's criteria have been employed in assessing the evidence for initial colonization events and early settlement in the region (e.g., Dye, 2011; Rieth et al., 2008, 2011; Wilmshurst et al., 2011) and revised cultural chronological and palaeodemographic models have been established based on large corpuses of archaeological dates from various island groups (e.g., Carson, 2005; Kirch and Rallu, 2007; Liston, 2005; McCoy, 2007; Smith, 2010). A number of publications concerning the initial colonization of Rapa Nui have built on this research more specifically in recent years (e.g., Hunt and Lipo, 2006; Martinsson-Wallin and Crockford, 2002; Shepardson et al., 2008; Wallin et al., 2010; Weisler and Green, 2011).

A recent article by Wilmshurst et al. (2011) applied a new set of explicit criteria to a sample of 1434 radiocarbon dates from East Polynesia, where they only fully accept dates that are:

> "(*i*) clearly and directly linked to cultural activity, (*ii*) have the fewest sources of potential error (e.g., from inbuilt age, dietary, or postdepositional contamination by old carbon), and (*iii*) are capable of providing a calibration that is close to the "true" age of the actual target event (i.e., human activity)." (2011:1815)

They divide dates into three reliability classes and rely on cumulative and summed probabilities of 207 calibrated (1 SD, 68% probability) Class 1 dates (taken from identified short-lived species of wood charcoal and terrestrial bird eggshell) to argue for the late colonization of East Polynesia. Although the methodology employed and the implications of the results presented by Wilmshurst et al. have been criticized (Dye, 2011; Mulrooney et al., 2011), their analysis is useful in applying explicit reliability criteria to radiocarbon determinations.

In the current study, radiocarbon dates are also assigned a reliability class designation and dates are placed into three major reliability classes. These classes are defined by combining some components of Spriggs and Anderson's (1993) chronometric hygiene protocol, some of the classificatory criteria used by Wilmshurst et al. (2011) and criteria that were established by Mulrooney (2012). The three major reliability classes include the following: 1) dates collected from secure cultural deposits that include wood charcoal from identified short-lived species, palm endocarps, and algal nodules; 2) dates from secure cultural deposits on unidentified wood charcoal (Spriggs and Anderson's criteria L); and 3) generally unreliable dates that are not reliable due to problems of mixed isotopic fractionation (Spriggs and Anderson's criteria I), dates from the Gakushuin Laboratory (Spriggs and Anderson's criteria A), dates on coral and bone that are questionable due to calibration issues (Spriggs and Anderson's criteria B), and dates from questionable contexts (Spriggs and Anderson's criteria D, F, G). Class 3 dates include most samples that had previously been considered unacceptable by Spriggs and Anderson (1993) and/or Hunt and Lipo (2006).

Dates are also assigned a sub-classification based on stratigraphic context. Three contextual sub-classes are identified. Samples from the first sub-class were collected from below an architectural feature, meaning that they probably pre-date the construction of that feature (i.e., under *ahu* walls) (see Dye, 2009; McCoy et al., 2011). These dates are *terminus post quem* (TPQ) dates, or a date which is older than the feature. The second sub-class includes dates that are close in age to the target event, such as the activity of burning wood in an earth oven. Although the burnt wood from an earth oven will produce a date that is older than the archaeological burning event, the identification of short-lived species means that the dated sample is close in age to the target event. The third sub-class includes samples recovered from cultural deposits that are not spatially and/or stratigraphically associated with an architectural feature in the landscape but are from stratigraphic layers that include other cultural materials such as portable artifacts. This criterion applies to the 15 samples that were recovered from approximately 1 m away from surface architectural features in the HHPA, where samples were selected from stratigraphic contexts which also contained a high number of portable artifacts, especially obsidian debitage.

3.2. The spatial component

In order to examine the spatial distribution of sampling locations, the island was divided into discrete areas based on distance

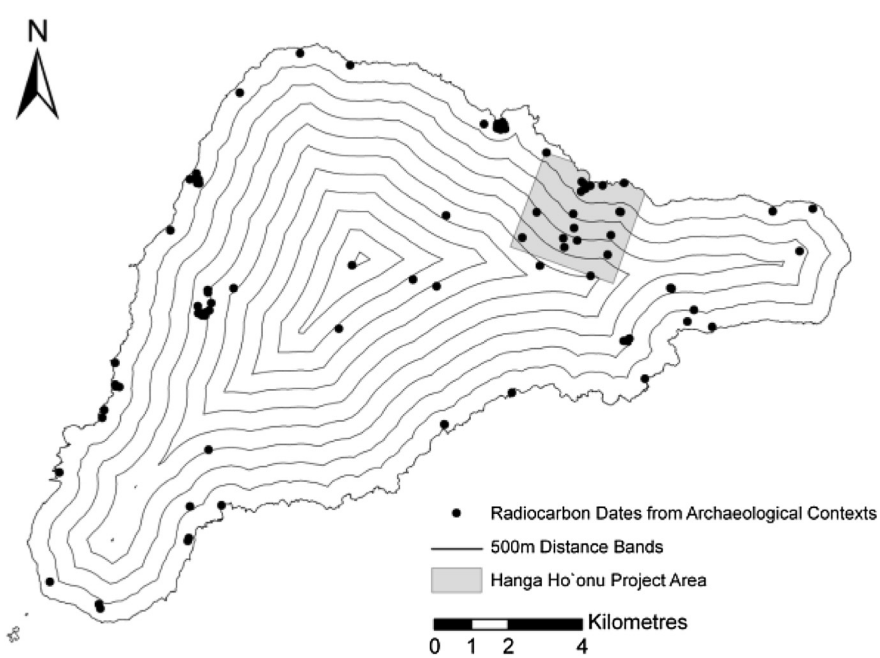

Fig. 3. Overall spatial distribution of radiocarbon dates from archaeological contexts in relation to 500 m distance bands and the HHPA.

from coast (Fig. 3). Distance bands were placed over the island in 500 m increments irrespective of topographical features. As Table 1 shows, the coastal band (from 0 to 500 m from the coast) comprises approximately 20% of the island's surface area, and contains the vast majority of radiocarbon determinations that have been collected from the island. A total of 228 out of 313 samples from archaeological contexts (72.8% of the corpus of dates) were collected from areas within 500 m of the coast, as is shown in Table 1 as well as Fig. 3. If we exclude the 89 dates collected from Hanga Rau in 'Anakena, over sixty per cent (139 of 224; 62.1%) of the corpus of dates come from coastal areas situated within 500 m of the coast. This illustrates the overarching coastal bias of researchers who have collected radiocarbon dates from archaeological contexts on the island. Fig. 3 also highlights the unique nature of research carried out in the HHPA in applying a landscape approach to the dating of archaeological contexts (see Mulrooney et al., 2009; Stevenson and Haoa Cardinali, 2008). Extensive pedestrian surveys have been carried out in examining large areas on the island (e.g., McCoy, 1976; Stevenson, 1984; Vargas et al., 2006), but these generally did not apply a systematic approach to dating the landscape. In the HPPA, Stevenson and Haoa Cardinali completed a systematic survey with targeted chronometric dating of features, and Mulrooney (2012) built on that research by systematically sampling the area for chronometric dating.

3.3. Database reliability and identification of overall trends

Table 2 shows the reliability class designations for each of the 313 dates from archaeological contexts. In total, 51 dates were classified as Class 1 dates, which are the most reliable. Class 2 includes 200 dates, and 62 dates were placed into Class 3, which includes the least reliable dates. The vast majority of dates (190 of 313) are from landscape contexts.

In assessing the overall dataset, there is also a bias in terms of associated or nearby feature type. Associated feature types were classified according to general functional classes established by Mulrooney et al. (2007, 2008). In total, 140 dates come from samples recovered from residential contexts, 118 were from ceremonial contexts, 44 dates were from agricultural contexts, 4 were from water management contexts, 3 were from burial contexts, 2 were from animal husbandry contexts, and 1 date was from a manufacturing context. In sum, over two-thirds of the dates come from ceremonial and residential contexts, and dates from agricultural contexts account for less than 15% of the total sample. All other general functional classes combined account for less than 1% of the sample. Overall, the majority of Class 1 and Class 2 dates come from residential contexts, while the least reliable Class 3 dates are dominated by samples taken from ceremonial contexts.

Table 2
Classifications of all dates from archaeological contexts.

Reliability class	Context type	Number of dates
1a	TPQ	7
1b	Target event	4
1c	Landscape	40
Total		**51**
2a	TPQ	18
2b	Target event	78
2c	Landscape	104
Total		**200**
3a	TPQ	5
3b	Target event	11
3c	Landscape	46
Total		**62**

This means that residential settlement patterns should be well-documented based on reliable associated ^{14}C dates.

Eleven of the dates (eight from Class 2c, three from Class 2b) were reported as "modern" or as calendar date ranges, which could not be calibrated accurately by the OxCal program. These are included in Tables 2 and 3, but were excluded from the present analysis because they could not be calibrated. This means that the overall sample is slightly biased due to the exclusion of these very recent dates.

Overall, it is clear that the island-wide corpus of radiocarbon dates is biased in terms of space, context type, and associated feature type. Researchers have tended to focus on coastal locales that contain large ceremonial architecture as well as extensive remains of residential features. The vast majority of dates come from landscape contexts, including excavated areas that are not stratigraphically associated with architectural features, but are associated with other cultural materials such as portable artifacts. Overall, the temporal aspect of the use of residential contexts is well-documented in this corpus of dates, which means that the identification of temporal trends in settlement is possible.

3.4. Assessing the effects of the calibration curve

Researchers often use summed probability distributions of radiocarbon dates to assess palaeodemographic trends on Rapa Nui and elsewhere (e.g., Dye and Komori, 1992; Kirch and Rallu, 2007; Vargas et al., 2006), and these provide a general proxy for the likelihood of occupation throughout the cultural sequence. Recent analyses have highlighted the difficulty in assessing population trends using summed probability distributions (Bamforth and Grund, 2012; Culleton, 2008) and various researchers have shown that the effects of the radiocarbon calibration curve can adversely affect the relative frequencies of dated archaeological contexts. Effects such as the 'CSD (calibrated stochastic distortion) effect', the 'radiocarbon-age plateau' and the 'calendar-age step' are variously reflected in calibration curves and thus make summed probability distributions difficult to interpret (Williams, 2012; also see Guilderson et al., 2005; Kirch, 2007; McFadgen et al., 1994; Michczyński and Michczyńska, 2006; Steier et al., 2001; Thorndycraft and Benito, 2006; Weninger et al., 2011).

The present analysis follows that of Buchanan et al. (2011) to examine the effects of the calibration curve for the island-wide dataset. Calibration curve effects were assessed by creating an artificial dataset of evenly spaced uncalibrated determinations assigned BP values at 10-year increments covering the overall temporal distribution of Class 1 dates (from 870 BP ± 30 to 90 BP ± 30), which would reflect continuity throughout the entire cultural sequence (including the post-European contact period). A second artificial dataset was created for comparison to archaeological dates from inland contexts. This dataset contained evenly spaced (at 10-year increments) uncalibrated dates that spanned the period from 870 BP ± 30 to 270 BP ± 30, thus meeting the expectations of the collapse scenario, which proposes the complete abandonment of inland locations around AD 1680. Using OxCal 4.1.7, the artificial dates were calibrated and summed, and the summed probability distributions of the artificial datasets were assessed alongside the archaeological datasets. For the artificial datasets, 10-year increments were chosen instead of the 25-year increments used for the North American dataset by Buchanan et al. (2011) due to the shorter temporal span of the Rapa Nui cultural sequence.

4. Results

In examining the overall distribution of radiocarbon dates for the island, the first step was to compare the artificial continuous

Table 3
Class 1 and 2 dates organized based on distance from coast and general functional type (based on associated feature and/or associated cultural materials).

