Comment on “Redefining the Age of Clovis: Implications for the Peopling of the Americas”

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Waters and Stafford (Reports, 23 February 2007, p. 1122) provided useful information about the age of some Clovis sites but have not definitively established the temporal span of this cultural complex in the Americas. Only a continuing program of radiometric dating and careful stratigraphic correlations can address the lingering ambiguity about the emergence and spread of Clovis culture.

Opinions differ on whether Clovis projectile points mark a rapid dispersal of the first humans throughout the Americas or merely an infilling of the land after earlier migrations. Waters and Stafford (1) provided very precise 14C dates for some sites of the Clovis cultural complex and for some “non-Clovis” sites, leading them to assert that the revised age range for Clovis is both brief and overlapping with some non-Clovis sites. They argued that this overlap proves the presence of pre-Clovis populations in the Americas, across which Clovis technology spread. However, the data presented are not directly relevant to this proposition.

At a basic epistemological level, the new radiocarbon dates from a sample of Clovis sites do not prove by themselves that older ages for other Clovis sites are wrong. For example, the two dates averaged as 11,570 radiocarbon years before the present (14Cyrb.p.) from Aubrey (Texas) may indeed be erratic or not clearly associated with human activity, but in the absence of additional contradictory dates for this component, they cannot simply be dismissed.

Waters and Stafford (1) proposed that Clovis was a diffused technology spread among preexisting human populations and sought support in the existence of coeval “non-Clovis” cultures. The occupants at such sites as Bonneville Estates (Nevada) and Arlington Springs (California) may or may not have been Clovis people; lacking diagnostic artifacts, one cannot say. Waters and Stafford therefore rightly emphasize the northern plains Goshen culture, which is characterized by well-made unfluted points. However, the dating of Goshen is ambiguous, and Waters and Stafford do not discuss this important issue. Some dates for the Goshen site of Mill Iron (Wyoming) appear to be contemporaneous with Clovis or exceed the age established by Waters and Stafford; nine dates from the site form two statistically distinct populations (11,360 ± 70 14Cyrb.p. and 10,840 ± 60 14Cyrb.p.) (2). One site (Hell Gap, Wyoming) had a Goshen point below a Folsom level, implying an early date (Folsom-associated radiocarbon dates range from about 10,900 to 10,200 14Cyrb.p.), but other dates associated with Goshen points (and the very similar post-Folsom Plainview type in the southern plains) are often about 10,200 14Cyrb.p. or younger. Goshen component bison bones at Upper Twin Mountain, Colorado, are dated 10,240 ± 70 14Cyrb.p. (CAMS-16081) and 10,450 ± 50 14Cyrb.p. (CAMS-26782) (3), and an average of seven dates from the Jim Pitts site (SD) is 10,160 ± 50 14Cyrb.p. (4), which makes Goshen coeval with Folsom or Agate Basin and indicates a younger age than Clovis. There is no known site where Goshen and Clovis artifacts occur in relative stratigraphic position to prove that they were or were not coeval.

Waters and Stafford concluded their report (1) with unsupported inference about the possibility of a spread of Clovis-point-making people, by speculating on an arbitrary extended length of time needed for human dispersal as far south as Tierra del Fuego. The authors reject the possibility that Clovis culture was a migration within the short span they claim to have established and offer the alternative hypothesis that Clovis technology was very rapidly adopted by preexisting and “culturally and genetically undefined” human populations that are barely visible archaeologically. Almost any length of time can be proposed for human dispersal in unpeopled landscapes, just as any length of time can be proposed for the spread of technology among preexisting human populations. Therefore, the proposed hypothesis lacks solid evidence or empirical support.

References

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Editor's Summary

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