TO: Ronald A. Thomas, Cara L. Wise, Mary Lawry

FROM: Tyler Bastian

SUBJECT: charcoal samples for radiocarbon dating of Nassawango site

Division of Archeology

DATE: 8 Jan 75

Please let me know if the enclosed forms are incorrect in any way.

I will notify you as soon as the results are received.
Site name: Nassawango Creek  
Site number: 18-Wo-23

Exact site location:

Latitude:  
Longitude:  

Cultural and/or time range of site: Terminal Archaic through Late Woodland (3000 B.C. through 1500 A.D.) -- major occupation is Early to Middle Woodland (500 B.C. to 200 A.D.)

Sample material: wood charcoal

Genus and species:

Identified by:

Geological/chemical environment of sample:

Evidence of leaching or humus:

Evidence of contamination or root penetration: roots throughout pit fill

Field packaging: aluminum foil

Preservative or fungicide: none

Excavation coordinates and stratigraphic position:

N4/W2  50 cm. below datum

Feature number and description: Feature 19 -- a deep bowl-shaped pit containing burned (possibly human) bone and copper beads in burned and ashy soil.

Associated cultural materials: copper beads, crushed quartz or sand tempered cordmarked pottery.

Estimated age and basis: between 200 B.C. and 200 A.D. -- copper indicates Adena associations, quality of beads indicates late phase. Importance of dating this sample: This sample dates a slightly different burial manifestation from that of the other samples.
Submitter and affiliation: Tyler Bastian, Division of Archeology, Maryland Geological Survey, The Johns Hopkins University, Baltimore, Maryland 21218
Collector and collection date: Cara L. Wise August 2, 1973
Other dates from site, position and publication reference: The three other samples submitted with this one should produce similar dates.


Further comment: (N.A. 005 or 0.8 008) beadwork shallow.

This form prepared by Cara L. Wise and Tyler Bastian.
Site name: Nassawango Creek  
Site number: 18-N0-23

Exact site location: [Redacted]

Latitude: [Redacted]  
Longitude: [Redacted]

Cultural and/or time range of site: Terminal Archaic through Late Woodland (3000 B.C. through 1500 A.D.) — major occupation is Early to Middle Woodland (500 B.C. to 200 A.D.)

Sample material: wood charcoal

Genus and species: [Redacted]

Identified by: [Redacted]

Geological/chemical environment of sample: [Redacted]

Evidence of leaching or humus: [Redacted]

Evidence of contamination or root penetration: roots throughout pit fill

Field packaging: aluminum foil

Preservative or fungicide: none

Excavation coordinates and stratigraphic position:
N4/W4 depth 90 - 100 cm. below datum

Feature number and description: Feature 6—a deep bowl-shaped pit containing burned (possibly human) bone and an in-flesh burial partially preserved by copper salts. Associated cultural materials: banded slate pendant, copper paint cup, fabric, copper beads, crushed-quartz tempered cordmarked pottery.

Estimated age and basis: between 200 B.C. and 200 A.D. — copper indicates Adena associations, quality of beads indicates late date. Importance of dating this sample: This sample is important for dating the only known example of aboriginal fabric from the Delmarva Peninsula.

OVER---
Submitter and affiliation: Tyler Bastian, Division of Archeology, Maryland Geological Survey, The Johns Hopkins University, Baltimore, Maryland 21218
Collector and collection date: Cara L. Wise, July 22, 1973

Other dates from site, position and publication reference:
The three other samples submitted with this one should produce similar dates.


Further comment: This form prepared by Cara L. Wise and Tyler Bastian.
Site name: Nassa-Wango Creek  Site number: 18 WO 23

Exact site location: [Redacted]

Latitude: [Redacted]  Longitude: [Redacted]

Cultural and/or time range of site: Late Archaic through Late Woodland (3000 B.C. to A.D. 1500); the major component and the one with which this sample is associated is Early to Middle Woodland (500 B.C. to A.D. 200).

Sample material: wood charcoal

Genus and species: not examined

Identified by:

Geological/chemical environment of sample: sand

Evidence of leaching or humus: sample is from well below the modern humus zone.

Evidence of contamination or root penetration: rootlets throughout the sample.

Field packaging: glass coffee jar

Preservative or fungicide: none

Excavation coordinates and stratigraphic position: Square N6-W2, Level 5, 50 cm below the surface of the ground and in the fill of a burial pit (Feature 1). (Area west of trench)

Feature number and description: Feature 1, a deep burial pit with dark sandy fill. The sample is from a concentration of charcoal in the fill of the feature.

