

REHABILITATION OF ARCHAEOBOTANICAL COLLECTIONS FROM PINELAND: A MAJOR COASTAL ARCHAEOLOGICAL SITE COMPLEX IN SOUTHWEST FLORIDA

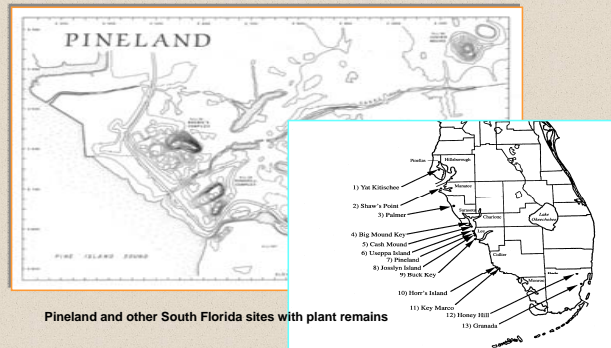


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1. INTRODUCTION:

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) and
• 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.



Records:
•Inventories
•Cross referencing
•Proofing

4. RESULTS OF REHABILITATION:

A. DRY (CARBONIZED) PLANT REMAINS-

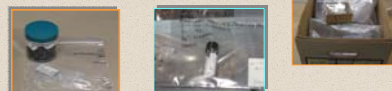
Most plant remains at southeastern U.S. sites survive because of carbonization. During the upgrade of the Pineland remains, we documented that the typical foil wrap method for C-14 samples (or AMS) could damage the specimens both in the field and lab (in part because they are hidden from view). Foil 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.

Procedures for charred seeds and wood

- Removed remains from old bags and boxes.
- Placed seeds in labeled glass vials and 4 mil bags.



- Placed wood and unanalyzed remains into 4 mil labeled bags.
- Insert material placed in small ziplock with specimens.
- Organized by provenience in archival boxes and housed in cabinets.
- Data entered into computer, printed inventories, proofed and filed.



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 rebowing. **Wood chips** were placed in labeled bags with holes for aeration, organized by provenience, catalogued, 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.

Conserved chips and cordage



C. WATERLOGGED PLANT REMAINS-

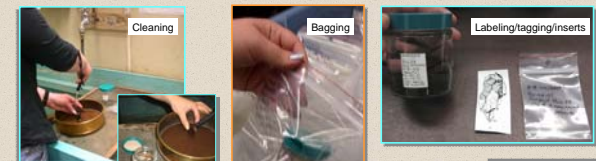
For years the adage was "if it is wet keep it wet." But, molds, algae and other microorganisms may form, odors develop, containers break, bags split, and water evaporates. Precious little literature exists on "how to" maintain and preserve these remains. We assessed the collection and established a system that includes condition reports. These are used to record prior history (when known), report initial baseline condition of specimen(s), treatment at time of upgrade, and annual status/maintenance checks. Ruhl developed the methods to prepare and house the seeds, wood, and other plant remains. Space, lighting, sample fragility, evaporation and differential preservation were all considered in developing procedures that would best protect and preserve the various remains.



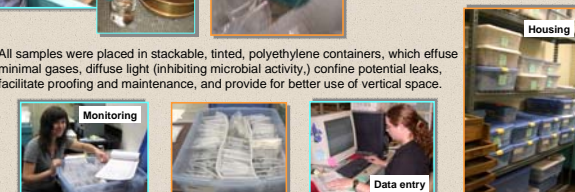
Two methods developed: one for seeds another for wood and other plant remains

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 [cover specimen(s) 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.



All samples were placed in stackable, tinted, polyethylene containers, which effuse minimal gases, diffuse light (inhibiting microbial activity,) confine potential leaks, facilitate proofing and maintenance, and provide for better use of vertical space.



5. RESULTS:

The rehabilitation of the Pineland archaeological 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 archaeological remains in general.

6. ACKNOWLEDGMENTS:

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