Holocene channel changes of Camp Creek; An arroyo in eastern Oregon
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In the stratigraphic record of Camp Creek are episodes of fluvial scour and fill thousands of years old. Radiocarbon dates and the Mazama tephra, which serves as a stratigraphic time line, temporarily bracket episodes of vertical aggradation and incision. Before 9000 years B.P. the valley floor was scoured to the Tertiary bedrock. Aggradation dominated since that time. Large cut-and-fill structures indicate that two periods of erosion occurred prior to incision of the modern arroyo. The first occurred before 6800 yr B.P. and the second occurred approximately 3000 years ago. The modern arroyo-channel flows at or near the Tertiary bedrock, is entrenched as much as nine meters in the valley-fill alluvium and is thought to have originated during the late 19th century.