

...at present suggests that the southern route may have played the most significant role in the initial settlement of the New World (Chard 1959).

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NATURAL PRESERVATION OF HUMAN BRAIN, WARM MINERAL SPRINGS, FLORIDA

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ABSTRACT

Artifacts of Archaic types, human bones, and a partly burned log have been recovered from three layers of sediments on the floor of a shallow limestone cave now under water. The skeletal remains include a skull from Layer 2 with naturally preserved portions of brain inside. The charred log from Layer 3 produced a radiocarbon date of 800 B.C. ± 200 years. The age of the preserved brain may not be as great as that of the log and human remains in Layer 3. The radiocarbon date is the earliest known date for man in Florida and suggests that during the early Southeastern Archaic, man lived in limestone caves in Florida when the sea level was considerably lower than at present.

THIS REPORT is based on finds made by Royal while diving in Warm Mineral Springs, Sarasota County, Florida. These finds suggest the possibility that during the early Southeastern Archaic, man lived in limestone caves in Florida when the sea level was considerably lower than at present. In Warm Mineral Springs, on the slopes of a sloping wall leading into a limestone sink hole, there are ledges and shallow caves containing stalactite, aragonite, and column formations encrusted with travertine. Some of these stalactites are now under water as much as 80 feet. In a section of one cave, where the floor was from 35 to 40 feet under water, numerous human bones of at least seven individuals (one child, six adults) were found. These included three skulls (one intact with cephalic index of 74), parts of mandibles, bones of the

upper and lower extremities, vertebrae, pelvic bones, and ribs. No pottery has been recovered. Artifacts include two long bone needles, an antler shaft wrench or atlatl weight, a bone pestle, marked deer bones and antlers, and part of a fossil shark's tooth with a chipped edge (Fig. 1). Except for the shark's tooth these few artifacts show similarity with those found at the Eva site in Tennessee (Lewis and Kneberg 1959). Human bones were located several feet under soft sediment, on or near the solid base rock forming the floor of the cave. After numerous dives and examination of this site we were convinced it was occupied at a time of lowered sea level when the cave was dry.

The sediment varies from about 3 to 7 feet in total thickness and is composed of three distinct layers:

1. A top layer averaging 20 to 40 inches in thickness is composed of extremely soft black sediment with numerous tiny shells of *Amnicola augustina* Pilsbry throughout as well as some alligator bones. Travertine deposits occur in loose chunks and coat stalactite fragments and cave walls in this and the following layer.

2. A middle layer varies from 6 to 18 inches in thickness and is more or less dark gray. It is a more compact and hard layer than the top one and is characterized by the presence of the shells of two species of fresh water snails, *Helisoma duryi* Wetherby and *Physa cubensis* Pfeiffer, which are heavily concentrated in the upper por-

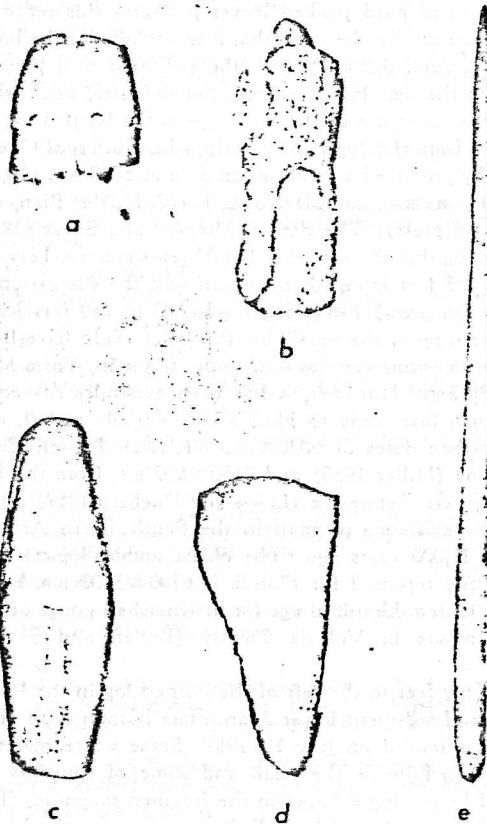


Fig. 1 [Royal and Clark]. Artifacts from Warm Mineral Springs, Florida. a, deer bone with cut edge; b, bone pestle; c, antler shaft wrench; d, half a fossil shark's tooth with chipped edge; e, bone needle. Length of e, approximately 18 cm.

Fig. 1 [Chard]. Map of the Bering Strait area showing two routes from Asia to North America.

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WARM MINERAL SPRINGS