	Agricultural	Animal husbandry	Burial	Ceremonial	Manufacturing	Residential	Water	Total
1a				**4**		**1**	**2**	**7**
0–500				4		1		5
4500–5000							2	2
1b				**2**		**2**		**4**
0–500				2		2		4
1c	**3**			**8**		**28**	**1**	**40**
0–500				8		15		23
500–1000						2		2
1000–1500						4		4
1500–2000	3					4		7
2000–2500						3		3
4500–5000							1	1
2a			**1**	**14**		**3**		**18**
0–500			1	12		3		16
1500–2000				2				2
2b	**10**	**2**	**1**	**14**	**1**	**50**		**78**
0–500		2	1	12	1	42		58
500–1000	9					1		10
1000–1500				1				1
1500–2000				1				1
2500–3000						1		1
3000–3500	1					2		3
3500–4000						4		4
2c	**30**			**32**		**41**	**1**	**104**
0–500	14			25		32		71
500–1000	3					4		7
1000–1500				7		3		10
1500–2000	11					1		12
2000–2500	2							2
2500–3000						1		1
4500–5000							1	1
Total	**43**	**2**	**2**	**74**	**1**	**125**	**4**	**251**

dataset to the archaeological datasets. This artificial dataset was calibrated and summed in OxCal 4.1.7, then compared to summed Class 1 and Class 2 archaeological dates (Fig. 4). Although the Class 1 dataset ($n = 51$) contained less dates than the artificial dataset of continuous dates ($n = 79$), while the Class 2 dataset ($n = 200$) contained more dates, the three summed probability distributions were similar in their overall distributions, which may suggest that the archaeological datasets exhibit continuity through time. When summed, the artificial dataset contained dips in the frequency of calibrated dates from the latter halves of the 15th and 17th centuries and the archaeological datasets mimicked this trend. These results suggest that these decreases in the frequency of calibrated dates from these time periods may not reflect behaviourally meaningful patterns, but instead reflect the nature of the calibration curve for these time periods.

4.1. Assessment of the collapse scenario

In order to test the proposed collapse scenario in terms of settlement and land use through time, Class 1 and 2 dates were assessed both spatially and temporally. Table 3 shows the associated feature type and distance band (spatial provenance) of all Class 1 and 2 dates. Class 1 and 2 dates from more than 1 km inland (the point at which the density of household features drops off in Hanga Ho'onu and elsewhere – see McCoy, 1976; Mulrooney, 2012;

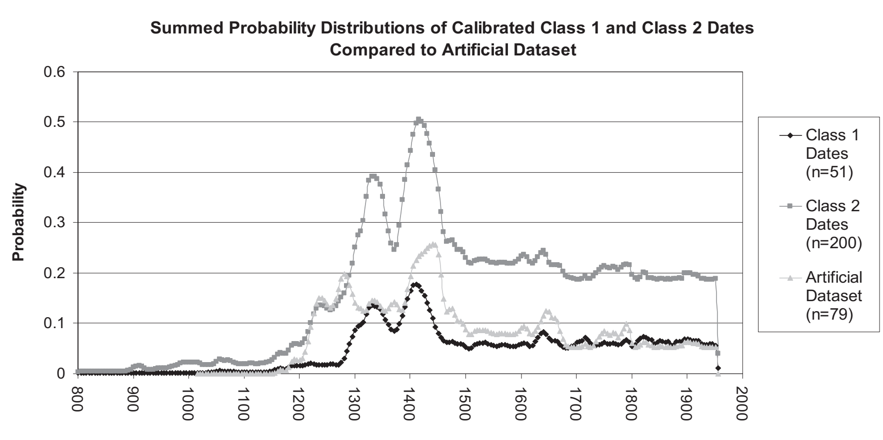

Fig. 4. Summed probability distributions of calibrated Class 1, Class 2, and artificial datasets at 1 SD (calibrated using OxCal 4.1.7).

Stevenson, 1984; Stevenson and Haoa Cardinali, 2008; Vargas Casanova, 1998) were isolated and examined. It is clear that this portion of the sample is under-represented on an island-wide scale, with 55 of 251 uncalibrated dates (21.9% of the total sample) coming from inland contexts.

Class 1 and 2 dates from contexts located 1–2 km from the coast ($n = 37$) display a somewhat continuous temporal distribution. These dates are mostly from landscape contexts and cover most of the cultural sequence, beginning by at least the 14th century, and suggest continuous use of these areas until the post-contact period. Dates from contexts situated 2–3.5 km from the coast ($n = 10$) account for less than 4% of the overall Class 1 and 2 sample, but do contain a relatively even distribution of dates from the mid-15th century until the post-contact period. Although this may support the notion that these areas were continuously occupied up to and following European contact, the low number of dates from these areas means that this pattern could also result from insufficient sampling. Those dates that come from contexts located more than 3.5 km from the coast also constitute a small percentage (ca. 3.2%) of the overall sample. All of these ($n = 8$) cluster to the 15th to early 17th centuries when calibrated. Four of the dates from contexts situated more than 3.5 km from the coast are from a water management feature on the slopes of Maunga Terevaka (Vogt and Moser, 2010) and four dates come from inland residential features (three from Stevenson's research at Maunga Tari in 1989–1993 and one from an upland residential feature in Vaitea excavated by Vargas et al. in 1992). It is difficult to discern whether the temporal distribution of these dates might reflect late prehistoric expansion followed by pre-European contact abandonment of these areas, or whether the more limited distribution of these dates is also the result of insufficient sampling.

The summed probabilities of all Class 1 and 2 dates from inland contexts were compared to the artificial datasets (Fig. 5) in order to test the collapse scenario further. When compared to the artificial continuous dataset, they show a broadly similar distribution. Two differences can be noted between these two summed probability distributions, however. The first is the pre-AD 1400 distribution, where dates from inland contexts have a very low probability of occurring, whereas the artificial continuous dataset exhibits a much higher summed probability distribution. This meets the expectation that expansion to inland sampled locations may have occurred slightly later than coastal settlement, with people settling on the coast initially, then moving to inland locations as population increased and agricultural systems were intensified (see Stevenson, 2002; Vargas et al., 2006). The second difference is in the amplitude of the peaks calibrated at AD 1650, where the artificial continuous dataset contains a higher peak than the archaeological dataset. While this may indicate that there was a slight decrease in the incorporation of charcoal into the archaeological record at inland locations around this time, the post-AD 1680 distribution of summed archaeological dates suggests that these areas continued to be occupied at a continuous rate. This is extremely apparent when compared to the artificial collapse dataset, which drops off considerably when calibrated.

If the summed probability distribution of the archaeological dates are viewed as a proxy for settlement of these sampled locations through time, it shows that the occupation of inland areas (1–3.5 km from the coast), especially in the HHPA, was likely to have been continuous throughout the pre- and post-contact cultural sequence. As shown in Fig. 5, the archaeological dates do not conform to the expectations of the collapse scenario, and instead exhibit a high probability of determinations dating to the second half of the 17th century and onwards that is broadly similar to the probability distribution of the artificial continuous dataset. The peaks and troughs caused by calibration curve effects are apparent in all three datasets, suggesting that some of the increases and decreases in the probability distribution are not reflective of palaeodemographic trends or behavioural differences through time as has previously been suggested.

Dates from inland agricultural and residential contexts (>1 km from the coast) were individually assessed to further evaluate the empirical support of proposed settlement shifts according to the collapse scenario. Agricultural intensification accompanied the process of deforestation on the island and can be viewed as an adaptive response to life on an island with limited terrestrial resources (see Kirch, 1984; Mieth et al., 2002), and dates from agricultural contexts are a proxy for the development of the agricultural economy. Dates from inland residential contexts are crucial in assessing the likelihood of occupation of interior areas that also contained intensified field systems and plantation areas (e.g., Stevenson, 1997). Therefore, these two subsets of data can be isolated to empirically test the collapse scenario.

Class 1 dates from agricultural contexts present the most limited sub-dataset of these data ($n = 3$). Nonetheless, these dates were individually calibrated using OxCal 4.1.7 (Fig. 6) and constrained by assigning a boundary condition at AD 1680, the date of the proposed collapse, in order to assess whether or not the

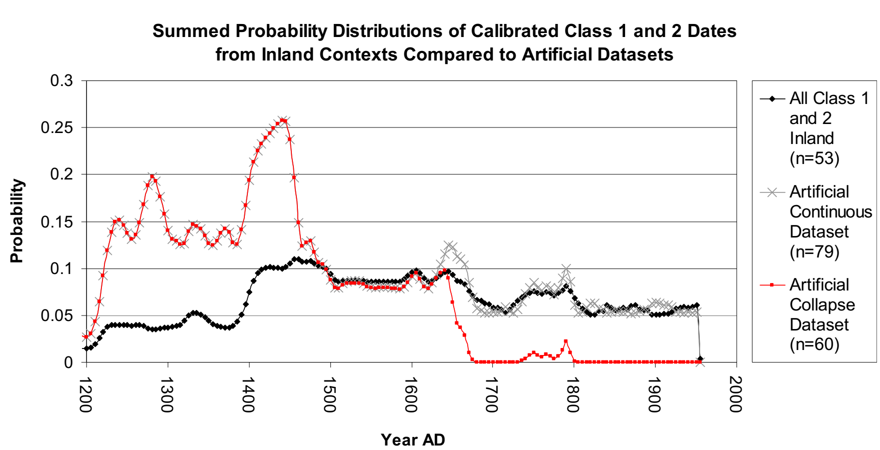

Fig. 5. Summed probability distribution of all Class 1 and 2 dates from inland contexts (>1 km from the coast) compared to artificial dataset of a continuous distribution of dates (grey line with x's) and artificial dataset reflecting the expectations of the collapse scenario (red line with squares) at 1 SD (calibrated using OxCal 4.1.7).

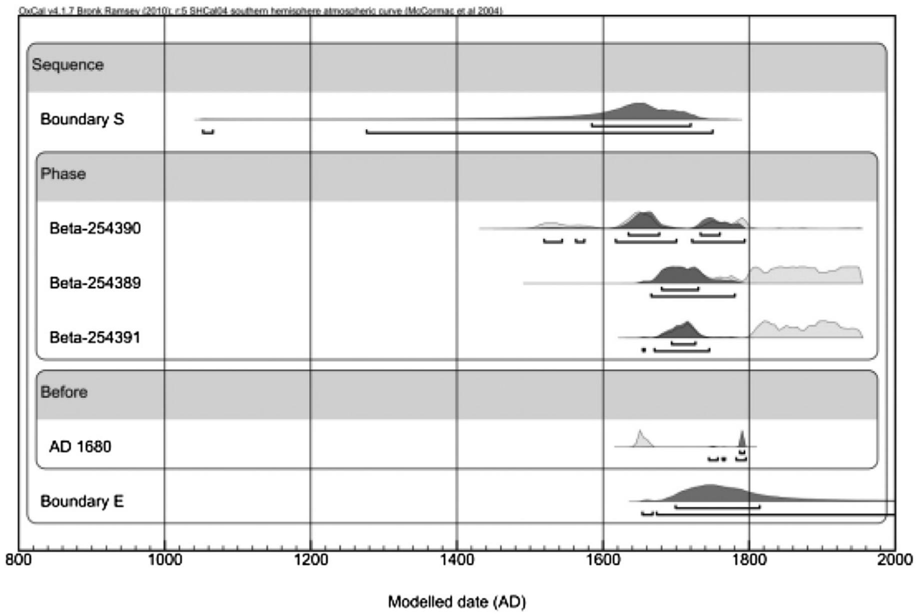

Fig. 6. Modelled calibrated Class 1c dates from inland agricultural contexts that test the expectations of the collapse model. Dark grey shading indicates the portion of the probability distribution that adheres to the expectations of the model, and light grey reflects that which does not fit the model.

probability distributions of these dates fell before this date, as would be expected based on the collapse scenario. As these data show, all three dates from inland contexts have probability distributions that do not meet the expectations of the collapse scenario. When calibrated, the majority of the probability distributions at 1 SD for two of these dates fall fully within the post-contact period (Beta-254389: 69.8%; Beta-254391: 87.1%) and the same is true for a significant percentage of the 1 SD probability distribution of the third date (Beta-254390: 35.8%). These dates all come from excavated contexts in the inland portion of the Hiva Hiva area, which is situated 2.2–2.6 km from the west coast of the island. Although this area is not situated in the far upland slopes of Maunga Terevaka, it does contain a high density of rock gardens as well as a lower density of residential features. Overall, it is more likely that the archaeological target events that the Hiva Hiva dates correspond to may actually reflect post-contact phenomena. As noted by Stevenson et al. (2008), this suggests that these intensified agricultural areas were not abandoned during late prehistory.