Associated cultural materials: the pit fill contained burned bone, cord-marked crushed-quartz tempered sherds, lithic flakes, and copper beads.

Estimated age and basis: Between 200 B.C. and A.D. 200, based on generally comparable radiocarbon-dated sites in Delaware, Maryland, and the Ohio Valley. Importance of dating this sample: Will provide first date for this specific assemblage on the Delmarva Peninsula and one of the few dates for Early to Middle Woodland burial sites in the Middle Atlantic region.
Submitter and affiliation: Tyler Bastian, State Archeologist
Maryland Geological Survey, Johns Hopkins University, Baltimore, Maryland
21218

Collector and collection date: Jean Messick, Lower Delmarva Chapter,
Archeological Society of Maryland, Inc. 11 April 73

Other dates from site, position and publication reference:
The three other samples being submitted with this one should produce similar
dates.

Eastern States Archeological Federation, Bulletin No. 33, p. 15.

Further comment: The site was discovered after timber had been cleared with
power equipment. The depth to which the sandy surface was disturbed and/or
removed during the clearing procedure is not precisely known, but it appears
to have been moderate.

This form prepared by Tyler Bastian from field data supplied by Jean Messick.
Site name: Nassawango Creek  Site number: 18.WO.23

Exact site location:

Latitude:   Longitude:

Cultural and/or time range of site: Late Archaic through Late Woodland (3000 B.C. to A.D. 1500); the major component and the one with which this sample is associated is Early to Middle Woodland (500 B.C. to A.D. 200).

Sample material: wood charcoal

Genus and species: not examined

Identified by:

Geological/chemical environment of sample: sand

Two small pieces of the charcoal have copper stains on them; one with a particularly heavy stain is not included in the sample submitted for dating.

Evidence of leaching or humus: sample is from well below the modern humus zone.

Evidence of contamination or root penetration: rootlets throughout the sample.

Field packaging: Aluminum foil in metal can used for 35mm bulk film.

Preservative or fungicide: none

Excavation coordinates and stratigraphic position: Square N6-W2, 50-60 cm below surface of the ground and in the fill of a burial pit (Feature 1).

Feature number and description: Feature 1, a deep burial pit with dark sandy fill. The sample is from a concentration of charcoal above burial 2. (See "Further comment", over)

Associated cultural materials: The pit fill contained dispersed chunks of charcoal, red ochre, burned bone, cord-marked crushed-quartz tempered sherd, lithic flakes, and copper beads.

Estimated age and basis: Between 200 B.C. and A.D. 200, based on generally comparable radiocarbon-dated sites in Delaware, Maryland, and the Ohio Valley. Importance of dating this sample: Will provide first date for this specific assemblage on the Delmarva Peninsula and one of the few dates for Early to Middle Woodland burial sites in the Middle Atlantic region.

OVER---
Submitter and affiliation: Tyler Bastian, State Archeologist, Maryland Geological Survey, Johns Hopkins University, Baltimore, Maryland 21218.

Collector and collection date: Richard Artusy, Section of Archeology, Division of Historical & Cultural Affairs, Dover, Delaware. 24 April 73

Other dates from site, position and publication reference:

The three other samples submitted with this one should produce similar dates.


Further comment: The site was discovered after timber had been cleared with power equipment. The depth to which the sandy surface was disturbed and/or removed during the clearing procedure is not precisely known, but it appears to have been moderate.

The sample was near and at about the same level as the top of a sub-feature which contained burned bone (burial 3). The sample was above an articulated poorly preserved, child (burial 2). The child was accompanied by a copper one-hole gorget or pendant, and several hundred copper beads found in a multiple-strand necklace arrangement; some of the fill around the burial was stained with red ochre. The top of Burial 2 was about 75 cm below the ground surface.

This form prepared by Tyler Bastian from field data provided by Richard Artusy, Jean Messick, Ronald A. Thomas, and Cara L. Wise.
Site name: Nassawango Creek
Exact site location: [censored]
Latitude: [censored] Longitude: [censored]

Cultural and/or time range of site: Terminal Archaic through Late Woodland (3000 B.C. through 1500 A.D.) -- major occupation is Early to Middle Woodland (500 B.C. to 200 A.D.)

Sample material: wood charcoal

Sample number: 2735 ± 75

Genus and species: 765 B.C.

