

## Variation among early American Crania

Jantz, Richard and Douglas Owsley In Press

The limited morphometric work on early American crania to date had treated them as a simple, temporally defined group. This paper addresses the question of whether there is significant variability among ancient American crania. A sample of 11 crania (Spirit Cave, Wizards Beach, Browns Valley, Pelican Rapids, Prospect, Wet Gravel male, Wet Gravel female, Medicine Crow, Turin, Lime Creek, and Swanson Lake) were available.

Crania dated to at least 4500BP were used for the study. 5 of the crania were dated chronometrically, and 6 crania were stratigraphically dated. The Prospect burial, from Oregon, was lying below Mazama ash dated to about 7000BP.

Two approaches were used to compare the crania: the crania were compared to modern samples, and they were compared to each other.

Each crania was compared to 34 modern groups. 6 crania (Prospect, Wet Gravel male, Wet Gravel female, Medicine Crow, Turin, and Wizards Beach) fall into the variation of modern groups. "In general, the 11 fossil crania do not show any particular affinity for the nine modern Native American samples for which we have data."

When the crania are compared to each other they form three distinct groups. The first group is comprised of Browns Valley, Pelican Rapids, and Lime Creek. Turin and Medicine Crow make up the second group, and the third group consists of the Wet Gravel specimens, Swanson Lake, Prospect, Wizards Beach, and Spirit Cave.

The heterogeneity among early American crania makes it inadvisable to form them into a single group for the purpose of analysis. Our results are inconsistent with hypotheses of a single ancestral group and they further suggest that the pattern of cranial variation is of recent origin, at least in the Plains region.

## **Circumpacific Populations and the Peopling of the New World: Part II**

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Multivariate analyses are performed to obtain a difference between ancient crania and modern populations. The Buhl skeletal remains are used to show differences between the ancient and modern populations. Buhl's morphometric traits are not similar to modern Native American groups, in fact they are closer to groups from the Pacific. This is similar to the trend of other Paleoindian remains that seem to resemble Old World populations. This "suggests that a source of the early migrants to America might be found in Asian Circumpacific populations. A logical way to investigate this is to examine early Pacific Coast populations in America and Asia." Californian and Asian populations, of a later date, were compared to Pacific populations.

Early western North Americans and early Asians are both part of an early circumpacific distributions of populations. These populations are quite naturally variable, but their craniofacial morphology consists of cranial vaults that are large, long and narrow, forward projection of the face, and low faces. Ancestors