April 4, 1980

Reply To

Robert Stuckenrath, Anthropologist, SRBL

Subject:

Report from Carbon Dating Laboratory

To:

Clifford Evans, Dept. Anthropology, NHB
Through: William H. Klein, Director, RBL

Herewith five radiocarbon dates for samples submitted from Pankatera, Ponape. Perhaps you can explain why the oldest date for each fireplace appears at the highest stratigraphic level. Is it because it's on the other side of the world where everybody lives upside down?

Attachments
Pankatera series, Ponape I

Charcoals from Pankatera (6° 50' 17" N, 158° 20' 15" E), Ponape I, Carolines. Coll 1963 and subm by Saul Riesenber and Clifford Evans, Smithsonian Inst.

SI-4152. Pankatera I, 10
Charcoal from fireplace 1, unit 1, 20 to 30cm. A.D. 1465

SI-4153. Pankatera I, 11
Charcoal from fireplace 1, unit 1, 30 to 40cm. A.D. 1790

SI-4154. Pankatera B, 40
Charcoal from fireplace 2, unit B, 0 to 10cm. A.D. 1095

SI-4155. Pankatera B, 41
Charcoal from fireplace 2, unit B, 10 to 20cm. A.D. 1670

SI-4156. Pankatera B, 42
Charcoal from fireplace 2, unit B, 20 to 30cm. A.D. 1405
Pankatera series, Ponape I

Charcoals from Pankatera (6° 50' 17" N, 158° 20' 15" E), Ponape I, Carolines. Coll 1963 and subm by Saul Riesenberq and Clifford Evans, Smithsonian Inst.

SI-4152. Pankatera I, 10
Charcoal from fireplace 1, unit 1, 20 to 30cm.

SI-4153. Pankatera I, 11
Charcoal from fireplace 1, unit 1, 30 to 40cm.

SI-4154. Pankatera B, 40
Charcoal from fireplace 2, unit B, 0 to 10cm.

SI-4155. Pankatera B, 41
Charcoal from fireplace 2, unit B, 10 to 20cm.

SI-4156. Pankatera B, 42
Charcoal from fireplace 2, unit B, 20 to 30cm.

485 ± 65

160 ± 80

A.D. 1465

A.D. 1790

855 ± 60

A.D. 1095

280 ± 70

A.D. 1670

545 ± 65

A.D. 1405
Site name: Pankatera - Unit I
Ponape Island, Caroline Islands, Micronesia
Exact site location: 6° 50' 17" N lat; 98° 15' E long.

Latitude: 
Longitude: 

Cultural and/or time range of site: 1180 - modern times; See remarks.

Sample material: Charcoal
Cat. No. Ponape # 10

Genus and species:

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral lined fireplace in house floor.

Evidence of leaching or humus: Heavy rainfall area

Evidence of contamination or root penetration: Trees and vines over whole site, had to be cut down. Visible mm rootlets removed from sample.

Field packaging: Plastic bag.

Preservative or fungicide: None used.

Excavation coordinates and stratigraphic position:
Fireplace 1 of Unit I, Level 20 - 30 cm.

Feature number and description: Excavated fireplace and sifted

Associated cultural materials: 10 fishbones, 4 turtle bones, 1 rum bottle, of past century type, fragment.

Estimated age and basis: This fireplace could be of aboriginal time period of 1180 - 1430 AD or of contact with Europeans or even of Japanese. Importance of dating this sample: occupation during time of World War I to World War II.

Compare with the dated charcoal samples from the ceremonial fires of Idelah Mound to see if house pit fireplaces and associated refuse have any
Site name: Pankataera - Unit I  Site number: P-1
Ponape Island, Caroline Islands, Micronesia
Exact site location: 6° 50' 17" N lat; 158° 20' 15" E long.

Latitude: Longitude:

Cultural and/or time range of site: 1180 - modern times; See remarks.

Sample material: Charcoal

Genus and species: 

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) AND Coral lined fireplace in house floor.

Evidence of leaching or humus: Heavy rainfall area

Evidence of contamination or root penetration: Trees and vines over whole site, had to be cut down. Visible rootlets removed from sample.

Field packaging: Plastic bag.

Preservative or fungicide: None used.

Excavation coordinates and stratigraphic position:
Fireplace 1 of Unit I, Level 20 - 30 cm.

Feature number and description: Excavated fireplace and sifted

Associated cultural materials: 10 fishbones, 4 turtle bones, 1 rum bottle, of past century type, fragment.

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Submitter and affiliation: Clifford Evans, NMNH, August 31, 1979

Collector and collection date: Excavated in field, 1963 by Riesenber, Evans and Meggers.

Other dates from site, position and publication reference:

See SI -90 - 520 B.P. ± 65

Relevant publications: SI-91 - 690 B.P. ± 50
SI-92 - 770 B.P. ± 60

Until a detailed study was made of shell remains and bone remains from various fireplaces dug at house units in Pomona, it was thought that they all might have been contaminated by recent use of Japanese during World War I - II.