Class 2 dates from agricultural contexts encompass a slightly more robust dataset ($n = 14$). When calibrated (Fig. 7), they cover a wider range of the cultural sequence and include a Class 2b date that is markedly early (Beta-199324). The rest of the dates are from Class 2c landscape contexts and include three dates that do not meet the expectations of the collapse scenario. Two dates come from Stevenson et al.'s inland survey block in Hiva Hiva and one is from an excavation in Stevenson and Haoa's "Far Interior zone" of the HHPA. All three of these dates contain probability distributions at 1 SD that fall mostly within the post-contact period (Beta-144309: 64.7%; Beta-238063: 70.2%; Beta 237461: 76.1%). This again suggests that it is more probable that these intensified agricultural areas were not abandoned in late prehistory. As with the locations of Class 1 dates from inland agricultural contexts, although these sampled areas are not in the far upland areas of Maunga Terevaka (>3.5 km from the coast), they are situated in localized situations that we may expect to have been abandoned with the supposed breakdown of the chiefly economy according to the collapse narrative. This applies to both the intensified Maunga Puko Puhi plantation area in the HHPA and the inland portion of the Hiva Hiva area, which contains a high density of agricultural features (Stevenson et al., 2008).

Dates from inland residential contexts were also assessed. As these data (Figs. 8 and 9) show, a number of dates from inland residential contexts have probability distributions that do not meet the expectations of the collapse scenario. In addition to the four HHPA-based Class 1c dates from residential contexts that were collected by Mulrooney (2012), one Class 1c date and two Class 2c dates contain probability distributions extending into the post-contact period. When calibrated, the majority of the probability distributions at 1 SD for these dates fall fully within the post-contact period (Beta-208938 (Class 1c): 75.5%; Beta-199322 (Class 2c): 71.0%; Beta-210554 (Class 2c): 77.4%). Sample Beta-208938 was collected from a layer with a basalt adze in the Poike Ditch (distance from coast: 1.15 km) excavations by Vargas et al. (1992), sample Beta-199322 was collected from a *hare oka* in Vaitea (situated at a distance of 3.45 km from the coast) that was excavated by Stevenson et al. (2005), and sample Beta-210554 was collected from an L-shaped wall near Ahu o Pepe (inland of the HHPA at a distance of 2.55 km from the coast) by Shepardson et al. (2005). The majority of the probability distributions of four residential Class 1 landscape dates from the interior areas of the HHPA also fell fully within the post-contact period (Wk-27378: 62.5%; Wk-24286: 69.3%; Wk-27380: 77.7%; Wk-24287: 74.1%). A significant percentage of the 1 SD probability distribution of one date from a sampled location situated more than 1 km from the coast in the HHPA also corresponds with the post-contact period (Wk-27384: 34.9%). This means that overall, it is more likely that the target events that these seven, and possibly eight, dates correspond to are actually post-contact phenomena. This does not support the notion that these areas of the landscape were abandoned in late prehistory.

5. Discussion

In examining the spatial and temporal distribution of ^{14}C dates from across the island, it is clear that inland and coastal areas were

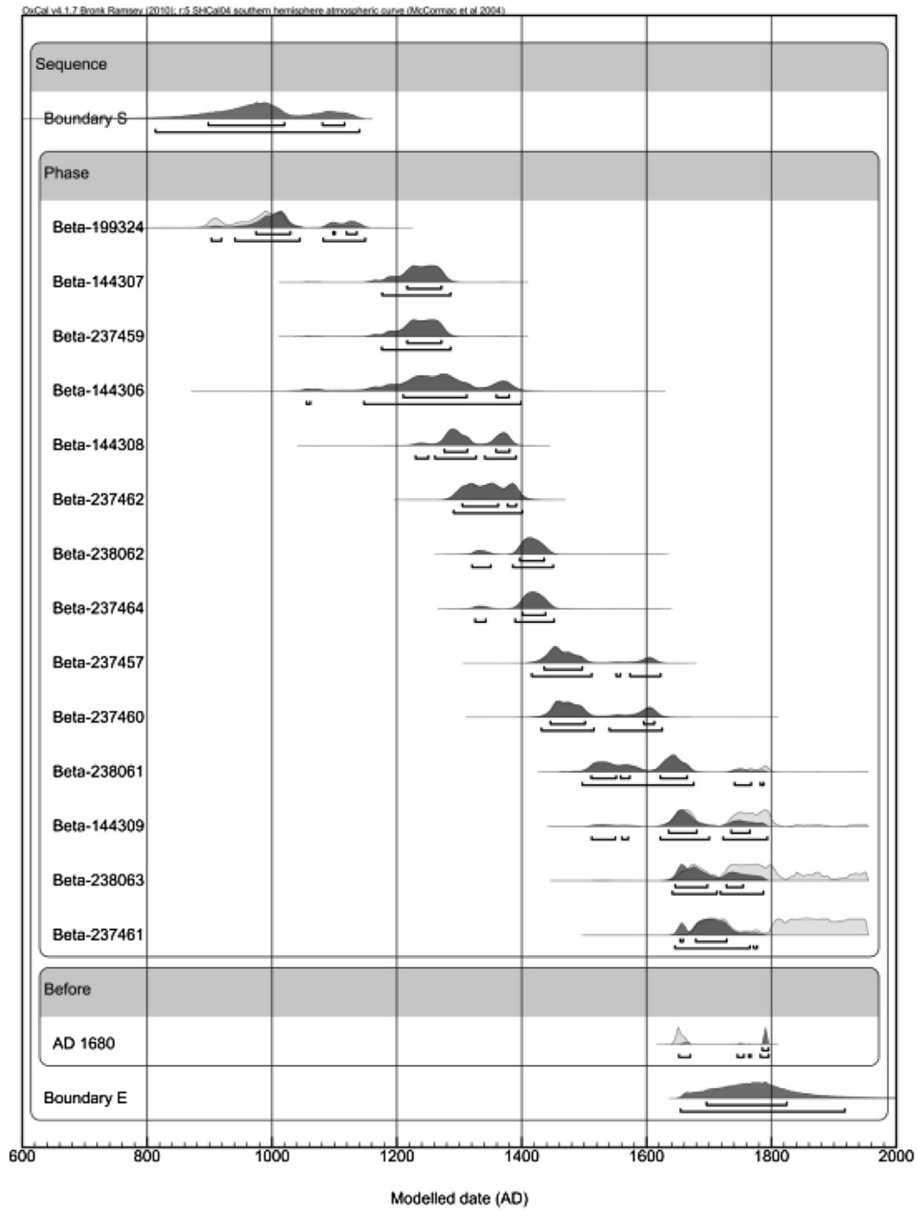

Fig. 7. Modelled calibrated Class 2b and 2c dates from inland agricultural contexts that test the expectations of the collapse model. Dark grey shading indicates the portion of the probability distribution that adheres to the expectations of the model, and light grey reflects that which does not fit the model.

continuously utilized. Beginning early on in the cultural sequence, and continuing right through to European contact and the post-contact period, most areas of the island appear to have been used by the ancient Rapa Nui based on the distribution of radiocarbon dates. Except for the very far upland region (>3.5 km) this pattern contradicts the claims of previous studies (Stevenson and Haoa, 1998; Stevenson and Haoa Cardinali, 2008; Vargas Casanova, 1998; Vargas et al., 2006) for widespread abandonment of non-coastal areas during late prehistory.

Currently, the most intensively sampled area of the island is the HHPA, whose inhabitants intensified production in the Maunga Puko Puhi plantation area in the interior “Hilltop zone” situated from 1 to 2.5 km inland from the coast, and this area does not show signs of abandonment according to the collapse scenario. Overall, the results of the present analysis, although limited due to a small sample size of dates from inland contexts, show that the expected pattern according to the collapse scenario is not documented in the HHPA or other areas, including Hiva Hiva, Vaitea, and Poike. The data from the HHPA are currently our most robust dataset and should be built upon and tested by future research.

The analysis undertaken in this project has elucidated the largely coastal bias of previous archaeological research endeavours on Rapa Nui. Nonetheless, this analysis has also shown that, despite this research bias, there is ample evidence of continued use of inland sampled locations and there is not sufficient evidence to support widespread abandonment of all inland areas of the island during the late pre-European contact cultural sequence. Although it is not possible to assign a calendar date for individual radiocarbon dates (see Michczyński, 2007), the summed probabilities of these dates, especially those from landscape contexts, can be used as a proxy for settlement through time.

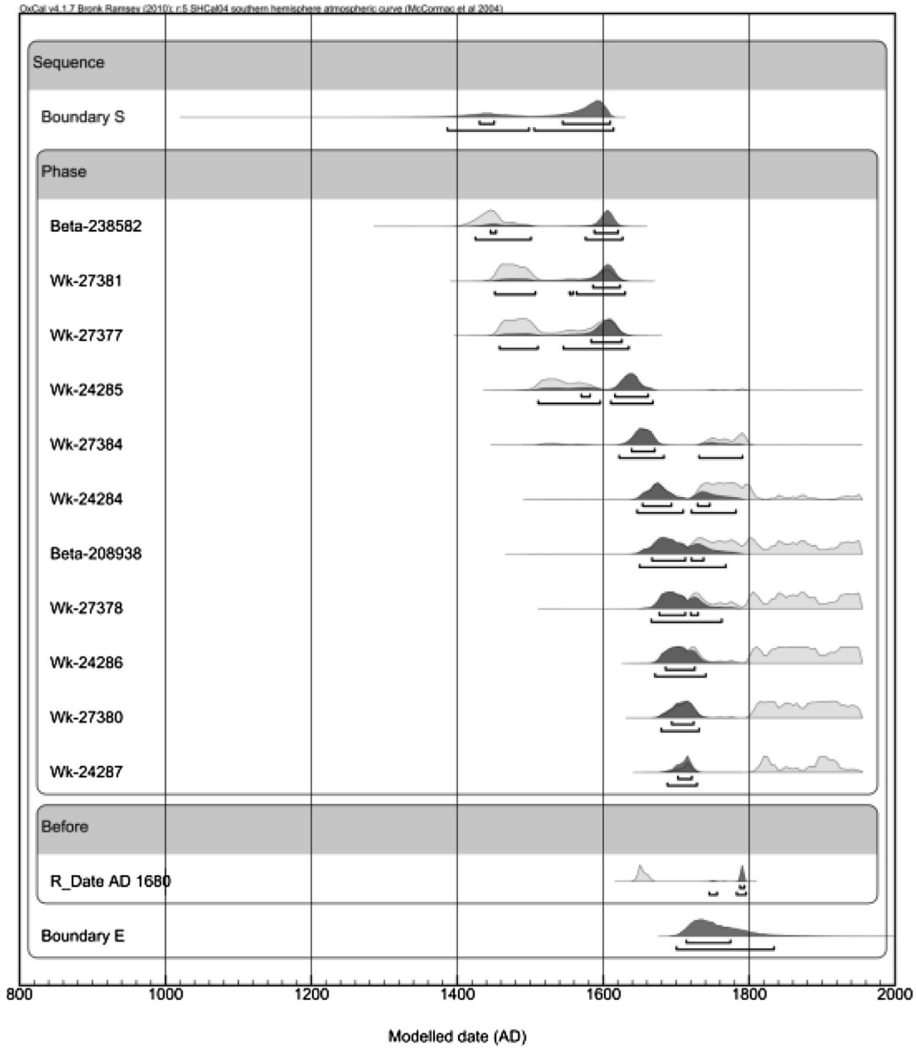

Fig. 8. Modelled calibrated Class 1c dates from inland residential contexts that test the expectations of the collapse model. Dark grey shading indicates the portion of the probability distribution that adheres to the expectations of the model, and light grey reflects that which does not fit the model.

