NEW DETERMINATIONS OF ABSOLUTE DATES FROM COMOREAN ARCHAEOLOGICAL SITES

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Most of our understanding of the archaeological chronology of the Comoro Islands is based upon the occurrence of Near Eastern and Chinese ceramics of known age in stratigraphic layers in Comorean archaeological sites. This kind of dating requires checking by other methods for two reasons.

- l. These imported types were often made and exported for long periods of time, so that their occurrence provides an imprecise indication of date at best.
- 2. Being rare and valuable, imported pottery was often preserved for a long time before it was broken and discarded in an archaeological deposit.

Fortunately, we have a number of Carbon - 14 age determinations from the Comoros, and they have enabled us to confirm the absolute age of the settlements of the IXth and Xth centuries A.D. This note presents both recent Carbon - 14 analyses and the results of a newer analytical technique, thermo-luminescence dating, for sites of the XIth century and later. These results are important for understanding the advent of Islam on the Comoros.

Carbon-14 Age Determination from Domoni and Sima, Ndzuwani

Charcoal samples excavated in 1984 by the joint team of the Centre de documentations et Recherche and the University of Michigan (sponsored by the U.S. National Endowment for the Humanities and the National Geographic Society) were submitted to the Radiocarbon Laboratory of Southern Methodist University, Dallas, Texas, under the direction of Dr. Herbert Haas. The results are preliminary pending final corrections for counter calibrations, but changes in the age estimate will be minor. The results given below include both the standard date using the conventional half life in radiocarbon years before A.D. 1950 and a correction for callendrical age given quantities of carbon-13 and variations in atmospheric Carbon-14 based on studies of ancient tree-ring growth.

SMU 1521 Domoni, Ndzuwani, Shirazi Mosque Unit I:15 (South Excavation, Layer 16) Wood charcoal from a layer of midden used to level off the foundation for the second mosque built on this location. This layer covers and thus post-dates the remains of the first mosque, and is sealed by the plaster floor of the second mosque. Thus, the building of the second mosque must have been later than the date of this layer.

The layer also contains imported "late scraffiato" sherds from the Near East, dated to the late XIIth or XIIIth centuries A.D.

Age Estimate with 5568 half-life B.P. 923 ± 46 Corrected Calendrical Age Estimate A.D. 1060 A.D. 950 - 1170

Comment: Somewhat earlier than the expected date given the imported ceramics. This, however is a frequent and not surprising occurrence with charcoal from major buildings which no doubt had beams of wood already old at the time of burning.

SMU 1518 Sima, Ndzuwani : Zira'at Site Unit II:03 (West Excavation, Layer 2)

Charcoal from small branches and twigs in a dense midden layer heaped against the west wall of latest mosque on this location, a building notable for its carved coral mihrab or prayer niche. This midden was covered by the collapsed rubble from this wall. The sample should date the period of final use and abandonment of the mosque.

Another indication of the date of this layer is the occurrence of half a small Chinese "celadon" bowl cemented into the rubble of the collapsed wall. Specialists unanimously ascribe a XIVth century A.D. date to this sherd. If the mosque was built during or just after the XIVth century, the abandonment as dated by this charcoal sample should be later yet.

Age Estimate with 5568 half-life B.P. 525 ± 42 Corrected Calendrical Age Estimate A.D. 1400 95% Confidence Limits A.D. 1300 - 1490

Comment: Perfectly concordant with the evidence of the imported sherds.

A Thermoluminesence Age Determination from Sima on Ndzuwani

A sherd from the same layer as SMU 1521 was submitted to the T-L Laboratory at the University of Durham, Durham, England. The sample was recovered in 1984 under the program noted above. The results, based upon the pre-dose technique, have been communicated to us by Dr. Ian Bailiff and Dr. Ian Watson.

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Domoni, Ndzuwani: Shirazi Mosque Unit I:15 (South Excavation, Layer 6)

Like SMU 1521, this sample should immediately predate the construction of the second mosque. Likewise, it is associated with "late scraffiato" sherds of the late XIIth of XIIIth centuries.

Age Extimate
95% Confidence Limits

A.D. 1210 ± 155 A.D. 900 - 1520

Comment: Perfectly concordant with the evidence of the imported ceramics

General Comment

These few dates confirm the evidence of the imported ceramics that the earliest mosques on Ndzuwani were built in the XIth or XII centuries A.D. and that the mosques with elaborate carved coral mihrabs were built during the XIVth or XVth centuries A.D. Certainly, however, more dates are desirable given the rather broad confidence limits provided by single analyses.