Further comment: time of their occupation of island from World War I - II.

But with study of these faunal remains, it is worth trying to see if the fireplace refuse from two units (I - Cat. Nos 10 and 11) and B (Cat. Nos. 40, 41 and 42), might not also be aboriginal occupation.

Note: there is the chance that all these samples might prove modern but Riesenber, Evans, Meggers and others who recently did the faunal remains, plus Rehder who did the shell remains, think it worth trying to date and hope that instead they prove to fall within the aboriginal period, or maybe the early contact period with Europeans.
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Note: there is the chance that all these samples might prove modern but Riesenber, Evans, Meggers and Rehder who recently did the faunal remains, plus Rehder who did the shell remains, think it worth trying to date and hope that instead they prove to fall within the aboriginal period, or maybe the early contact period with Europeans.
Site name: Pukutara - Unit I
Exact site location: Pumape Island, Caroline Islands, Micronesia
Latitude: 6° 50' 17" North; Longitude: 158° 20' 15" East Long.
Cultural and/or time range of site: 1180 to modern. See remarks in detail on Cat. No. Pumape # 10.

Sample material: Charcoal Pumape # 11.

Genus and species:

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral-lined fireplace in house floor.

Evidence of leaching or humus: Heavy rain fall area.

Evidence of contamination or root penetration: Trees and vines over site and had to be cut down. Visible roots less removed from sample.

Field packaging: Plastic bag

Preservative or fungicide: None used.

Excavation coordinates and stratigraphic position:

Fireplace 1 of Unit I, Level 30 - 40 cm. Smaller fireplace lined with stone within the larger fireplace.

Feature number and description:

Associated cultural materials: No bones from this lower level, only shells and charcoal. No other artifacts.

Estimated age and basis: 1340 - 1440 AD - See comments on Pumape # 10 or possible contamination with recent European occupation.

Importance of dating this sample: See comments on Pumape # 10.
Site name: Pankotera - Unit I  
Exact site location: Ponape Island, Caroline Islands, Micronesia

Latitude: 6° 50' 17" North; Longitude: 158° 20' 15" East Long.

Cultural and/or time range of site: 1180 to modern. See remarks in detail on Cat. No. Ponape # 10.

Sample material: Charcoal Ponape # 11.

Genus and species:

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral-lined fireplace in house floor.

Evidence of leaching or humus: Heavy rain forest area.

Evidence of contamination or root penetration: Trees and vines over site and had to be cut down. Visible rootlets removed from sample.

Field packaging: Plastic bag

Preservative or fungicide: None used.

Excavation coordinates and stratigraphic position:

Fireplace 1 of Unit I, Level 3B - 4C cm. Smaller fireplace lined with stone within the larger fireplace.

Feature number and description:

Associated cultural materials: No bones from this lower level, only shells and charcoal. No other artifacts.

Estimated age and basis: 1180 - 1430 AD - See comments on Ponape # 10 or possible contamination with recent European occupation.

Importance of dating this sample: See comments on Ponape # 10.
Site name: Pankatera - Unit B  Site number: P-1
Exact site location: Ponape Island, Caroline Islands, Micronesia
Latitude: 6° 50' 17" North  Longitude: 158° 20' 15" East
Cultural and/or time range of site: 1180 AD to modern. See remarks in detail on Sample No. 10 Ponape #10.

Sample material: Charcoal
Ponape # 40

Genus and species: 

Identified by: 

Geological/chemical environment of sample: Sample from a stone(basalt) and coral lined fireplace in house floor.

Evidence of leaching or humus: sunny rainfall area.

Evidence of contamination or root penetration: Trees and vines over site and had to be cut down. Visible rootlets removed from sample.

Field packaging: Plastic

Preservative or fungicide: None used.

Excavation coordinates and stratigraphic position:
Fireplace 2, Unit B, Level 0 - 10 cm.

Feature number and description:

Associated cultural materials: 14 fish bones; 5 turtle; 1 scapula; 1 innominate and 1 lower molar of Canis familiaris; 1 mammal shaft bone fragment.

Estimated age and basis: No European goods found in fireplace and so hopefully not contaminated. 1180-1430 AD. See comments under Ponape #10.

Importance of dating this sample: Ditto, see comments under Ponape #10.
Site name: Pankatera - Unit B
Exact site location: Ponape Island, Caroline Islands, Micronesia
Latitude: 6° 50' 17" North
Longitude: 156° 20' 15" East
Cultural and/or time range of site: 1180 AD to modern. See remarks in detail on Sample No. 50 Ponape # 10.

Sample material: Charcoal
Genus and species:
Identified by:
Geological/chemical environment of sample: Sample from a stone (basalt) and coral lined fireplace in house floor.
Evidence of leaching or humus: "oily" rainfall area.
Evidence of contamination or root penetration: Trees and vines over site and had to be cut down. Visible rootlets removed from sample.
Field packaging: Plastic
Preservative or fungicide: None used.
Excavation coordinates and stratigraphic position:
Fireplace 2, Unit B, Level 0 - 10 cm.