The overall distribution of Class 1 and Class 2 dates is, to some degree, affected by the nature of the archaeological contexts from which they are sampled, and the overall dataset may be adversely affected by sampling biases by individual researchers working on Rapa Nui. This is an issue that has been noted for both archaeological and palaeoenvironmental studies (see Michczyński and Michczyńska, 2006). Dates from landscape contexts are the best-represented in the overall sample and include the earliest Class 1 date from 'Anakena, which has a 1 SD age range of AD 1054–1279. The precision limits associated with this and other early dates make it difficult to shed light on the continuing debate regarding the initial colonization of Rapa Nui (see Hunt and Lipo, 2006; Martinsson-Wallin and Crockford, 2002; Mulrooney et al., 2011; Shepardson et al., 2008; Wallin et al., 2010; Weisler and Green, 2011; Wilmshurst et al., 2011), but the overall corpus of dates suggests permanent and widespread settlement on the island by at least AD 1200, with initial colonization possibly having occurred significantly earlier, as AD 1200 reflects the median age estimates of the earliest reliable Class 1 dates from 'Anakena and does not take the full probability distribution into account (see Shepardson et al., 2008). Interestingly, the Class 1 and Class 2 dates from the earlier portion of the cultural sequence are not predominantly from TPQ contexts, and are instead mostly from landscape and target event contexts. This means that these dates are appropriate for making a conservative estimate for the initial colonization and settlement of the island at this time because they do not pre-date the construction of archaeological features, but instead date samples that are temporally associated with specific events and/or the general use of the landscape.

In terms of later settlement, the continuous distribution of dates from coastal areas, as well as inland areas located up to 3.5 km from the coast, suggests that all of these areas were the focus of cultural activity throughout the entire pre- and post-European contact cultural sequence. When compared to an artificial dataset that met the expectations of the collapse scenario, the distribution of dates from inland contexts clearly shows that the archaeological data do not support such a scenario. It is clear that these data are unsupportive of the idea that inland areas of the landscape were completely abandoned during late prehistory.

6. Conclusion

The overall temporal distribution of ^{14}C dates from archaeological contexts on Rapa Nui appears to be reflective of

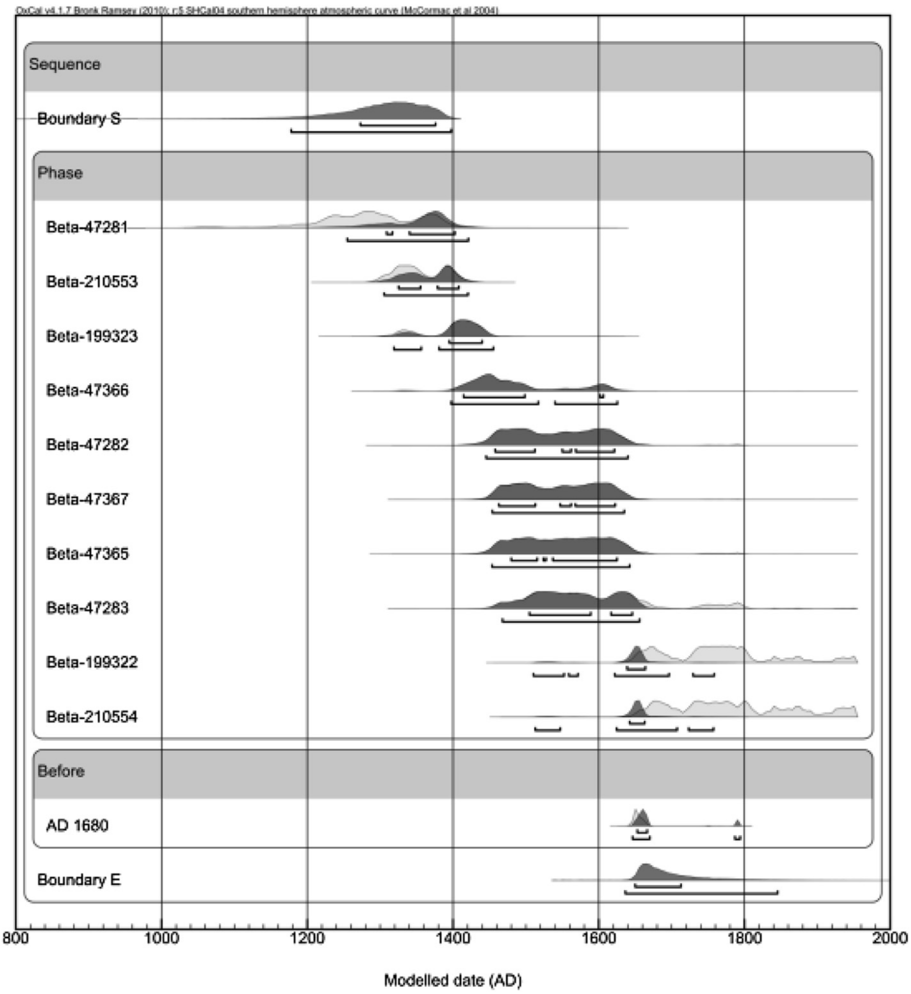

Fig. 9. Modelled calibrated Class 2b and 2c dates from inland residential contexts that test the expectations of the collapse model. Dark grey shading indicates the portion of the probability distribution that adheres to the expectations of the model, and light grey reflects that which does not fit the model.

continuous settlement and land use through time based on the results of this study. By comparing the overall temporal distribution of dates from archaeological contexts to artificial datasets that reflect continuous settlement and land use as well as the expectations of the collapse scenario, this analysis has shown that the archaeological dataset exhibits continuity overall. In looking at the spatial and temporal distributions of dates, it is clear that coastal as well as almost all inland sampled locations continued to be utilized by the ancient Rapa Nui throughout the entire cultural sequence, including the post-European contact period.

Despite the fact that there has been a largely coastal bias in research endeavours, there is sufficient evidence to suggest that there was no widespread settlement shift during late prehistory as proposed by previous researchers utilizing a settlement pattern approach. The results of this analysis, especially in relation to dates from inland contexts situated 1–3.5 km from the coast which were isolated for analysis, empirically refute one component of the collapse scenario. If the chiefly economy collapsed during late prehistory, the reorganization of the sociopolitical structure would have potentially resulted in the complete abandonment of intensified agricultural areas situated away from the coast. Currently, there is not evidence of widespread abandonment of inland locations prior to European contact. It instead appears that the ancient Rapa Nui continued to occupy and utilize most inland locations up to and following European contact.

Acknowledgements

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Appendix A. Summary table of radiocarbon dates from archaeological contexts

Lab no.	General context	Associated feature type	Material	Quad.	Distance band	Researcher	CRA	Class	Reference
T-194	Orongo Complex B	Ceremonial	Wood charcoal	1	0–500	Heyerdahl et al., 1956	470 ± 70	2b	Martinsson-Wallin and Crockford 2002:248
K-506	Orongo Complex B	Ceremonial	Wood charcoal	1	0–500	Heyerdahl et al., 1956	220 ± 100	2c	Martinsson-Wallin and Crockford 2002:248
K-514	Orongo Complex B	Ceremonial	Wood charcoal	1	0–500	Heyerdahl et al., 1956	380 ± 60	2c	Martinsson-Wallin and Crockford 2002:248
K-520	Orongo Complex B	Ceremonial	Wood charcoal	1	0–500	Heyerdahl et al., 1956	540 ± 100	2a	Martinsson-Wallin and Crockford 2002:248
M-708	Orongo Complex B	Ceremonial	Wood charcoal	1	0–500	Heyerdahl et al., 1956	100 ± 200	2c	Martinsson-Wallin and Crockford 2002:248
T-193	Ahu at Orongo	Ceremonial	Wood charcoal	1	0–500	Mulloy, 1960	540 ± 70	2b	Martinsson-Wallin and Crockford 2002:251
WSU-1146	Site 1-187	Residential	Wood charcoal – Identified	1	0–500	McCoy, 1968	1180 ± 230	2b	McCoy 1973; Martinsson-Wallin and Crockford 2002:249
WSU-1147	Site 1-187	Residential	Wood charcoal	1	0–500	McCoy, 1968	350 ± 220	3b	Martinsson-Wallin and Crockford 2002:249
I-7516	Site 1-193	Residential	Wood charcoal	1	0–500	Ayres, 1973	Modern	2b	Ayres 1975
Beta-099336	O97 Orongo	Residential	Wood charcoal	1	0–500	Orliac, 1995	320 ± 70	2b	Martinsson-Wallin and Crockford 2002:248, Orliac 1998
Beta-099339	Orongo	Residential	Wood charcoal	1	0–500	Orliac, 1995	250 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099342	ORMNG Orongo	Residential	Wood charcoal	1	0–500	Orliac, 1995	240 ± 60	2b	Martinsson-Wallin and Crockford 2002:248, Orliac 1998
Beta-099347	Orongo	Residential	Wood charcoal	1	0–500	Orliac, 1995	210 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099348	O97 Orongo	Residential	Wood charcoal	1	0–500	Orliac, 1995	30 ± 80	2b	Martinsson-Wallin and Crockford 2002:248, Orliac 1998
Beta-099356	Orongo	Residential	Wood charcoal	1	0–500	Orliac, 1995	200 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
K-523	Ahu Vinapu 1	Ceremonial	Wood charcoal	2	0–500	Heyerdahl et al., 1956	440 ± 100	2c	Martinsson-Wallin and Crockford 2002:252
M-709	Ahu Vinapu 1	Ceremonial	Wood charcoal	2	0–500	Heyerdahl et al., 1957	120 ± 200	2b	Martinsson-Wallin and Crockford 2002:252
M-710	Ahu Vinapu 2	Ceremonial	Wood charcoal	2	0–500	Heyerdahl et al., 1957	1100 ± 200	2b	Martinsson-Wallin and Crockford 2002:252
M-711	Ahu Vinapu 1	Ceremonial	Bone – human	2	0–500	Heyerdahl et al., 1958?	730 ± 200	3b	Martinsson-Wallin and Crockford 2002:252
T-5175	Ahu Vinapu 2	Ceremonial	Wood charcoal and ash	2	0–500	Martinsson-Wallin? 1984	570 ± 120	3c	Martinsson-Wallin and Crockford 2002:252
Ua-19463	Ahu Vinapu 2	Ceremonial	Carbonized nutshell	2	0–500	Martinsson-Wallin, 2002	610 ± 40	1c	Martinsson-Wallin 2004:8
Ua-19464	Ahu Vinapu 2	Ceremonial	Carbonized nutshell	2	0–500	Martinsson-Wallin 2002	605 ± 45	1c	Martinsson-Wallin 2004:8
Beta-38785	Ana Kai Tangata	Residential	Wood charcoal	3	0–500	Cervellino 1990	290 ± 80	2c	Cervellino 1990
KIA-17116	HK 7 IPC M. Orito 1	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	177 ± 18	2b	Bork et al., 2004:11; Stevenson et al., 2006:925
KIA-17117	HK 6 IPC M. Orito 1	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	148 ± 18	2b	Bork et al., 2004:11; Stevenson et al., 2006:925
KIA-17118	HK 8 IPC M. Orito 1	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	114 ± 21	2b	Bork et al., 2004:11; Stevenson et al., 2006:925
KIA-17120	M1 IPC M. Orito 1	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	6607 ± 107	3c	Stevenson et al., 2006:925
KIA-25975	Section D-Buried Aga-Horizon	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	347 ± 21	2b	Stevenson et al., 2006:925
Beta-178860	Feature 101A	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	200 ± 50	2b	Stevenson et al., 2006:925