Identified by:

Geological/chemical environment of sample:

Evidence of leaching or humus:

Evidence of contamination or root penetration: roots throughout pit fill

Field packaging: aluminum foil

Preservative or fungicide: none

Excavation coordinates and stratigraphic position:
N4/W2 50 cm. below datum

Feature number and description: Feature 19 -- a deep bowl-shaped pit containing burned (possibly human) bone and copper beads in burned and ashy soil.

Associated cultural materials: copper beads, crushed quartz or sand tempered cordmarked pottery.

Estimated age and basis: between 200 B.C. and 200 A.D. -- copper indicates Adena associations, quality of beads indicates late phase. Importance of dating this sample: This sample dates a slightly different burial manifestation from that of the other samples.

OVER----
Submitter and affiliation: Tyler Bastian, Division of Archeology, Maryland Geological Survey, The Johns Hopkins University, Baltimore, Maryland 21218

Collector and collection date: Cara L. Wise August 2, 1973

Other dates, from site, position and publication reference:

The three other samples submitted with this one should produce similar dates.


Further comment: 

This form prepared by Cara L. Wise and Tyler Bastian.
Site name: Nassawango Creek

Exact site location:

Latitude:
Longitude:

Cultural and/or time range of site: Terminal Archaic through Late Woodland (3000 B.C. through 1500 A.D.)—major occupation is Early to Middle Woodland (500 B.C. to 200 A.D.)

Sample material: wood charcoal

Genus and species:

Identified by:

 Geological/chemical environment of sample:

Evidence of leaching or humus:

Evidence of contamination or root penetration: roots throughout pit fill

Field packaging: aluminum foil

Preservative or fungicide: none

Excavation coordinates and stratigraphic position:

N4/W4 depth 90 - 100 cm. below datum

Feature number and description: Feature 6—a deep bowl-shaped pit containing burned (possibly human) bone and an in-flesh burial partially preserved by copper salts. Associated cultural materials: banded slate pendant, copper paint cup, fabric, copper beads, crushed-quartz tempered cordmarked pottery.

Estimated age and basis: between 200 B.C. and 200 A.D. — copper indicates Adena associations, quality of beads indicates late date.

Importance of dating this sample: This sample is important for dating the only known example of aboriginal fabric from the Delmarva Peninsula.
Submitter and affiliation: Tyler Bastian, Division of Archeology, Maryland Geological Survey, The Johns Hopkins University, Baltimore, Maryland 21218
Collector and collection date: Cara L. Wise, July 22, 1973

Other dates from site, position and publication reference: The three other samples submitted with this one should produce similar dates.


This form prepared by Cara L. Wise and Tyler Bastian.
Site name: Nassa Wango Creek
Exact site location: 
Latitude: 
Longitude: 
Site number: 18 WO 23

Cultural and/or time range of site: Late Archaic through Late Woodland (3000 B.C. to A.D. 1500); the major component and the one with which this sample is associated is Early to Middle Woodland (500 B.C. to A.D. 200).

Sample material: wood charcoal
Genus and species: not examined

Identified by:

Geological/chemical environment of sample: sand

Evidence of leaching or humus: sample is from well below the modern humus zone.

Evidence of contamination or root penetration: rootlets throughout the sample.

Field packaging: glass coffee jar
Preservative or fungicide: none

Excavation coordinates and stratigraphic position: Square N6-W2, Level 5, 50 cm below the surface of the ground and in the fill of a burial pit (Feature 1). (Area west of trench)

Feature number and description: Feature 1, a deep burial pit with dark sandy fill. The sample is from a concentration of charcoal in the fill of the feature.

Associated cultural materials: the pit fill contained burned bone, cord-marked crushed-quartz tempered sherds, lithic flakes, and copper beads.

Estimated age and basis: Between 200 B.C. and A.D. 200, based on generally comparable radiocarbon-dated sites in Delaware, Maryland, and the Ohio Valley.

Importance of dating this sample: Will provide first date for this specific assemblage on the Delmarva Peninsula and one of the few dates for Early to Middle Woodland burial sites in the Middle Atlantic region.

OVER----
Submitter and affiliation: Tyler Bastian, State Archeologist
Maryland Geological Survey, Johns Hopkins University, Baltimore, Maryland
21218

Collector and collection date: Jean Messick, Lower Delmarva Chapter,
Archeological Society of Maryland, Inc. 11 April 73

Other dates from site, position and publication reference:
The three other samples being submitted with this one should produce similar
dates.

Eastern States Archeological Federation, Bulletin No. 33, p. 15.

