

COMMENTS ON “AMERICA’S OLDEST BASKETRY”

Thomas J Connolly

State Museum of Anthropology, University of Oregon, Eugene, Oregon 97403 USA

William J Cannon

Bureau of Land Management, Lakeview District, PO Box 151, Lakeview, Oregon 97630 USA

ABSTRACT. A recent publication on directly dated basketry specimens from the western United States (Berger et al. 1998, *Radiocarbon* 40(2):615–20) contained some misleading information, and in a few cases discussed radiocarbon ages from unacknowledged sources. We provide the missing original citations along with some clarifications. We focus especially on the age of distinctive Fort Rock and Multiple Warp–style sandals, for which we provide additional previously unreported ^{14}C ages. Direct dates on fibers from Fort Rock sandals from 3 different sites range in age from 10,500 cal BP to about 9200 cal BP. Contextual evidence suggests that Multiple Warp sandals may date as early as 6600 cal BP, but the few directly dated specimens are less than 1000 yr old.

INTRODUCTION

In “America’s Oldest Basketry,” a short contribution by Berger et al. (*Radiocarbon* 40(2):615–20 [1998]), calibrated ranges are presented for previously reported radiocarbon ages on archaeological basketry specimens from western North America. The article contains a number of factual errors. Further, some dates, but not all, are cited as reports from ^{14}C labs by the senior author and others (Berger et al. 1965; Berger and Libby 1966), but some primary sources are not acknowledged. In no case are published reports by the sample submitter credited, although these would lead the reader to important contextual information and technical descriptions of the specimens.

The ^{14}C ages discussed by Berger et al. (1998) were all reported in works published between 1951 and 1982 (Table 1), and calibrated ranges for some of the dates have been previously reported (e.g. Connolly et al. 1995). We offer here a brief comment on the material mentioned from the central and southern Great Basin, then discuss the twined sandals from the south-central Oregon caves in greater detail.

DESCRIPTIVE BACKGROUND

In the caption to their Figure 1, Berger et al. identify an age of 2440 BP as the “earliest date for coiled technique”. This may be the case for the Falcon Hill, Nevada, sites where this dated specimen was recovered (Hattori 1982), but it is not true for the general region (Figure 1). Coiled basketry was recovered from strata considerably older than 5000 yr at Hogup Cave, Danger Cave, and other sites in the eastern Great Basin (Adovasio 1970, 1986; Aikens 1970). While it is possible that this and other statements were intended to specifically reference the Falcon Hill basketry assemblage, with which the authors were familiar, this is not made clear in the text, and is not the case implied by the paper’s title. In another case, the Berger et al. Figure 3 caption identifies plain twined, s-twist basketry, dated to 3900 BP, as the “last known occurrence” of this type. Again, this may be true for directly dated specimens from the Falcon Hill sites, but examples of this type are common in late prehistoric and ethnographic collections from the Great Basin (e.g., Adovasio 1986; Connolly et al. 1998; Fowler and Dawson 1986).

Berger et al.’s Figure 7 identifies the pictured artifacts as “Fort Rock, Oregon” sandals; the upper photo is a Fort Rock–style sandal, as defined by Cressman (1942, p 57–8). While the pictured specimen may indeed have come from Fort Rock Cave, specific source information, such as accession or specimen number, is not provided. Sandals of this type have been found in a number of northern