Beta-196925	Section D-Buried Aga-Horizon	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	450 ± 40	2b	Stevenson et al., 2006:925
Beta-196926	Section D-Buried Aga-Horizon	Agricultural	Wood charcoal	4	500–1000	Stevenson et al., 2004	460 ± 40	2b	Stevenson et al., 2006:925
Gak-4503	Ahu Huri a Urenga	Ceremonial	Wood charcoal	5	1500–2000	Mulloy, 1973	40 ± 70	3c	Martinsson-Wallin and Crockford 2002:250
Gak-4506	Ahu Huri a Urenga	Ceremonial	Wood charcoal	5	1500–2000	Mulloy, 1973	840 ± 90	3c	Martinsson-Wallin and Crockford 2002:250
CNRS 1111a	Hanga te Pahu	Residential	Carbonized nutshell	5	0–500	Orliac, 1988	640 ± 90	1b	Orliac 2003:189; Delhon and Orliac 2010:98
CNRS 1111b	Hanga te Pahu	Residential	Carbonized nutshell	5	0–500	Orliac, 1988	465 ± 85	1b	Orliac 2003:189; Delhon and Orliac 2010:98
Beta-155732	Ahu o Tuki	Ceremonial	Carbonized nutshell	5	0–500	Orliac and Orliac, 2001	610 ± 60	1c	Huyge and Cauwe 2005:8
Beta-155733	Ahu o Tuki	Ceremonial	Carbonized nutshell	5	0–500	Orliac and Orliac, 2001	595 ± 65	1c	Huyge and Cauwe 2005:8
GrA-25870	Ahu o Tuki	Ceremonial	Carbonized nutshell	5	0–500	Huyge and Cauwe, 2002	640 ± 35	1a	Huyge and Cauwe 2005:8
GrA-25872	Basalt workshop, Viri o Tuki	Manufacturing	Wood charcoal	5	0–500	Huyge and Cauwe, 2002	410 ± 35	2b	Huyge and Cauwe 2005:8
I-7517	Site 7-1, Akahanga cave	Residential	Wood charcoal	7	0–500	Ayres, 1973	220 ± 80	2b	Martinsson-Wallin and Crockford 2002:246; Ayres 1975:97
Beta-50136	Site 7-553	Residential	Wood charcoal – Unidentified	7	0–500	Vargas et al., 1992	270 ± 60	2b	Vargas et al., 2006:268-9
Beta-50137	Site 7-553	Residential	Wood charcoal – Unidentified	7	0–500	Vargas et al., 1992	Modern	2b	Vargas et al., 2006:268-9
Beta-50138	Site 7-553	Residential	Wood charcoal – Unidentified	7	0–500	Vargas et al., 1992	440 ± 60	2b	Vargas et al., 2006:268-9
Beta-099330	Site AK 571 Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	220 ± 70	2b	Martinsson-Wallin and Crockford 2002:248, Orliac and Orliac 1998
Beta-099333	Site AK 551 Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	340 ± 60	2b	Martinsson-Wallin and Crockford 2002:248, Orliac and Orliac 1998
Beta-099334	Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	320 ± 60	2b	Martinsson-Wallin and Crockford 2002:246; Orliac and Orliac 1998
Beta-099343	Site AK 551 Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	220 ± 70	2b	Martinsson-Wallin and Crockford 2002:248, Orliac and Orliac 1998
Beta-099351	Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	80 ± 50	2b	Martinsson-Wallin and Crockford 2002:246; Orliac and Orliac 1998
Beta-099352	Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	10 ± 60	2b	Martinsson-Wallin and Crockford 2002:246; Orliac and Orliac 1998
Beta-099353	Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	200 ± 50	2b	Martinsson-Wallin and Crockford 2002:246; Orliac and Orliac 1998
Beta-099354	Site AK 571 Akahanga settlement	Residential	Wood charcoal	7	0–500	Orliac, 1995	390 ± 110	2b	Martinsson-Wallin and Crockford 2002:248, Orliac and Orliac 1998
Gak-2862	Ahu Ko Te Riku	Ceremonial	Wood charcoal	8	0–500	Ayres, 1970	910 ± 90	3c	Martinsson-Wallin and Crockford 2002:251
Gak-2863	Ahu Ko Te Riku	Ceremonial	Wood charcoal	8	0–500	Ayres, 1970	880 ± 70	3b	Martinsson-Wallin and Crockford 2002:251
Gak-2864	Ahu Ko Te Riku	Ceremonial	Wood charcoal	8	0–500	Ayres, 1970	1010 ± 90	3b	Martinsson-Wallin and Crockford 2002:251
Gak-2865	Ahu Ko Te Riku	Ceremonial	Wood charcoal	8	0–500	Ayres, 1970	780 ± 90	3c	Martinsson-Wallin and Crockford 2002:251
Gak-2866	Ahu Tahai	Ceremonial	Wood charcoal	8	0–500	Ayres, 1970	1260 ± 130	3a	Martinsson-Wallin and Crockford 2002:251
Gak-2867	Ahu Tahai	Ceremonial	Bone – human	8	0–500	Ayres, 1970	810 ± 80	3b	Martinsson-Wallin and Crockford 2002:252
Gak-4504	Ahu Hanga Kio'e 1	Ceremonial	Wood charcoal	8	0–500	Mulloy, 1973	180 ± 55	3c	Martinsson-Wallin and Crockford 2002:250
Gak-4505	Ahu Hanga Kio'e 2	Ceremonial	Wood charcoal	8	0–500	Mulloy, 1973	70 ± 80	3c	Martinsson-Wallin and Crockford 2002:250
Gak-4507	Ahu Tahai	Ceremonial	Wood charcoal	8	0–500	Ayres, 1973	200 ± 70	2c	Martinsson-Wallin and Crockford 2002:252

(continued on next page)

Appendix A (*continued*)

Lab no.	General context	Associated feature type	Material	Quad.	Distance band	Researcher	CRA	Class	Reference
SI-5460	Site 8-85	Residential	Wood charcoal – identified	8	0–500	Cristino et al., 1976	580 ± 60	1a	Vargas Casanova et al., 2006:244-5
Ua-13161	Ahu Tautira	Ceremonial	Wood charcoal	8	0–500	???1998	220 ± 50	2c	Martinsson-Wallin and Crockford 2002:252
Ua-13162	Ahu Tautira	Ceremonial	Wood charcoal	8	0–500	???1998	720 ± 50	2b	Martinsson-Wallin and Crockford 2002:252
Ua-13284	Ahu Tautira	Ceremonial	Wood charcoal	8	0–500	???1998	475 ± 60	2a	Martinsson-Wallin and Crockford 2002:252
GrA-18378	Ahu o Rongo	Ceremonial	Wood charcoal	8	0–500	Huyge and Cauwe, 2001	655 ± 30	2c	Huyge and Cauwe 2002:15
GrN-26318	Ahu o Rongo I	Ceremonial	Wood charcoal	8	0–500	Huyge and Cauwe, 2001	715 ± 35	2b	Huyge and Cauwe 2002:15
GrA-18380	Ahu o Rongo I	Ceremonial	Wood charcoal	8	0–500	Huyge and Cauwe, 2003	655 ± 30	2b	Huyge and Cauwe 2002:15
Beta-47365	Site 10-241, Feature 26	Residential	Wood charcoal	10	3500–4000	Stevenson et al., 1989-1993	380 ± 60	2b	Stevenson 1997:45
Beta-47366	Site 10-241, Feature 39	Residential	Wood charcoal	10	3500–4000	Stevenson et al., 1989-1993	480 ± 60	2b	Stevenson 1997:45
Beta-47367	Site 10-241, Feature 41	Residential	Wood charcoal	10	3500–4000	Stevenson et al., 1989-1993	390 ± 50	2b	Stevenson 1997:45
I-7515	Site 7-1, Runga Va'e cave	Residential	Wood charcoal	12	0–500	Ayres, 1973	190 ± 80	2c	Ayres 1975:97; Martinsson-Wallin and Crockford 2002:249
UGa-631	Site 14-1	Residential	Wood charcoal	14	0–500	Ayres, 1973	395 ± 60	2c	Ayres 1975:97; Martinsson-Wallin and Crockford 2002:248
KIA-18839	SW Poike – base of cliff	Agricultural	Wood charcoal	14	500–1000	Mieth and Bork, 2002	561 ± 26	2b	Mieth and Bork 2003:37
KIA-18840	SW Poike – base of cliff	Burial	Wood charcoal	14	500–1000	Mieth and Bork, 2002	626 ± 25	3c	Mieth and Bork 2003:38
KIA-18841	SW Poike – base of cliff	Residential	Wood charcoal	14	500–1000	Mieth and Bork, 2002	297 ± 21	2b	Mieth and Bork 2003:38
KIA-18842	SW Poike – base of cliff	Agricultural	Wood charcoal	14	500–1000	Mieth and Bork, 2002	298 ± 48	2b	Mieth and Bork 2003:38
Beta-210555	Site C, Hare umu, Ahu Te Pa Haha Tea	Residential	Wood charcoal	14	0–500	Shepardson et al., 2005	210 ± 40	2b	Shepardson et al., unpublished
M-870	Ahu Tepeu 1	Ceremonial	Bone – human	15	0–500	Smith, 1956	330 ± 150	3b	Martinsson-Wallin and Crockford 2002:252
M-732	Ahu Tepeu	Ceremonial	Totora reed	15	0–500	Smith, 1956	1640 ± 250	3b	Martinsson-Wallin and Crockford 2002:252, Martinsson-Wallin 1997:177
TBN-348-2	Ahu Vai Teka	Ceremonial	Wood charcoal	15	1500–2000	Mulloy and Figueroa, 1960–70	399 ± 76	2a	Martinsson-Wallin and Crockford 2002:252, Martinsson-Wallin 1997:177
I-455	Ahu Vai Teka	Ceremonial	Wood charcoal	15	1500–2000	Mulloy and Figueroa, 1960–70	340 ± 75	2a	Martinsson-Wallin and Crockford 2002:252, Martinsson-Wallin 1997:177
M-1372	Ahu Vai Teka	Ceremonial	Wood charcoal	15	1500–2000	Mulloy and Figueroa, 1960–70	330 ± 100	2b	Martinsson-Wallin and Crockford 2002:252, Martinsson-Wallin 1997:177
Beta-155725	Ahu Tepeu	Ceremonial	Wood charcoal?	15	0–500	Orliac and Orliac, 2000	Modern	2c	Orliac and Orliac 2001
Beta-155726	Ahu Tepeu	Ceremonial	Wood charcoal?	15	0–500	Orliac and Orliac, 2000	Modern	2c	Orliac and Orliac 2001
Beta-254389	Site 15-233, TU2, L3	Agricultural	Wood charcoal – identified	15	1500–2000	Stevenson et al., 2007	160 ± 40	1c	Stevenson et al. 2013:3027
Beta-254390	Site 15-233, TU2, L4	Agricultural	Wood charcoal – identified	15	1500–2000	Stevenson et al., 2007	280 ± 40	1c	Stevenson et al. 2013:3027
Beta-254391	Site 15-233, TU2, L6	Agricultural	Wood charcoal – Identified	15	1500–2000	Stevenson et al., 2007	110 ± 40	1c	Stevenson et al. 2013:3027
Beta-237457	Site 15-90, TU52	Agricultural	Wood charcoal	15	2000–2500	Stevenson et al., 2008	460 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-237458	Site 15-182, TU 98	Residential	Wood charcoal	15	1500–2000	Stevenson et al., 2008	Modern	2c	Stevenson et al., 2008:51, Table 5
Beta-237459	Site 15-68, TU105	Agricultural	Wood charcoal	15	1500–2000	Stevenson et al., 2008	840 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-237460	Site 15-68, TU105	Agricultural	Wood charcoal	15	1500–2000	Stevenson et al., 2008	440 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-237461	Site 15-233H, TU2	Agricultural	Wood charcoal – unidentified	15	1500–2000	Stevenson et al., 2008	150 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-237462	Site 15-233H, TU2	Agricultural	Wood charcoal – unidentified	15	1500–2000	Stevenson et al., 2008	670 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-237464	Rock Garden 22, TU145	Agricultural	Wood charcoal	15	1500–2000	Stevenson et al., 2008	560 ± 40	2c	Stevenson et al., 2008:51, Table 5