Further comment: The site was discovered after timber had been cleared with
power equipment. The depth to which the sandy surface was disturbed and/or
removed during the clearing procedure is not precisely known, but it appears
to have been moderate.

This form prepared by Tyler Bastian from field data supplied by Jean Messick.
Site name: Nassawango Creek
Site number: 18.WO 23

Exact site location: [Redacted]

Latitude: [Redacted] Longitude: [Redacted]

Cultural and/or time range of site: Late Archaic through Late Woodland (3000 B.C. to A.D. 1500); the major component and the one with which this sample is associated is Early to Middle Woodland (500 B.C. to A.D. 200).

Sample material: wood charcoal
Genus and species: not examined

Identified by:

Geological/chemical environment of sample: sand
Two small pieces of the charcoal have copper stains on them; one with a particularly heavy stain is not included in the sample submitted for dating.

Evidence of leaching or humus: sample is from well below the modern humus zone.

Evidence of contamination or root penetration: rootlets throughout the sample.

Field packaging: Aluminum foil in metal can used for 35mm bulk film.

Preservative or fungicide: none

Excavation coordinates and stratigraphic position: Square N6-W2, 50-60 cm below surface of the ground and in the fill of a burial pit (Feature 1).

Feature number and description: Feature 1, a deep burial pit with dark sandy fill. The sample is from a concentration of charcoal above burial 2. (See "Further comment", over)

Associated cultural materials: The pit fill contained dispersed chunks of charcoal, red ochre, burned bone, cord-marked crushed-quartz tempered sherds, lithic flakes, and copper beads.

Estimated age and basis: Between 200 B.C. and A.D. 200, based on generally comparable radiocarbon-dated sites in Delaware, Maryland, and the Ohio Valley. Importance of dating this sample: Will provide first date for this specific assemblage on the Delmarva Peninsula and one of the few dates for Early to Middle Woodland burial sites in the Middle Atlantic region.
Submitter and affiliation: Tyler Bastian, State Archeologist, Maryland Geological Survey, Johns Hopkins University, Baltimore, Maryland 21218.

Collector and collection date: Richard Artusy, Section of Archeology, Division of Historical & Cultural Affairs, Dover, Delaware. 24 April 73

Other dates from site, position and publication reference: The three other samples submitted with this one should produce similar dates.


Further comment: The site was discovered after timber had been cleared with power equipment. The depth to which the sandy surface was disturbed and/or removed during the clearing procedure is not precisely known, but it appears to have been moderate.

The sample was near and at about the same level as the top of a sub-feature which contained burned bone (burial 3). The sample was above an articulated poorly preserved, child (burial 2). The child was accompanied by a copper one-hole gorget or pendant, and several hundred copper beads found in a multiple-strand necklace arrangement; some of the fill around the burial was stained with red ochre. The top of Burial 2 was about 75 cm below the ground surface.

This form prepared by Tyler Bastian from field data provided by Richard Artusy, Jean Messick, Ronald A. Thomas, and Cara L. Wise.
NEW RADIOCARBON DATES FOR A MARYLAND ADENA SITE

Tyler Bastian
Maryland Geological Survey

The Nassawango Creek site (18 WO 23) in northwestern Dorchester County was discovered by members of the Lower Delmarva Chapter early in 1973. The site was brought to the attention of Ron Thomas, Howard MacCord, and Tyler Bastian when short, thick-walled copper beads were found. Excavations started by the Chapter were expanded under the direction of Cara L. Wise for three weeks during the summer of 1973 with funds and assistance made available by the Maryland Geological Survey. A full report will be the subject of Cara's Masters thesis at Catholic University.

The site is on a sandy ridge in a bend of Nassawango Creek about midway between Chesapeake Bay and the Atlantic Ocean. Four burial pits, a hearth, and six pits of unknown function were excavated. Late Archaic through Late Woodland components are indicated by artifacts found on the surface of the site, but all of the burials relate to the Early and Middle Woodland Delmarva Adena complex. Radiocarbon measurements were made by Dr. Robert Stuckenrath of the Radiation Biology Laboratory, Smithsonian Institution on charcoal from three of the burial pits.

