

1. INTRODUCTION: Archaeobotanical collections exist from excavation projects that took place at southwest Florida’s Pineland Site Complex from 1988 to 1995. They focus on its A.D. 50-1710 cultural and environmental histories.

2. SAMPLES: Collections consist of:
- dry (carbonized)
- wet (waterlogged)
- conserved plant remains

3. METHODS: A grant from the National Endowment for the Humanities (NEH) supported use of national curation standards as illustrated. Field notes, records, and other documentation were cross referenced and proofed against original archaeological bags. In addition, a preservation plan (including annual monitoring) for the waterlogged specimens was developed and implemented, enhancing chances for long-term stability and accessibility of this rare and rich component from Pineland. Funding provided for cabinetry and archival supplies (including 4 mil bags, boxes, vials and jars, tags, labels), database development, and personnel.

4. RESULTS OF REHABILITATION:

A. DRY (CARBONIZED) PLANT REMAINS-
Most plant remains at southeastern U.S. sites survive because of carbonization. During the upgrade of the Pineland remains, we documented that the typical but wrap method for C-14 samples (in AMF) could damage the specimens both in the field and lab (in part because they are hidden from view). Foil wrapping may also promote decay and microbial growth because moisture may be trapped. Crumpled foil typically indicates damaged samples (hindering identification and preservation).

- New acid-free tags highlight C-14 samples. Original, bag labels were trimmed, placed into small ziplock bags, and inserted in 4 mil bags with the charred remains, better documenting collection history.
- Carefully clean seeds, wood and other plant remains on very fine mesh geological screen with gently flowing tap water (potentially less harmful to preservation, DNA and other research). All specimens were placed in pre-filled glass vials with screw cap lids, affixed with pre-written archival labels.
- 1. Seed(s) filled to the very top with water and sealed tightly to curb evaporation and microbial activity, then placed in labeled 4 mil bags.
- 2. Wood or other plant remains were placed into triple-lined, labeled, 4 mil ziplock bags of appropriate leakage and evaporation. Bags were sealed tightly removing as much air as possible but not vacuum sealed. Inner and outer bags were labeled and a waterproof tag inserted between middle and outer bags. An archival photocopy of illustrated specimens was included for condition monitoring.

B. CONSERVED PLANT REMAINS-
Thousands of worked wood chips (Taxodium sp.) exist—possibly from dugout canoe manufacture. Most are preserved using wet processing methods (see section C.). Selected wood debitage with distinct cut marks was conserved using PEG by conservator, Kate Singley, in the 1990s. Upgrades for wood chips and rare 2-ply cordage include rehousing, condition reporting, rebagging and relacing. Wood chips were placed in labeled bags with holes for ventilation, organized by provenience, catalouged, loosely placed in archival boxes and databased. Cordage was placed into labeled bags with holes; then into ethafoam-lined, partitioned, acid-free boxes to prevent movement and damage to these very fragile items.

- New acid-free bags highlight C-14 samples. Original, bag labels were trimmed, placed into small ziplock bags, and inserted in 4 mil bags with the charred remains, better documenting collection history.
- Procedures for charred seeds and wood:
  - Remoted remains from old bags and boxes.
  - Placed seeds in labeled glass vials and 4 mil bags.

C. WATERLOGGED PLANT REMAINS-
- Papaya-Carica papaya
- Two methods developed: one for seeds another for wood and other plant remains
- Carefully clean seeds, wood and other plant remains on very fine mesh geological screen with gently flowing tap water (potentially less harmful to preservation, DNA and other research). All specimens were kept wet throughout the upgrade and rinsed thoroughly removing slimy growth and decay.
- 1. Seed(s) were placed in pre-filled glass vials with screw cap lids, affixed with pre-written archival labels. Filled to the very top with water and sealed tightly to curb evaporation and microbial activity, and then placed into labeled 4 mil ziplock bags.
- 2. Wood or other plant remains were placed into triple-lined, labeled, 4 mil ziplock bags of appropriate size and filled with water (cove specimens) at least 50% more than the space they require to minimize leakage and evaporation. Bags were sealed tightly removing as much air as possible but not vacuum sealed. Inner and outer bags were labeled and a waterproof tag inserted between middle and outer bags. An archival photocopy of illustrated specimens was included for condition monitoring.

5. RESULTS: The rehabilitation of the Pineland archaeobotanical collection and the implementation of condition reporting and monitoring enhances preservation and future research potential of this important collection. These new procedures offer a streamlined and affordable preservation method for archaeobotanical remains in general.

6. ACKNOWLEDGMENTS: Funding was provided by an NEH grant obtained by Drs. William H. Marquardt and Karen J. Walker. Special thanks to artists Sue-Ellen Hunter and Merald Clark, and to colleagues and student participants, especially, Sarah Graham, Greg Leaker, and Johanna Talcott.