Beta-238061	Rock Garden 16, TU137	Agricultural	Wood charcoal	15	1500–2000	Stevenson et al., 2008	300 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-238062	Rock Garden 20, TU141	Agricultural	Wood charcoal	15	1500–2000	Stevenson et al., 2008	570 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-238063	Rock Garden 25, TU148	Agricultural	Wood charcoal	15	2000–2500	Stevenson et al., 2008	210 ± 40	2c	Stevenson et al., 2008:51, Table 5
Beta-238582	Test unit 107, Midden	Residential	Carbonized nutshell	15	1500–2000	Stevenson et al., 2008	490 ± 40	1c	Stevenson et al., 2008:51, Table 5
I-456	Ahu Akivi	Ceremonial	Wood charcoal	16	2000–2500	Mulloy and Figueroa, 1960–70	510 ± 40	3a	Martinsson-Wallin and Crockford 2002:250
M-1370	Ahu Akivi	Ceremonial	Wood charcoal	16	2000–2500	Mulloy and Figueroa, 1960–70	425 ± 100	3a	Martinsson-Wallin and Crockford 2002:250
M-1371	Ahu Akivi	Ceremonial	Bone and wood charcoal	16	2000–2500	Mulloy and Figueroa, 1960–70	350 ± 100	3b	Martinsson-Wallin and Crockford 2002:250
M-1374	Ahu Akivi	Ceremonial	Bone and wood charcoal	16	2000–2500	Mulloy and Figueroa, 1960–70	580 ± 100	3b	Martinsson-Wallin and Crockford 2002:250
TBN-348-1	Ahu Akivi	Ceremonial	Wood charcoal	16	2000–2500	Mulloy and Figueroa, 1970–75	2216 ± 96	3c	Martinsson-Wallin and Crockford 2002:250
Erl-13247	T 01, Stone-lined basin	Water	Soil with organic remains	17	4500–5000	Vogt and Moser, 2010	384 ± 40	1c	Vogt and Moser 2010:20
Erl-13248	T 01, Stone-lined basin	Water	Carbonized nutshell	17	4500–5000	Vogt and Moser, 2010	360 ± 39	1a	Vogt and Moser 2010:20
Erl-13249	T 01, Stone-lined basin	Water	Carbonized nutshell	17	4500–5000	Vogt and Moser, 2010	307 ± 39	1a	Vogt and Moser 2010:20
Erl-13250	T 01, Stone-lined basin	Water	Wood charcoal	17	4500–5000	Vogt and Moser, 2010	349 ± 40	2c	Vogt and Moser 2010:20
Beta-47282	Site 18-228	Residential	Wood charcoal – unidentified	18	3500–4000	Vargas Casanova et al., 1992	400 ± 60	2b	Vargas et al., 2006:296-8
Beta-47283	Site 18-419	Residential	Wood charcoal – unidentified	18	2500–3000	Vargas Casanova et al., 1992	330 ± 60	2b	Vargas et al., 2006:297-8
Beta-199322	Site 18-473G, Feature 1, TU1	Residential	Wood charcoal	18	3000–3500	Stevenson et al., 2005	220 ± 40	2b	Stevenson et al., 2007:75
Beta-199323	Site 18-473G, Feature 3, TU2	Residential	Twig and grass fragments	18	3000–3500	Stevenson et al., 2005	570 ± 50	2b	Stevenson et al., 2007, p.75
Beta-199324	Site 18-473G, Feature 20, TU1	Agricultural	Wood charcoal	18	3000–3500	Stevenson et al., 2005	1110 ± 40	2b	Stevenson et al., 2007, p.75
Wk-27380	ST 43, near Feature SH-4-129d	Residential	Wood charcoal – identified	19	2000–2500	Mulrooney et al., 2008	131 ± 30	1c	Mulrooney 2012
Wk-27381	ST 43, near Feature SH-4-129d	Residential	Wood charcoal – identified	19	2000–2500	Mulrooney et al., 2008	426 ± 30	1c	Mulrooney 2012
Beta-144306	CS4, Unit 2, F.1	Agricultural	Wood charcoal	20	1500–2000	Stevenson and Haoa Cardinali, 1999	790 ± 80	2c	Stevenson and Haoa Cardinali 2008:5
Beta-144307	CS4, Unit 2, F.3	Agricultural	Wood charcoal	20	1500–2000	Stevenson and Haoa Cardinali, 1999	840 ± 40	2c	Stevenson and Haoa Cardinali 2008:75
Beta-144308	CS2, F.3	Agricultural	Wood charcoal	20	1500–2000	Stevenson and Haoa Cardinali, 1999	740 ± 40	2c	Stevenson and Haoa Cardinali 2008:75
Beta-144309	CS2, F.6	Agricultural	Wood charcoal	20	1500–2000	Stevenson and Haoa Cardinali, 1999	250 ± 40	2c	Stevenson and Haoa Cardinali 2008:75
Beta-144310	Site 20-52 E1t, Unit 1, F.6	Agricultural	Wood charcoal	20	500–1000	Stevenson and Haoa Cardinali, 1999	780 ± 50	2c	Stevenson and Haoa Cardinali 2008:75
Beta-144311	Site 20-52 E1t, Unit 2, F.10	Agricultural	Wood charcoal	20	500–1000	Stevenson and Haoa Cardinali, 1999	380 ± 40	2c	Stevenson and Haoa Cardinali 2008:75
Beta-210554	Site D, Ahu O'Pepe, inside corner of an L-shaped wall	Residential	Wood charcoal	20	2500–3000	Shepardson et al., 2005	200 ± 40	2c	Shepardson unpublished
Wk-24285	ST 16, near Feature HH-751a	Residential	Wood charcoal – identified	20	2000–2500	Mulrooney, 2006	314 ± 30	1c	Mulrooney et al., 2009:101
Wk-27377	ST 14, near Feature HH-655a	Residential	Wood charcoal – identified	20	1500–2000	Mulrooney et al., 2008	407 ± 30	1c	Mulrooney 2012
Wk-27378	ST 21, near Feature SH-2-68	Residential	Wood charcoal – identified	20	1500–2000	Mulrooney et al., 2008	172 ± 30	1c	Mulrooney 2012
Wk-27384	ST 48, near Feature SH-4-9b	Residential	Wood charcoal – identified	20	1500–2000	Mulrooney et al., 2008	269 ± 30	1c	Mulrooney 2012
K-501	Poike Ditch	Residential	Wood charcoal	21	1000–1500	Smith et al., 1956	280 ± 100	3c	Smith 1961:391; Martinsson-Wallin and Crockford 2002:249
K-502	Poike Ditch	Residential	Wood charcoal	21	1000–1500	Smith et al., 1956	1570 ± 100	3c	Smith 1961:391; Martinsson-Wallin and Crockford 2002:249

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Appendix A (*continued*)

Lab no.	General context	Associated feature type	Material	Quad.	Distance band	Researcher	CRA	Class	Reference
Beta-208937	Poike Ditch	Residential	Wood charcoal – identified	21	1000–1500	Vargas Casanova et al., 1992	440 ± 60	1c	Vargas Casanova et al., 2006:380
Beta-208938	Poike Ditch	Residential	Wood charcoal – unidentified	21	1000–1500	Vargas Casanova et al., 1992	190 ± 40	2c	Vargas Casanova et al., 2006:381-4
Beta-47281	Poike Ditch	Residential	Wood charcoal – unidentified	21	1000–1500	Vargas Casanova et al., 1992	760 ± 80	2c	Vargas Casanova et al., 2006:385
KIA-17110	SW Poike	Agricultural	Wood charcoal	22	0–500		654 ± 22	2c	Mieth et al., 2002:92, 2004:63
KIA-18832	SW Poike	Agricultural	Wood charcoal	22	0–500	Mieth and Bork, 2002	570 ± 22	2c	Mieth and Bork 2003:37
KIA-18833	SW Poike	Agricultural	Wood charcoal	22	0–500	Mieth and Bork, 2002	482 ± 26	2c	Mieth and Bork 2003:36
KIA-18834	SW Poike	Agricultural	Wood charcoal	22	0–500	Mieth and Bork, 2002	319 ± 21	2c	Mieth and Bork 2003:36
KIA-18836	SW Poike	Agricultural	Wood charcoal	22	0–500	Mieth and Bork, 2002	573 ± 20	3c	Mieth and Bork 2003:36
KIA-19369	SW Poike	Agricultural	Burnt grass	22	0–500	Mieth and Bork, 2002	525 ± 26	2c	Mieth and Bork 2003:36
KIA-26452	AMTH-III, Ahu Motu Toremo Hiva	Ceremonial	Wood charcoal	24	0–500	Cauwe et al., 2004	675 ± 20	2c	Cauwe et al., 2006:100
KIA-26453	AMTH-II, Ahu Motu Toremo Hiva	Ceremonial	Wood charcoal	24	0–500	Cauwe et al., 2004	675 ± 25	2c	Cauwe et al., 2006:100
KIA-26461	AMTH-III, Ahu Motu Toremo Hiva	Ceremonial	Wood charcoal	24	0–500	Cauwe et al., 2004	630 ± 25	2c	Cauwe et al., 2006:100
KIA-26464	AMTH-II, Ahu Motu Toremo Hiva	Ceremonial	Wood charcoal	24	0–500	Cauwe et al., 2004	700 ± 25	2c	Cauwe et al., 2006:100
KIA-26483	Burial sub-contemporary, Ahu Motu Toremo Hiva	Burial	Wood charcoal	24	0–500	Cauwe et al., 2004	150 ± 20	2a	Cauwe et al., 2006:100
KIA-26487	Behind Ahu Motu Toremo Hiva	Agricultural	Wood charcoal	24	0–500	Cauwe et al., 2004	240 ± 20	2c	Cauwe et al., 2006:100
KIA-29812	AMTH-II, Ahu Motu Toremo Hiva	Ceremonial	Wood charcoal	24	0–500	Cauwe et al., 2004	630 ± 25	2c	Cauwe et al., 2006:100
KIA-29813	AMTH-I, Ahu Motu Toremo Hiva	Ceremonial	Wood charcoal	24	0–500	Cauwe et al., 2005	610 ± 25	2c	Cauwe et al., 2006:100
KIA-29814	Behind Ahu Motu Toremo Hiva	Agricultural	Wood charcoal	24	0–500	Cauwe et al., 2005	325 ± 25	2c	Cauwe et al., 2006:100
SRR-2430	Poike E cave near Ana Okeke	Residential	Carbonized nutshell – rat-gnawed	25	0–500	Dransfield et al., 1983	820 ± 40	2c	Dransfield et al., 1984
KIA-18837	E Poike	Residential	Wood charcoal	25	0–500	Mieth and Bork, 2002	631 ± 22	2b	Mieth and Bork 2004:57, 2005:60
KIA-18838	E Poike	Residential	Wood charcoal	25	0–500	Mieth and Bork, 2002	588 ± 22	2b	Mieth and Bork 2004:57, 2005:60
KIA-20383	Fireplace, east Poike	Residential	Carbonized nutshell	25	0–500	Mieth and Bork, 2002	317 ± 20	1c	Mieth and Bork 2004:58
Beta-210553	Site B, Inside a hare paenga near ahu	Residential	Wood charcoal	25	1000–1500	Shepardson et al., 2005	640 ± 40	2c	Shepardson unpublished
AZ-1	Site 26-7b, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	435 ± 40	2c	Wozniak 2003:302-4
AZ-2	Site 26-22B, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	605 ± 40	2c	Wozniak 2003:302-4
AZ-3	Site 26-22C, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	385 ± 40	2c	Wozniak 2003:302-4
AZ-4	Site 26-36, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	210 ± 60	2c	Wozniak 2003:302-4
AZ-5	Site 26-I0, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	715 ± 70	2c	Wozniak 2003:302-4
AZ-6	Site 26-T0, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	415 ± 70	2c	Wozniak 2003:302-4
AZ-7	Site 26-6c, Te Niu	Residential	Wood charcoal	26	0–500	Wozniak, 1996	680 ± 45	2c	Wozniak 2003:302-4
AZ-8	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	375 ± 45	2b	Wozniak 2003:302-4
AZ-9	Site 26-6, Te Niu	Residential	Wood charcoal	26	0–500	Wozniak, 1996	230 ± 45	2c	Wozniak 2003:302-4
AZ-10	Site 26-5, Te Niu	Residential	Wood charcoal	26	0–500	Wozniak, 1996	105 ± 40	2c	Wozniak 2003:302-4
AZ-13	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	535 ± 50	2a	Wozniak 2003:302-4
AZ-14	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	230 ± 60	2c	Wozniak 2003:302-4
AZ-20	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Bone	26	0–500	Wozniak, 1996	380 ± 45	3b	Wozniak 2003:302-4
AZ-22	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Carbonized nutshell	26	0–500	Wozniak, 1996	325 ± 40	2c	Wozniak 2003:302-4
AZ-23	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	685 ± 50	2c	Wozniak 2003:302-4
AZ-24	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	535 ± 40	2c	Wozniak 2003:302-4
AZ-25	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	650 ± 40	2c	Wozniak 2003:302-4
AZ-26	26M250S firepit, Te Niu	Residential	Wood charcoal	26	0–500	Wozniak, 1996	240 ± 40	2b	Wozniak 2003:302-4
AZ-27	Site 26F, Te Niu	Agricultural	Wood charcoal	26	0–500	Wozniak, 1996	545 ± 40	2c	Wozniak 2003:302-4
AZ-28	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Carbonized nutshell	26	0–500	Wozniak, 1996	555 ± 40	1a	Wozniak 2003:302-4