Feature 1 containing charcoal, red ochre, burned bone, cord-marked pottery with crushed-quartz temper, stone flakes, and copper beads

\[
\begin{align*}
\text{SI - 2188} & \quad (2445 \pm 100 \text{ B.R}) & \quad 495 \pm 100 \text{ B.C.} \\
\text{SI - 2189} & \quad (2190 \pm 70 \text{ B.P.}) & \quad 240 \pm 70 \text{ B.C.}
\end{align*}
\]

Feature 6 containing burned bone, in-flesh burial, banded slate pendant, copper paint cup, copper beads, cord-marked pottery of crushed-quartz temper, and fragments of fabric preserved by copper salts.

\[
\begin{align*}
\text{SI - 2190} & \quad (2190 \pm 100 \text{ B.P.}) & \quad 240 \pm 100 \text{ B.C.}
\end{align*}
\]
Feature 19 containing burned bone, pottery, and copper beads

SI - 2191 (2735 ± 75 B.P.) 785 ± 75 B.C.

The dates for the Nassawango Creek site are earlier than most of the
8 previously reported radiocarbon dates determined for the West River Adena
site in Anne Arundel County, Maryland, which range from 360 ± 200 B.C. to
A.D. 320 ± 400.

December 1975

Note: This MS published in Newsletter, Archeological Society of Maryland, Inc.,
Vol. 1, No. 2, p. 6 (Dec 1975); the dates were incorrectly copied.
Corrected dates were published in Vol. 2, No. 1, p. 5 (Jan 1976).
May 1, 1975

Dr. Tyler Bastine, State Archeologist
Maryland Geological Survey
Johns Hopkins University
Baltimore, Maryland

Dear Tyler:

At long last, herewith dates for Nassawango! Is there really that much difference in level between SI-2188 and SI-2189, within the same burial? Or is this a matter of roots and statistics?

SI-2191 is significantly older than the other dates of the series, and the information sheet notes "a slightly different burial manifestation". How different?

Fear not, it will be many, many months before I get around to working up a date-list, and a year after that before print. And we'll note only the approximate lat- and-long and county.

Appreciate your comments on the dates. Need more?

Sincerely,

Robert Stuckenrath
Radiocarbon Laboratory

12441 Parklawn Drive - Rockville, Maryland 20852
Dr. Robert Stuckenrath  
Radiocarbon Laboratory  
Smithsonian Institution  
12441 Parklawn Drive  
Rockville, Maryland  20852

Dear Bob:

Many thanks for the Wassawango dates. Although they are a little earlier than I had estimated, they seem reasonable. I do not have any problem with the spread between SI-2162 and SI-2169 from the same feature. All four samples are fill inclusions whose direct association with the burials or other activities has not been demonstrated. As a matter of fact, considering that the sandy soil of the site is so susceptible to penetrating roots and burrowing animals, I am pleased that all four dates came out as close as they did.

By copy of this letter, I am asking Cara Wise to respond to your question about the "slightly different burial manifestation" for which SI-2191 is significantly older than the other three dates.

We do need more dates on a few Maryland sites, and I will get them together and send them to you this summer.

Sincerely,

Tyler Bastian  
State Archeologist

TB/mb
cc: Mrs. Lee L. Lawry  
    Cara L. Wise  
    Ronald A. Thomas
Nassawango Cr. series, Maryland

Nassawango Cr. site, 18-WO-23 ( ), lies on E bank Nassawango Cr., Worcester Co., Maryland. Cultural material spans Late Archaic to Late Woodland periods (Wise 1974).
Subm. by Tyler Bastien, Md. St. Archeol.

2445 ± 100

SI-2188. Nassawango 1 495 B.C.
Charcoal from feature 1, 50 to 60 cm below surface, a burial pit containing charcoal, red ochre, burned bone, cord-marked pottery of crushed-quartz temper, stone flakes, and copper beads. This sample from same depth as top of burial 3, and immediately above burial 2.

2190 ± 70

SI-2189. Nassawango 2 240 B.C.
Charcoal from feature 1, 50 cm below surface.

2190 ± 100

SI-2190. Nassawango 3 240 B.C.
Charcoal from feature 6, a bowl-shaped pit containing burned bone and an in-flesh burial partially preserved by copper salts. Assoc. with banded slate pendant, copper paint cup, fabric, copper beads, and cord-marked pottery of crushed-quartz temper.
2735 ± 75

SI-2191. Nassawango 4

785 B.C.

Charcoal from feature 19, a bowl-shaped pit containing burned bone and copper beads in burned and ashy soil.

General Comment: All samples were pretreated by boiling in 2% NaOH before leach in 2N HCl. Ages are based upon Libby half-life value of 5568 years, and errors quoted include those of sample as well as concurrent background and modern standard measurements.