

THE WARM MINERAL SPRINGS ARCHAEOLOGICAL RESEARCH PROJECT

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Warm Mineral Springs, Florida 33596  
Telephone: (813) 426-9559

**WILBURN A. COCKRELL, Director**  
Barbara Cockrell, Manager  
Skip Wood, Dive Officer and  
Assistant Archaeologist  
Steve Koski, Assistant  
Archaeologist

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## I. INTRODUCTION

The prehistoric and historic periods of Florida's past are of singular and significant importance to the people of Florida and the world. People first came into the New World at some yet undetermined time during the Pleistocene, or Ice Age, almost certainly from Eastern Asia via the Bering Land Bridge. By 11,000 years ago, these people had certainly reached Florida during a time in which many forms of now extinct Pleistocene megafauna were still found in considerable numbers, as evidenced by research at Warm Mineral Springs and other sites. During the Pleistocene, sea level stands were considerably lower than today, although estimates for the relative sea level near the end of the Pleistocene range from 30 to 100 meters lower than present for the South Atlantic. Regardless of the exact level, it is known that humans and the floral and faunal forms with which they interacted were active in areas which are today underwater, both in coastal areas, and in now-inundated caves, springs, and lower areas. In addition to sites which were covered by these rising waters, there are prehistoric sites underwater in Florida which were deposited from areas on adjacent uplands; an example of this type site would be one of the numerous deposits of aboriginal ceramics in Florida rivers and springs (pottery technology was not introduced into North America until ca. 2-3000 B.C., or near the time at which the sea level reached approximately its present day level).

## II. HISTORY OF THE PROJECT

Since the beginning of the work by then State Underwater Archaeologist Wilburn Cockrell in 1972, the State-sponsored interdisciplinary Archaeological Project at Warm Mineral Springs has been one of the most productive underwater archaeological projects to date, both in terms of significant recoveries and in the development and execution of innovative techniques for recording and excavating these recoveries.

In the area of technical developments, the Project has necessarily been concerned with diver safety under demanding work situations; since the Project's inception, more than 3,000 working dives have been made, with no accidents or injuries; this is quite unusual and is the result of rigid on-site diver training, safety procedures and the utilization of the safety equipment available.

The modification of existing archaeological land survey and mapping techniques to the underwater environment has resulted in a complete surface and underwater map of the Springs, and the ability to know within ten centimeters the location of any materials recovered. This is essential to proper scientific documentation of the significant finds.

Excavation techniques have been treated similarly, and the Project has perfected techniques for excavating stratified deposits underwater with precision equal to that on land.

The scientific findings have been particularly significant. The Project has now recovered three humans; a burial from 13 meters below the surface with an associated spear thrower spur (the earliest dated such tool in North America) dated at 10,240 radio carbon years before present; a human humerus from 50 meters below surface (apparently the deepest such archaeological recovery made to date); and a human mandible, or jawbone, from 13 meters below surface from a stratum (which occurs directly beneath the deposits previously dated 9 to 11,000 years before present) which contains sabre cat and ground sloth remains, the first evidence in the Western Hemisphere for human and sabre cat contemporaneity! Additionally, the Project has collected human remains recovered by divers prior to the State's investigation. While these earlier recoveries would normally be useless to scientific analysis, due to the lack of controlled professional recovery technique and supervision, the detailed analysis of the three humans recovered during the present Project has provided a basis for comparative study and identification. The result has been the determination

that there are to date four Paleo-Indians among the remains, giving Warm Mineral Springs the largest known sample of such to date in the eastern United States. These materials are presently being studied by physical anthropologists at Arizona State University.

It should be noted particularly that the utilization of still cameras and underwater video has contributed heavily to the credibility of the Project, as there can be no legitimate questions now as to the validity of recoveries. Such permanent recording assures that any of the recoveries are permanently documented, and are available for re-study at any time.

In addition to the recovery of human and artifactual material, now-extinct Pleistocene megafauna have been located and are being excavated utilizing archaeologically precise techniques (it is necessary to be more precise than is considered acceptable to paleontologists due to the association between the humans and the animals). To date there have been three now-extinct ground sloth and two extinct giant cats (one a sabre-tooth cat) recovered from the 13 meter ledge. An additional valuable discovery was the observation of rodent gnaw marks on the sloth bones, proving that the animal was exposed on a dry ledge after death and before the rise of the waters to present day levels. Analysis of the pollen and other botanical remains gives even more data about the altered environment in this early era.

The dissemination of information to both the public and the scientific community is considered essential to any scientific project. Professional presentations have been made to over 20 scientific conferences; hundreds of public lectures, radio and television interviews and on-site lectures to school groups have been made in order to acquaint the citizens of Florida with the Project. It is estimated that more than 10,000 Floridians have attended these public lectures; millions of Florida and United States citizens have been informed through media coverage. An archaeological field school through the Department of Anthropology



at Florida State University, where Cockrell was an adjunct faculty member, was held in the 1970's and volunteer students have participated. The Project is in the Encyclopedia Britannica, Encyclopedia Americana, and World Book Yearbooks, and two (2) editions of the Florida Handbook, as well as in numerous other publications. Currently, several magazines, including Omni, have stories in progress, and the BBC completed filming the Project April 27, 1985, for its upcoming world-wide series on underwater archaeology. Newspaper and television coverage at the local and state levels has been most extensive.

Current Project activity is continuing the uplands and shallow underwater excavations, and work has begun on the 40 - 70 meter (120 - 220 foot) deep silt cone. Furthermore, the clearing of more modern sediments from the 13 meter (45 foot) ledge has exposed strata in such a way as to indicate further significant layers for investigation; the excavation of the northwestern quadrant has produced remnants of the two extinct animals previously listed; and the recovery of the human mandible from the lower strata on the 13 meter ledge has documented that there are 11,000 year old human remains, older than the 10,000 year old recoveries already documented.

Project members are collecting and filing archival, photographic, and oral histories pertaining to the Springs and related areas to add to our knowledge of this unique area.

The current Project, the first state-sponsored research at Warm Mineral Springs since 1978, is funded by a legislative appropriation and is now administered by Manatee Community College, which has offered its first archaeological field course this past session at its South Campus; a new class, on land, is scheduled to begin in May.

For further information, contact Wilburn Cockrell, Project Director, or Barbara Cockrell, Project Assistant, at:

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