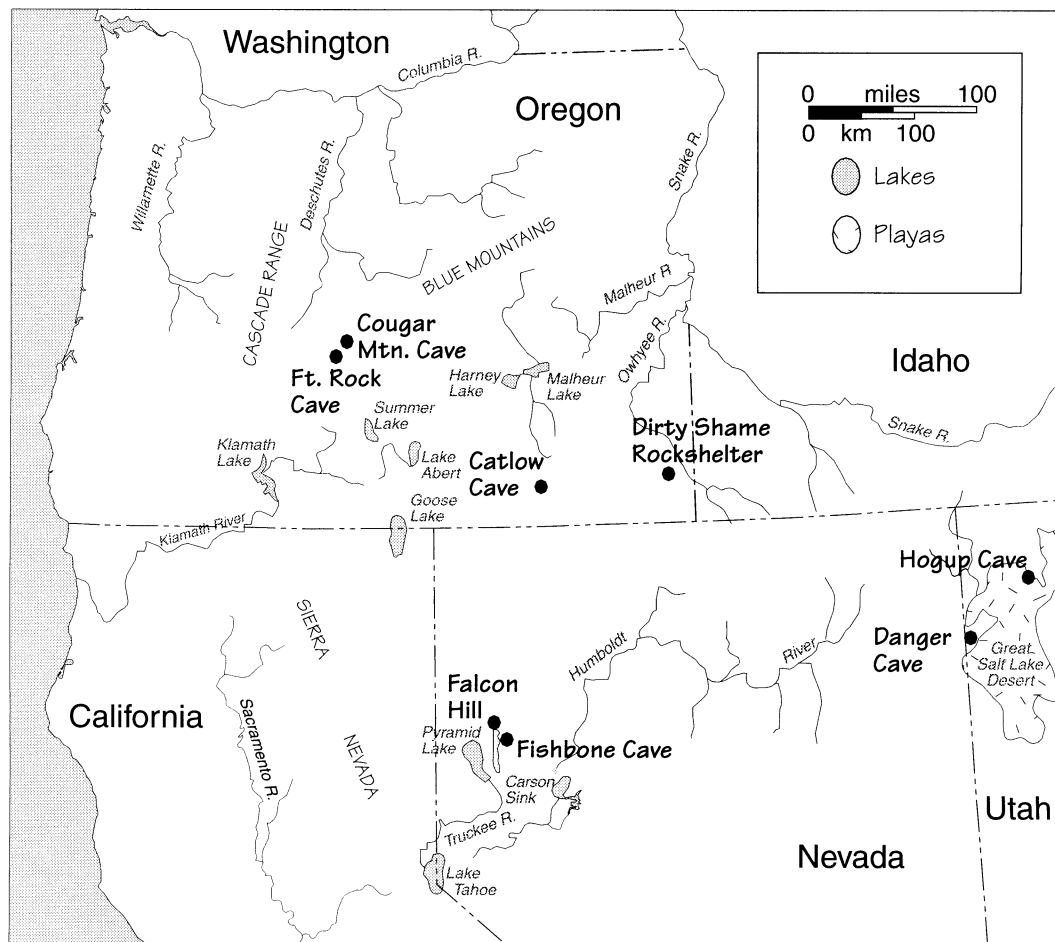


Figure 1 Locations of basketry-producing archaeological sites mentioned

Great Basin sites (Andrews et al. 1986; Connolly 1994; Cowles 1959; Cressman 1942). Berger et al. (1998, p 620) identify an unacknowledged date of 8410 ± 250 BP from a Fort Rock-style sandal from Cougar Mountain Cave; this was originally reported by Fergusson and Libby (1962) as 8510 ± 250 BP (Table 1).

The lower photo in Berger et al.'s Figure 7 shows sandals that are neither the Fort Rock type, nor from Fort Rock Cave; this pair of child-sized sandals was recovered from the upper levels of Catlow Cave by a crew under the supervision of Luther Cressman in 1937, and reported and illustrated in his 1942 publication. These sandals fit into the "Multiple Warp" type described by Cressman (1942, p 58). One sandal from this pair (Berger et al. 1998, Figure 7b; University of Oregon Museum of Natural History Accession 56, specimen 1-3112) has only recently been dated to 950 ± 45 BP (Table 1), effectively identical to the 959 ± 150 BP age reported by Cressman (1951, p 308) on a fire-hardened digging stick also collected from the upper levels of the site, and believed by him to be "from near the end of occupation" of the cave.

Table 1 Directly dated Fort Rock and Multiple Warp style sandals, northern Great Basin

Lab no.	¹⁴ C age (yr BP)	Age range (cal BP, 1 σ)	Material	Site	Reference(s), comments
<i>Fort Rock–Style Sandals</i>					
C-428a	9188 \pm 480 ^a	10,920–9650	Sagebrush bark	Fort Rock Cave	Arnold and Libby 1951
C-428b	8916 \pm 540 ^a	10,440–9380	Sagebrush bark	Fort Rock Cave	Cressman 1951; Bedwell and Cressman 1971
AA-30056 ^b	8308 \pm 43	9380–9240	Sagebrush bark	Catlow Cave	Not previously reported
UCLA-112	8510 \pm 250	9840–9240	Tule	Cougar Mtn. Cave	Fergusson and Libby 1962; Connolly 1994
I-1917	8500 \pm 140	9530–9380	Sagebrush bark	Fort Rock Cave	Bedwell and Cressman 1971
AA-9249	9215 \pm 140	10,360–10,020	Sagebrush bark	Fort Rock Cave? ^c	Not previously reported
AA-9250	8715 \pm 105	9870–9520	Sagebrush bark	Fort Rock Cave? ^c	Not previously reported
<i>Multiple Warp Sandals</i>					
WSU-4198	820 \pm 60	780–670	Tule	S. Warner Cave	Fowler and Cannon 1992; Eiselet 1997
AA-30055	950 \pm 45	930–790	Sagebrush bark ^d	Catlow Cave	Not previously reported

