

# California archaeological record consistent with Younger Dryas disruptive event

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Buchanan *et al.* <sup>(1)</sup> assert that the radiocarbon record from the United States and Canada does not support the extraterrestrial impact hypothesis, but their claims do not hold true for the California archaeological record. Fluted projectile points marking Paleoindian occupations have been reported from no fewer than 51 locations in California <sup>(2)</sup>, and no fewer than 38 sites have produced radiocarbon evidence for occupation between 10,500 and 9,000 calibrated yrs BP <sup>(3)</sup>. Only two sites have produced fluted points and early Holocene occupational residues together in stratified context. At the same time, none of the sites that have produced radiocarbon evidence for occupation between 10,500 and 9,000 calibrated yrs BP have yielded fluted points. There are no archaeological sites in California that have reliable radiocarbon dates between 12,900 and 12,200 calibrated yrs BP and precious few that date between 12,000 and 10,500 calibrated yrs BP. The earliest archaeological record from California is therefore marked by a strong cultural unconformity between the late Pleistocene and the early Holocene that is consistent with a significant disruptive event of the type described by Firestone *et al.* <sup>(4)</sup> and Kennett *et al.* <sup>(5)</sup>. A more careful evaluation of the full cultural and archaeological record from the regions discussed by Buchanan *et al.* <sup>(1)</sup> would likely show similar patterns.

## References

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4. Firestone RB, et al. (2007) Evidence for an extraterrestrial impact 12,900 years ago that contributed to the megafaunal extinctions and the Younger Dryas cooling. *Proc Natl Acad Sci USA* 104:16016–16021.
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