B-95878	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	700 ± 90	2b	Wozniak 2003:302-4
B-95879	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	230 ± 90	2c	Wozniak 2003:302-4
B-95880	Site 26-50, Te Niu	Residential	Wood charcoal	26	0–500	Wozniak, 1996	550 ± 110	2c	Wozniak 2003:302-4
B-106319	Site 26-1, Ahu Te Niu (Ahu Ohau)	Ceremonial	Wood charcoal	26	0–500	Wozniak, 1996	570 ± 50	2a	Wozniak 2003:302-4
B-106320	Site 26-6, Te Niu	Residential	Wood charcoal	26	0–500	Wozniak, 1996	90 ± 60	2c	Wozniak 2003:302-4
Wk-27379	ST 39, near Feature SH-3-274a	Residential	Wood charcoal – identified	30	0–500	Mulrooney et al., 2008	133 ± 30	1c	Mulrooney 2012
Beta-46110	Site 21-568a, Hare Aio	Residential	Wood charcoal	31	500–1000	Vargas Casanova et al., 1992	430 ± 70	2c	Vargas Casanova et al., 2006:217
Beta-47279	Site 21-568a, Hare Aio	Residential	Wood charcoal	31	500–1000	Vargas Casanova et al., 1992	320 ± 70	2c	Vargas Casanova et al., 2006:217-9
Beta-91771	Site 31-98, TU1, F.20	Residential	Burnt grass	31	0–500	Stevenson and Haoa Cardinali, 1995	420 ± 80	2b	Stevenson and Haoa Cardinali 2008:109
Beta-91772	Site 31-98, TU6, F.33	Residential	Wood charcoal?	31	0–500	Stevenson and Haoa Cardinali, 1995	130 ± 40	2b	Stevenson and Haoa Cardinali 2008:109
Beta-91773	Site 31-98, TU11, F.63	Residential	Wood charcoal	31	0–500	Stevenson and Haoa Cardinali, 1995	70 ± 40	2b	Stevenson and Haoa Cardinali 2008:109
Beta-91774	Site 31-98, TU6, F.66	Residential	Wood charcoal	31	0–500	Stevenson and Haoa Cardinali, 1995	130 ± 60	2b	Stevenson and Haoa Cardinali 2008:109
Beta-91775	Site 31-98, TU9, F.73	Residential	Wood charcoal	31	0–500	Stevenson and Haoa Cardinali, 1995	240 ± 40	2b	Stevenson and Haoa Cardinali 2008:109
Beta-099344	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	80 ± 70	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099346	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	160 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099349	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	60 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099350	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	10 ± 70	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099355	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	150 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099357	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	60 ± 50	2b	Martinsson-Wallin and Crockford 2002:248
Beta-099345	Site 31-90 or 31-91	Residential	Wood charcoal	31	0–500	Orliac, 1995	610 ± 80	2b	Martinsson-Wallin and Crockford 2002:248
Beta-155723	Site 21-568a, Hare Aio, bore hole	Residential	Wood charcoal	31	500–1000	Orliac and Orliac, 2001	Modern	2c	Orliac and Orliac 2001
Beta-155724	Site 21-568a, Hare Aio	Residential	Wood charcoal	31	500–1000	Orliac and Orliac, 2001	Modern	2c	Orliac and Orliac 2001
Ua-11700	Ahu Heki'i, T1	Ceremonial	Carbonized nutshell	31	0–500	Martinsson-Wallin and Wallin, 1997	705 ± 45	1a	Martinsson-Wallin and Crockford 2002:250
Ua-11701	Ahu Heki'i, T2, F.1	Ceremonial	Carbonized nutshell	31	0–500	Martinsson-Wallin and Wallin, 1997	700 ± 45	1b	Martinsson-Wallin and Crockford 2002:250
Ua-11702	Ahu Heki'i, T2, below F.1	Ceremonial	Carbonized nutshell	31	0–500	Martinsson-Wallin and Wallin, 1997	465 ± 45	1b	Martinsson-Wallin and Crockford 2002:250
Ua-11703	Ahu Heki'i, T2, Level 7	Ceremonial	Carbonized nutshell	31	0–500	Martinsson-Wallin and Wallin, 1997	555 ± 50	1a	Martinsson-Wallin and Crockford 2002:250
Ua-11704	Ahu No. 31-286	Ceremonial	Wood charcoal	31	0–500	Martinsson-Wallin and Wallin, 1998	795 ± 50	2a	Martinsson-Wallin and Crockford 2002:252
Ua-13163	Ahu Ra'ai	Ceremonial	Wood charcoal	31	0–500	Martinsson-Wallin and Wallin, 1998	135 ± 60	2b	Martinsson-Wallin and Crockford 2002:251
Ua-13164	Ahu Ra'ai	Ceremonial	Wood charcoal	31	0–500	Martinsson-Wallin and Wallin, 1998	515 ± 60	2a	Martinsson-Wallin and Crockford 2002:251
Ua-13165	Ahu Ra'ai	Ceremonial	Wood charcoal	31	0–500	Martinsson-Wallin and Wallin, 1998	570 ± 50	2b	Martinsson-Wallin and Crockford 2002:251
Ua-13166	Ahu Ra'ai	Ceremonial	Wood charcoal	31	0–500	Martinsson-Wallin and Wallin, 1998	635 ± 50	2a	Martinsson-Wallin and Crockford 2002:251
Ua-13167	Ahu Ra'ai	Ceremonial	Wood charcoal	31	0–500	Martinsson-Wallin and Wallin, 1998	645 ± 50	2a	Martinsson-Wallin and Crockford 2002:251

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Appendix A (*continued*)

Lab no.	General context	Associated feature type	Material	Quad.	Distance band	Researcher	CRA	Class	Reference
Wk-24284	ST 12, near Feature HH-531a	Residential	Wood charcoal – identified	31	1000–1500	Mulrooney, 2006	214 ± 30	1c	Mulrooney et al., 2009:101
Wk-24286	ST 22, near Feature SH-2-4	Residential	Wood charcoal – identified	31	1000–1500	Mulrooney 2006	157 ± 28	1c	Mulrooney et al., 2009:101
Wk-24287	ST 22, near Feature SH-2-4	Residential	Wood charcoal – identified	31	1000–1500	Mulrooney 2006	90 ± 30	1c	Mulrooney et al., 2009:101
Wk-27374	ST 3, near Feature HH-153a	Residential	Wood charcoal – identified	31	500–1000	Mulrooney et al., 2008	110 ± 30	1c	Mulrooney 2012
Wk-27375	ST 3, near Feature HH-153a	Residential	Wood charcoal – identified	31	500–1000	Mulrooney et al., 2008	352 ± 30	1c	Mulrooney 2012
Wk-27376	ST 6, near Feature HH-52a	Residential	Wood charcoal – identified	31	0–500	Mulrooney et al., 2008	146 ± 30	1c	Mulrooney 2012
Wk-27382	ST 46, near Feature SH-1-93f	Residential	Wood charcoal – identified	31	0–500	Mulrooney et al., 2008	243 ± 30	1c	Mulrooney 2012
Wk-27383	ST 46, near Feature SH-1-93f	Residential	Wood charcoal – identified	31	0–500	Mulrooney et al., 2008	212 ± 30	1c	Mulrooney 2012
Beta-46103	Site 32-14, Burial	Burial	Wood charcoal – unidentified	32	0–500	Vargas Casanova et al., 1986	100 ± 70	2b	Vargas Casanova et al., 2006:176-81
Gd-6963	Site 32-200c	Animal husbandry	Organic material	33	0–500	Vargas Casanova et al., 1986	150 ± 90	2b	Vargas Casanova et al., 2006:128
Gd-6965	Site 32-200c	Animal husbandry	Organic material	33	0–500	Vargas Casanova et al., 1986	120 ± 100	2b	Vargas Casanova et al., 2006:128
Beta-210552	Site F, umu near Ahu Heu	Residential	Wood charcoal	33	0–500	Shepardson et al., 2005	100 ± 40	2b	Shepardson unpublished
K-522	'Anakena E2, Circular dwelling	Residential	Wood charcoal	35	0–500	Heyerdahl et al., 1956	430 ± 100	2b	Martinsson-Wallin and Crockford 2002:248
UGa-630	'Anakena 35-8, hare paenga	Residential	Wood charcoal	35	0–500	Ayres 1973	395 ± 75	2a	Martinsson-Wallin and Crockford 2002:248
Gak-4616	Ahu Ihu Arero	Ceremonial	Wood charcoal	35	0–500	Ayres 1973	480 ± 90	2a	Ayres 1975:97
Gak-4617	Ahu Ihu Arero	Ceremonial	Wood charcoal	35	0–500	Ayres 1973	480 ± 90	2a	Martinsson-Wallin and Crockford 2002:250
Beta-28753	Site 35-11	Residential	Wood charcoal	35	0–500	Vargas Casanova et al., 1986	280 ± 60	2b	Vargas Casanova et al., 2006:203
Ua-1144	Ahu Ature Huki	Ceremonial	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	580 ± 85	2b	Martinsson-Wallin and Crockford 2002:250
Ua-617	Ahu Nau Nau III	Ceremonial	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	610 ± 85	2c	Martinsson-Wallin and Crockford 2002:251
T-6678	Ahu Nau Nau I	Ceremonial	Bone	35	0–500	Skjolsvold et al., 1986-1988	860 ± 130	3b	Martinsson-Wallin and Crockford 2002:251
T-6679	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	1170 ± 140	2c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
T-6680	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	370 ± 90	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7341	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	900 ± 120	2c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
T-7342	Ahu Nau Nau I	Ceremonial	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	710 ± 70	2a	Martinsson-Wallin and Crockford 2002:251
T-7343	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	750 ± 100	2c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
T-7344	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	600 ± 140	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7345	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	810 ± 80	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7346	'Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	810 ± 70	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7347	Ahu Nau Nau II	Ceremonial	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	720 ± 120	2c	Martinsson-Wallin and Crockford 2002:251