^aThe commonly cited 9053 \pm 350 age for the “Fort Rock sandal” is actually an average of these 2 dates, run on “several pairs of woven rope sandals” (Arnold and Libby 1951, p 117). The weighted average of these 2 ages produces an age range of 10,390–9650 cal BP.

^bSpecimen I-3583, Accession 56, State Museum of Anthropology, Eugene, Oregon.

^cReportedly recovered from Fort Rock Cave ca. 1928 by local residents, subsequently donated to the Lake County Museum, Lakeview, Oregon.

^dChild-sized sandal, specimen I-3112, accession 56, Oregon State Museum of Anthropology; pictured by Berger et al. (1998), Figure 7.

DISCUSSION

Fort Rock Sandals

Named for the site where several dozen examples were recovered from a cache buried beneath the approximately 7500-yr-old Mazama volcanic ash, Fort Rock–style sandals are described as having a flat close-twined sole, usually with 5 rope warps (although variation has been noted; Connolly 1994, p 73). Twining proceeded from the heel to the toe, where the warps are subdivided into finer warps and turned back to form an open-twined toe flap (refer to Berger et al. 1998, Figure 7a). A tie rope attached to one edge of the sole presumably wrapped around the ankle and fastened to the opposite edge (Cressman 1942, p 57).

Andrews et al. (1986) suggest that Fort Rock–style sandals may occur in Dirty Shame Rockshelter as late as about 6000 yr ago, based on stratigraphic associations. Table 1 summarizes all known ¹⁴C ages from directly dated Fort Rock sandals. Most dated specimens are from Fort Rock Cave, but directly dated sandals of this type are also known from Cougar Mountain and Catlow Caves. Directly dated Fort Rock style sandals range in age from at least 10,500 cal BP to about 9200 cal BP.

Multiple Warp Sandals

Multiple Warp-style sandals are open or close twined from heel to toe, but have from 8 to more than a dozen warps “arranged in a series of parabolas around the heel” to form a pocket (Cressman 1942, p 58). Loose warps are bent back to form a toe cover, but are rarely twined. Loops built into the sole were pulled together across the top of the foot and secured with a tie (see also Berger et al. 1998, Figure 7b).

Adovasio (1986, p 197) has reported that a sandal similar to the northern Great Basin Multiple Warp type was recovered from Fishbone Cave in western Nevada in strata predating about 8200 cal BP. Andrews et al. (1986) report that Multiple Warp sandals were recovered from Zone VI in Dirty Shame Rockshelter in southeast Oregon, which predates about 6600 cal BP. While these associations appear to be valid, cave deposits can be quite disturbed, and Multiple Warp sandals from the northern Great Basin that have been directly dated—or are clearly associated with ¹⁴C-dated features (Table 1; also see Eiselt 1997; Marchesini 1994)—are consistently much younger. Andrews et al. (1986, p 126) suggest that Multiple Warp sandals first appear in the northern Great Basin after 8000 cal BP, and were made up to the time of Euroamerican contact.

CONCLUSION

The distinctive Fort Rock and Multiple Warp sandal types appear to be of dramatically different ages. All directly dated Fort Rock style sandals predate 9000 cal BP, although it is possible sandals of this type were made until 7000 cal BP or later (Andrews et al. 1986). Multiple Warp sandals may have first appeared prior to 6600 cal BP, and sandals of this type were evidently made up to the historic period (Andrews et al. 1986). The small number that have been directly sampled or have unambiguous ¹⁴C associations date to within the first half of the last millennium.

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NOTE FROM AUTHORS OF ORIGINAL ARTICLE

“We welcome the improvements presented by Connolly and Cannon filling in the archaeological/archival record. Some of their information had not been available to us directly. Other data in the literature proved to be inaccurate in the end.” — *Rainer Berger, Millie Bendat, and Andrea Parker.*