Feature number and description:

Associated cultural materials: 14 fish bones; 5 turtle; 1 scapula 1 innominate and 1 lower molar of Canis familiaris; 1 mammal shaft bone fragment.
Estimated age and basis: No European goods found in fireplace and so hopefully not contaminated. 1180"- 1430 AD. See comments under Ponape # 10.
Importance of dating this sample:
Ditto, see comments under Ponape # 10.
Site name: Fankatera - Unit B          Site number: P-1
Exact site location: Ponape Island, Caroline Islands, Micronesia
Latitude: 6° 50' 17" North          Longitude: 158° 20' 15" East
Cultural and/or time range of site: 1180 AD to modern. See remarks on Sample Ponape # 10.

Sample material: Charcoal          Ponape # 11

Genus and species:

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral lined fireplace in house floor.

Evidence of leaching or humus: Heavy rainfall area.

Evidence of contamination or root penetration: Trees and vines over site and had to be cut down. Visible rootlets removed from sample.

Field packaging: Plastic

Preservative or fungicide: None used

Excavation coordinates and stratigraphic position:
Fireplace 2, Unit B. Level 10 - 20 cm.

Feature number and description:

Associated cultural materials: 10 fish bones, 4 mammal bones shaft fragments and 3 unidentified fragments. No European goods.

Estimated age and basis: No European goods and so hopefully not contaminated. 1180 - 1430 A.D. See comments under Ponape # 10. Importance of dating this sample: Should be significantly older than Ponape # 40 by a few years.
Site name: Pankatera - Unit B  
Site number: P-1

Exact site location: Ponape Island, Caroline Islands, Micronesia

Latitude: 6° 30' 17" North  
Longitude: 158° 20' 15" East

Cultural and/or time range of site: 1180 AD to modern. See remarks on Sample Ponape # 10.

Sample material: Charcoal  
Ponape # 41

Genus and species: 

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral lined fireplace in house floor.

Evidence of leaching or humus: Heavy rainfall area.

Evidence of contamination or root penetration: Trees and vines over site and had to be cut down. Visible rootlets removed from sample.

Field packaging: Plastic

Preservative or fungicide: None used

Excavation coordinates and stratigraphic position:

Fireplace 2, Unit B. Level 10 - 20 cm.

Feature number and description:

Associated cultural materials: 10 fish bones, 4 mammal bones shaft fragments and 3 unidentified fragments. No European goods.

Estimated age and basis: No European goods and so hopefully not contaminated. 1180 - 1430 A.D. See comments under Ponape # 10.

Importance of dating this sample: Should be several years older than Ponape # 40 by a few years.
Site name: Pankatera - Unit B  Site number: F-1
Exact site location: Ponape Island, Caroline Islands, Micronesia
Latitude: 6° 50' 17" North  Longitude: 158° 20' 15" East
Cultural and/or time range of site: 1180 AD to modern. See remarks on sample Ponape # 10.

Sample material: Charcoal  Ponape # 42

Genus and species:

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral lined fireplace in house floor.

Evidence of leaching or humus: Heavy rainfall area.

Evidence of contamination or root penetration: Trees and vines occur over site and had to be cut down, Visible rootlets removed from sample.

Field packaging: Plastic

Preservative or fungicide: None used

Excavation coordinates and stratigraphic position:

Fireplace 2, Unit B, Level 20 - 30 cm.

Feature number and description:

Associated cultural materials: No bones or artifacts in this level.

Estimated age and basis: No European goods found, so hopefully not contaminated, 1180 - 1430 AD. See comments under Ponape # 10.

Importance of dating this sample: Should be slightly older than levels above of Ponape No. 40 and 41.
Site name: Pankatera - Unit B
Site number: F-1
Exact site location: Ponape Island, Caroline Islands, Micronesia
Latitude: 6° 50' 17" North
Longitude: 158° 20' 15" East
Cultural and/or time range of site: 1180 AD to modern. See remarks on sample Ponape # 10.

Sample material: Charcoal

Genus and species:

Identified by:

Geological/chemical environment of sample: Sample from a stone (basalt) and coral lined fireplace in house floor.

Evidence of leaching or humus: Heavy rainfall area.

Evidence of contamination or root penetration: Trees and vines occur over site and had to be cut down, visible rootlets removed from sample.

Field packaging: Plastic

Preservative or fungicide: None used

Excavation coordinates and stratigraphic position:

Fireplace 2, Unit B, Level 20 - 30 cm.

Feature number and description:

Associated cultural materials: No bones or artifacts in this level.

Estimated age and basis: No European goods found, so hopefully not contaminated, 1180 - 1430 AD. See comments under Ponape # 10. Importance of dating this sample: Should be slightly older than levels above of Ponape Nos. 40 and 41.