Ascent

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INTRODUCTION

For the past dozen years, the University of Colorado has been fortunate to have one of the largest (over 400 individuals) collections of naturally mummified human remains in the country. Excavated in 1979 by a CU-led expedition to the Medieval site of Kulubnarti in Sudanese Nubia (MAP) the remains represent one of the last Christian populations to occupy that part of the modern Moslem world. Since their return to CU’s Department of Anthropology, the remains have been the focus of intensive investigation involving reconstructions of mortality, disease, growth and development as well as nutrition.

In the Spring of 1990, we began developing a laboratory for conducting trace element analysis on the remains. At the same time a number of undergraduate students were expressing interest in the Nubian research. As a result, we decided to develop a UROP proposal that would involve them in the trace element project. UROP funds were used to support their work as well as provide critical laboratory equipment and supplies. From this came three projects: Scott Kolbrenner’s analysis of preindustrial lead levels, Chi-Hua Chiu’s investigation of enamel and dentin, and Tina Garcia’s Nubian hair study. Almost on the heels of the trace element project came a second remarkable opportunity. We were asked by Soil Systems Incorporated to conduct an intensive analysis of over 600 human skeletons from the site of Pueblo Grande in Phoenix, Arizona. The remains provided an interesting set of contrasts and similarities to the Nubian material. Unlike the wonderfully preserved Nubians, the Pueblo Grande skeletons were extremely fragmentary. However, like the Nubians they were a desert people of comparable antiquity (A.D. 1050-1400) dependent upon simple agriculture and a river (the Salt River) for survival (MAP).

The remains were shipped to CU and we were given a year to analyze everything we could. Here, again, the project seemed ideal for UROP support. In order to accommodate another UROP team we decided to design a series of interrelated projects, each conducted by an undergraduate student in collaboration with a graduate student director. The Pueblo Grande research led to Julie Amon’s study of enamel hypoplasias, Chris Kuzawa’s study of osteopenia, Kathryn McCafferty’s research into spinal arthritis (osteophyosis) and Debbie Jones’ reconstruction of diet and status based on trace element distributions.

In the end, seven undergraduate and three graduate students conducted seven research projects on two ancient human populations who, over a thousand years ago, lived and died half a world apart. The opportunities for individual creativity were enormous as can be seen in the pages that follow. However, running through all the studies is an important theme: every individual carries a bit history to the grave. Locked away in their hair, bones
and teeth are clues to the stresses and strains of their everyday lives. The challenge to the biological anthropologist is to read the clues as text and from that text reconstruct the adaptation and evolution of ancient populations.

The investigations reported in this volume reveal two societies on the edge of survival. Infants and children were frequently ill and death rates were high. Limited to a few crops, diets in both communities were inadequate in many basics. Children and adults alike were frequently anemic and social practices may have compounded dietary constraints. At Pueblo Grande women appear to have consumed less animal protein than their male counterparts.

While neither society is likely to have faced the modern burden of environmental pollution, producing food and raising children in a rugged desert environment clearly took its toll. In modern populations conditions such as arthritis and osteoporosis are primarily afflictions of the elderly. In these ancient societies young women literally mined their own skeletons to provide calcium for their children and both sexes showed the beginnings of arthritis by their thirties.

These, of course, are only highlights of what we are learning in the course of our ongoing investigations. The excitement for us and for the students is that each project has contributed in an important and unique way to our emerging understanding of these people and the cultures that sustained them.

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*Pueblo Grande*

*Cartography by GEO-VAP, Inc. 1990*

**EXPLANATION**

- **A**: Banister's compounds (1892 - approximate location)
- **B**: Compound (Cotter and Doyle 1986 a)
- **C**: Farmes' compound (1917)
- **D**: Ruins (Hodge 1867)
- **E**: Compounds located by SG for Nahuatam Expressway Project
- **F**: Adobe pithouses located by SG for Nahuatam Expressway Project
- **G**: Burial area