T-7348	Ahu Nau Nau IV?	Ceremonial	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	200 ± 80	2c	Martinsson-Wallin and Crockford 2002:251
T-7349	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	550 ± 150	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7350	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	710 ± 80	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7958	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	340 ± 100	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7959	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	510 ± 40	2c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
T-7960	’Anakena uphill	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	Modern	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7961	’Anakena uphill	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	Modern	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7973	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	Modern	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7974	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	540 ± 60	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7975	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	710 ± 40	2b	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
T-7976	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	789 ± 90	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7977	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	220 ± 80	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106
T-7979	Ahu Ature Huki	Ceremonial	Wood charcoal	35	0–500	Skjolsvold et al., 1986-1988	510 ± 80	2a	Martinsson-Wallin and Crockford 2002:250
Ua-1740	’Anakena cultural layer	Residential	Bone – aquatic bird	35	0–500	Skjolsvold et al., 1990	1290 ± 100	3c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
Beta-47169	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Steadman et al., 1991	900 ± 80	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106, Steadman et al., 1994 (dates slightly different)
Beta-47170	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Steadman et al., 1991	900 ± 60	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106, Steadman et al., 1994 (dates slightly different)
Beta-47171	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Steadman et al., 1991	660 ± 80	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106, Steadman et al., 1994 (dates slightly different)
Beta-47172	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Steadman et al., 1991	170 ± 110	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106, Steadman et al., 1994 (dates slightly different)
Beta-47173	’Anakena cultural layer	Residential	Wood charcoal	35	0–500	Steadman et al., 1991	860 ± 100	2c	Martinsson-Wallin and Crockford 2002:247, Skjolsvold 1994:106, Steadman et al., 1994 (dates slightly different)
CAMS-5335	Ahu Nau Nau	Ceremonial	Tooth – dolphin	35	0–500	Steadman et al., 1991	1090 ± 60	3c	Steadman et al., 1994:86
CAMS-5336	Ahu Nau Nau	Ceremonial	Bone – periotic	35	0–500	Steadman et al., 1991	1040 ± 80	3c	Steadman et al., 1994:86
CAMS-5337	Ahu Nau Nau	Ceremonial	Bone – periotic	35	0–500	Steadman et al., 1991	1310 ± 60	3c	Steadman et al., 1994:86
Ua-3007	’Anakena cultural layer	Residential	Bone – rat	35	0–500	Skjolsvold et al., 1993	1015 ± 65	3c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
Ua-4626	’Anakena cultural layer	Ceremonial	Bone	35	0–500	Skjolsvold, 1994	710 ± 75	3c	Martinsson-Wallin and Crockford 2002:246, Skjolsvold 1994:106
Beta-77743	’Anakena Pipe Trench	Residential	Wood charcoal	35	0–500	Stevenson et al., 1994	Modern	2b	Stevenson et al., 2000:170
Beta-77744	’Anakena Pipe Trench	Residential	Wood charcoal	35	0–500	Stevenson et al., 1994	70 ± 50	2b	Stevenson et al., 2000:170

(*continued on next page*)

Appendix A (*continued*)

Lab no.	General context	Associated feature type	Material	Quad.	Distance band	Researcher	CRA	Class	Reference
A-160	’Anakena Trench C	Residential	Coral	35	0–500	Beck et al., 2003	1020 ± 65	3c	Beck et al., 2003:105
A-161	’Anakena Trench C	Residential	Coral	35	0–500	Beck et al., 2003	1010 ± 60	3c	Beck et al., 2003:105
A-161b	’Anakena Trench C	Residential	Coral	35	0–500	Beck et al., 2003	965 ± 45	3c	Beck et al., 2003:105
AA-27343	Auh Nau Nau plaza	Ceremonial	Algal nodule	35	0–500	Beck et al., 2003	371 ± 50	1c	Beck et al., 2003:101
AA-27344	Auh Nau Nau plaza	Ceremonial	Algal nodule	35	0–500	Beck et al., 2003	423 ± 60	1c	Beck et al., 2003:101
AA-27345	Auh Nau Nau plaza	Ceremonial	Algal nodule	35	0–500	Beck et al., 2003	555 ± 45	1c	Beck et al., 2003:101
AA-27346	Auh Nau Nau plaza	Ceremonial	Algal nodule	35	0–500	Beck et al., 2003	430 ± 40	1c	Beck et al., 2003:101
AA-30983	Ahu Nau Nau III	Ceremonial	Coral	35	0–500	Beck et al., 2003	885 ± 45	3c	Beck et al., 2003:101
AA-30984	Ahu Nau Nau	Ceremonial	Coral	35	0–500	Beck et al., 2003	455 ± 45	3c	Beck et al., 2003:101
AA-30985	Ahu Nau Nau III	Ceremonial	Coral	35	0–500	Beck et al., 2003	815 ± 70	3c	Beck et al., 2003:101
AA-30986	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	760 ± 45	3c	Beck et al., 2003:101
AA-30987	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	960 ± 45	3c	Beck et al., 2003:101
AA-30988	Ahu Nau Nau III	Ceremonial	Coral	35	0–500	Beck et al., 2003	875 ± 50	3c	Beck et al., 2003:101
AA-30989	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	525 ± 45	3c	Beck et al., 2003:101
AA-30990	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	810 ± 50	3c	Beck et al., 2003:101
AA-30991	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	780 ± 45	3c	Beck et al., 2003:101
AA-30992	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	830 ± 45	3c	Beck et al., 2003:101
AA-30993	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	1290 ± 45	3c	Beck et al., 2003:101
AA-30994	’Anakena	Ceremonial	Coral	35	0–500	Beck et al., 2003	665 ± 45	3c	Beck et al., 2003:101
AA-30995	Ahu Nau Nau	Ceremonial	Coral	35	0–500	Beck et al., 2003	420 ± 45	3c	Beck et al., 2003:101
AA-30996	Ahu Nau Nau	Ceremonial	Coral	35	0–500	Beck et al., 2003	365 ± 45	3c	Beck et al., 2003:101
AA-30997	Ahu Nau Nau	Ceremonial	Coral	35	0–500	Beck et al., 2003	365 ± 50	3c	Beck et al., 2003:101
AA-30998a	Ahu Nau Nau, Trench C1	Residential	Coral	35	0–500	Beck et al., 2003	930 ± 45	3c	Beck et al., 2003:101
AA-30998b	Ahu Nau Nau, Trench K	Residential	Coral	35	0–500	Beck et al., 2003	975 ± 60	3c	Beck et al., 2003:101
AA-30999	Ahu Nau Nau, Trench C1	Residential	Coral	35	0–500	Beck et al., 2003	985 ± 65	3c	Beck et al., 2003:101
AA-31000	Nau Nau East	Residential	Coral	35	0–500	Beck et al., 2003	770 ± 45	3c	Beck et al., 2003:101
AA-31001	Nau Nau East	Residential	Coral	35	0–500	Beck et al., 2003	505 ± 45	3c	Beck et al., 2003:101
AA-31002	Nau Nau East	Residential	Coral	35	0–500	Beck et al., 2003	940 ± 45	3c	Beck et al., 2003:101
AA-31003	Ahu Nau Nau, Trench E	Ceremonial	Coral	35	0–500	Beck et al., 2003	610 ± 45	3c	Beck et al., 2003:101
AA-31004	Ahu Nau Nau, Trench C2	Ceremonial	Coral	35	0–500	Beck et al., 2003	760 ± 45	3c	Beck et al., 2003:101
Beta-196711	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	660 ± 40	1c	Hunt and Lipo 2006, Table 1
Beta-196712	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	680 ± 60	1c	Hunt and Lipo 2006, Table 1
Beta-196713	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	670 ± 60	1c	Hunt and Lipo 2006, Table 1
Beta-196714	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	590 ± 60	1c	Hunt and Lipo 2006, Table 1
Beta-196715	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	710 ± 40	1c	Hunt and Lipo 2006, Table 1
Beta-196716	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	720 ± 60	1c	Hunt and Lipo 2006, Table 1
Beta-209903	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	870 ± 80	1c	Hunt and Lipo 2006, Table 1
Beta-209904	’Anakena Dune Site	Residential	Wood charcoal	35	0–500	Hunt & Lipo 2004-2005	870 ± 40	1c	Hunt and Lipo 2006, Table 1
Ua-34183	Ahu Nau Nau I	Ceremonial	Carbonized nutshell	35	0–500	Martinsson-Wallin et al., 2007	535 ± 35	2c	Wallin et al., 2010
Ua-34184	Ahu Nau Nau I	Ceremonial	Bone – Rattus exulans	35	0–500	Martinsson-Wallin et al., 2007	640 ± 65	3a	Wallin et al., 2010
Ua-34185	Ahu Nau Nau I	Ceremonial	Bone – Rattus exulans	35	0–500	Martinsson-Wallin et al., 2007	610 ± 50	3a	Wallin et al., 2010
Ua-34186	’Anakena pre-Ahu Nau Nau I, Trench C	Residential	Wood charcoal – unidentified	35	0–500	Martinsson-Wallin et al., 2007	555 ± 35	2a	Wallin et al., 2010
Ua-34187	’Anakena pre-Ahu Nau Nau I	Residential	Bone – Rattus exulans	35	0–500	Martinsson-Wallin et al., 2007	915 ± 60	3c	Wallin et al., 2010
Ua-34188	’Anakena pre-Ahu Nau Nau I, Trench C	Residential	Wood charcoal – unidentified	35	0–500	Martinsson-Wallin et al., 2007	665 ± 30	2a	Wallin et al., 2010
Ua-34189	’Anakena settlement, Trench C	Residential	Carbonized nutshell	35	0–500	Martinsson-Wallin et al., 2007	565 ± 35	1c	Wallin et al., 2010
Ua-34190	’Anakena settlement	Residential	Wood charcoal – unidentified	35	0–500	Martinsson-Wallin et al., 2007	665 ± 35	2c	Wallin et al., 2010
Ua-34191	’Anakena settlement, Trench C	Residential	Carbonized nutshell	35	0–500	Martinsson-Wallin et al., 2007	565 ± 35	1c	Wallin et al., 2010
K-507	Statue Quarry	Ceremonial	Wood charcoal	RR	1000–1500	Heyerdahl et al., 1956	480 ± 100	2c	Skjolsvold 1961:343; Martinsson-Wallin and Crockford 2002:253
K-508	Statue 280	Ceremonial	Wood charcoal	RR	1000–1500	Heyerdahl et al., 1956	110 ± 100	2b	Skjolsvold 1961:354; Martinsson-Wallin and Crockford 2002:253

K-521	Statue Quarry	Ceremonial	Wood charcoal & soil	RR	1000–1500	Heyerdahl et al., 1956	750 ± 250	3c	Skjolsvold 1961:343; Martinsson-Wallin and Crockford 2002:253
T-5006	Moai Tukuturi	Ceremonial	Wood charcoal	RR	1000–1500	??1983	180 ± 40	2c	Martinsson-Wallin and Crockford 2002:253
Beta-13130	Moai Tukuturi	Ceremonial	Wood charcoal	RR	1000–1500	??1985	540 ± 90	2c	Martinsson-Wallin and Crockford 2002:253
T-6258	Moai Tukuturi	Ceremonial	Wood charcoal	RR	1000–1500	??1986	230 ± 60	2c	Martinsson-Wallin and Crockford 2002:253
Ua-618	Moai Tukuturi	Ceremonial	Wood charcoal	RR	1000–1500	??1987	1040 ± 90	2c	Martinsson-Wallin and Crockford 2002:253
Ua-1145	Statue No. 478	Ceremonial	Wood charcoal	RR	1000–1500	??1989	180 ± 110	2c	Martinsson-Wallin and Crockford 2002:253
Ua-14189	Statue Quarry	Ceremonial	Wood charcoal	RR	1000–1500	??1999	550 ± 70	2c	Martinsson-Wallin and Crockford 2002:253

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