Supplement 1: Radiocarbon dates and chronological blocks

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"Prehistoric Human Occupation of Andean Forests: Evidence from Alero Largo, Aysén, Chilean Patagonia"

Table SI-1: Radiocarbon dates and associated data, RI-6 West and East. We calibrated all dates using Calib version 7.1 (Stuvier et al. 2020) and the SHcal13 calibration curve (Hogg et al. 2013). The calibrated age of each sample (column "cal BP") is estimated as the median of the calibrated age range at two standard deviations. PI = principal investigator; cmbs = centimeters below surface; 14C BP = mean uncalibrated radiocarbon age and one standard deviation; cal BP = calibrated radiocarbon age, as defined above.

	PI	cmbs	14C BP	cal BP	material	lab code
RI-6 WEST						
	Prentiss	near surface	180 ± 20	170	wood	UGAMS 10805
	Prentiss	~100	380 ± 30	401	charcoal	UGAMS 10800
	Garvey	135	1630 ± 25	1479	charcoal	UGAMS 24463
	Garvey	248	2020 ± 25	1941	charcoal	UGAMS 24461
	Garvey	260	6500 ± 30	7370	charcoal	UGAMS 24462
RI-6 EAST						
	Mena	8	1410 ± 20	1290	charcoal	UGAMS 10804
	Mena	23	1740 ± 25	1606	bone	UGAMS 11757
	Mena	23	1860 ± 25	1756	charcoal	UGAMS 10803
	Mena	62	5270 ± 30	5975	bone	UGAMS 10802

Explanation of Dating

The site was first archaeologically tested in the context of a 2012 field school jointly directed by Drs. Anna Prentiss (University of Montana) and Francisco Mena (Centro de Investigación en Ecosistemas de la Patagonia). Two distinct sections were identified: excavation of the western section (RI-6W) was led by Prentiss, and excavation of the eastern (RI-6E), by Mena (see main text, Figure 1). Prentiss's team excavated four 1 x 1 units to an average depth of 1 meter below surface. Later excavations in the western sector (see below) indicate a high probability for cultural materials below this depth but, of necessity, excavations were terminated and the units backfilled at the conclusion of the field school. In the eastern section of the site, Mena's team excavated four units to bedrock, roughly 60 cm below surface (Unit 3A). In 2015 and 2016, the lead author of this paper (Garvey) led the excavation of four additional 1 x 1 m units at RI-6W, just east of those excavated in 2012 (see main text, Figure 1). These were excavated to varying depths, determined by productivity (i.e., consecutive sterile levels) and safety (see main text,

Figure 3). Unit 3 was terminated 310 cm below surface and adjacent units (2 and 4) at approximately 150 cmbs to facilitate access and reduce risk.

Excavations at RI-6 have produced a total of nine radiocarbon dates between ca. 170 and ca. 7400 cal BP (Table SI-1, above). In the eastern section of the site (RI-6E; Mena 2012), the basal date (ca. 6000 cal BP) derives from a bone found immediately overlying bedrock. Bedrock was not reached in the western section due to logistical and safety concerns, as culture-bearing sediments continue more than 300 cmbs. The earliest radiocarbon date in the western section (ca. 7400 cal BP, 260 cmbs) may not reflect the site's earliest use.

There is little evidence of post-depositional disturbance and there are no reversals in the radiocarbon sequence. However, one date is anomalous: A charcoal sample collected from Stratum G (248 cmbs) returned a date of circa 1900 cal BP. The sample was recovered roughly 60 cm below the H2 tephra (ca. 3290 cal BP) and just 12 cm above the collection location of the charcoal sample that returned a date of ca. 7400 cal BP. Either this is, in fact, evidence of post-depositional disturbance, or the young charcoal was accidentally relocated during excavation to the depth where it was found (see main text).

Works Cited

Hogg, Alan G., Quan Hua, Paul G. Blackwell, Caitlin E. Buck, Thomas P. Guilderson, Timothy J. Heaton, Mu Niu, Jonathan G. Palmer, Paula J. Reimer, Ron W. Reimer, Christian S. M. Turney, Susan R. H. Zimmerman. 2013. *Radiocarbon* 55:1889-1903.

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