

Preliminary Report on Macrofloral Remains  
from Site 26LN2978  
Lincoln County, Nevada



Prepared for the Nevada  
Department of Transportation

By

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## Introduction and Methods

Preliminary identifications of carbonized and modern plant remains recovered from the floor of House Pit 2, site 26LN2978, are reported here. Site 26LN2978 is located in southern Nevada, between Crystal Springs and Ash Springs in Pahrangat Valley, Lincoln County. The site was discovered and tested by Nevada Department of Transportation (NDOT) archaeologists Jim Bunch, Patti DeBunch and Steve Stearns. A 7-liter bulk sediment sample was collected from a small feature on the house floor. The sample was processed in the laboratory in Carson City using the water flotation technique described in Schaaf (1988). In 1-liter subsamples, the sediment sample was elutriated by DeBunch in a gallon glass jar by directing a fine spray of water against the jar side. The angle and flow of the water was controlled to create a vortex, causing lighter particles to float off while gently churning the heavier residue. The light fraction was floated out of the jar and into a series of nested sieves grading from coarse to fine mesh, placed beneath the jar. For recovery of the smallest seeds, a sieve size of 0.25 mm (#60 U.S. Standard) was placed at the bottom of the nested sieves.

The floated fractions of the sample were air dried and sent to the author for recovery and identification of plant remains. Archaeologist Ann Biddle sorted the samples using a binocular microscope at 25x magnification. A stereo-zoom binocular scope with the author's comparative collection of about 2000 specimens and references cited were used to make the preliminary identifications. Both of these collections were assembled by the author with the assistance of DeBunch and contain both vouchered and unvouchered specimens. The plants from which the seeds were collected are vouchered at the University of Minnesota herbarium in Minneapolis. Unvouchered seeds were contributed by Margaret Williams of the Northern Nevada Native Plant society, Dr. Fritz Went of the Desert Research Institute, Steve Simms of the University of Utah, and some were purchased from Plants of the Southwest in New Mexico. Vouchered plants were identified by Arnold Tiehm of the New York Botanical Garden, and by Jennifer Stephens and Jeanne Schaaf, both formerly with NDOT.

## Results

More than 300 carbonized seeds and uncounted seed fragments were recovered from this small sediment sample from the floor of House Pit 2. This conservatively represents a minimum of 10 genera tentatively identified here. At least six distinct seeds (all carbonized and not pictured here) remain unidentified, along with the unidentified grass and small oval seeds lumped with the *Juncus* sp. count. Modern contaminants are reported separately below.

**Gramineae (Grass Family):**

Sixty carbonized grass seeds and over 100 fragments found may represent more than one genera. Well-preserved specimens as those pictured below are identifiable.



Unidentified Gramineae. Scale is in 2mm divisions.

**Cyperaceae (Sedge Family):**

Forty *Scirpus* sp. seeds plus seed fragments were identified. All are carbonized.



*Scirpus* sp. Bottom row seed fragments show seed coat thickness and charred endosperm. Scale is in 2mm divisions.

**Juncaceae (Rush Family):**

About 200 charred seeds are less than 1mm long, oval-shaped and round in cross section. Several are “bipointed” with terminal appendages and have a minutely reticulate surface texture characteristic of *Juncus*, but this group probably includes other small-seeded genera that should be further identified.



Carbonized *Juncus* sp. and unidentified seeds. Scale is in 2mm divisions.

**Chenopodiaceae (Goosefoot Family):**

Two carbonized seeds are small (less than 1 mm) *Chenopodium* sp. (not pictured here).

**Fumariaceae (Fumewort Family):**

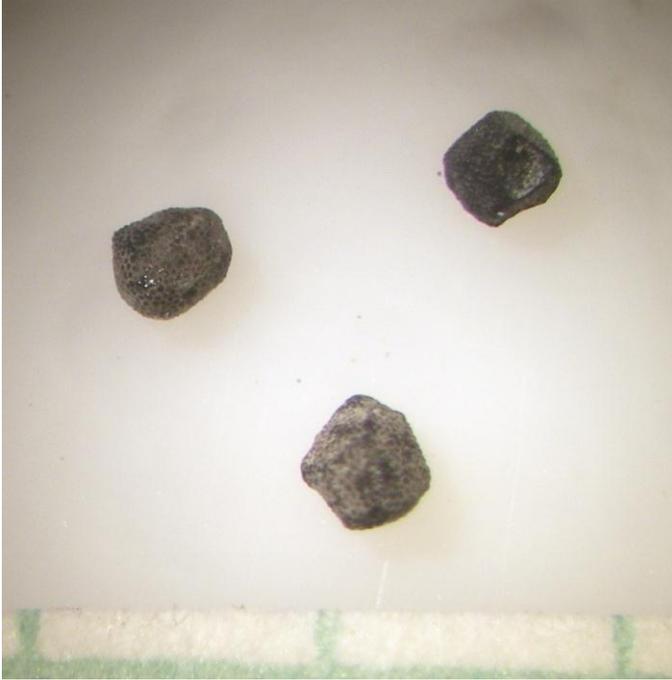
One charred complete specimen has a small bit of reticulate outer seed coat adhering and is a close match with *Dicentra* sp.



*Dicentra* sp. Scale is in 2mm divisions.

**Primulaceae (Primrose Family)?:**

Three carbonized seeds are irregularly angled, finely reticulate and about 0.7 mm in size and share characteristics with seeds of this family.



Unidentified genera of Primulaceae family. Scale is in 2mm divisions.

**Compositae (Sunflower Family):**

One carbonized seed is 2mm long and has a small pappus scar relative to most composites. It is very similar in size and appearance to *Madia* cf. *minima* A.



Compositae, cf. *Madia*. Scale is in 2mm divisions.

**Solanaceae (Nightshade Family):**

Two carbonized seed fragments have a surface reticulation that is characteristic of some genera in the Solanaceae family.



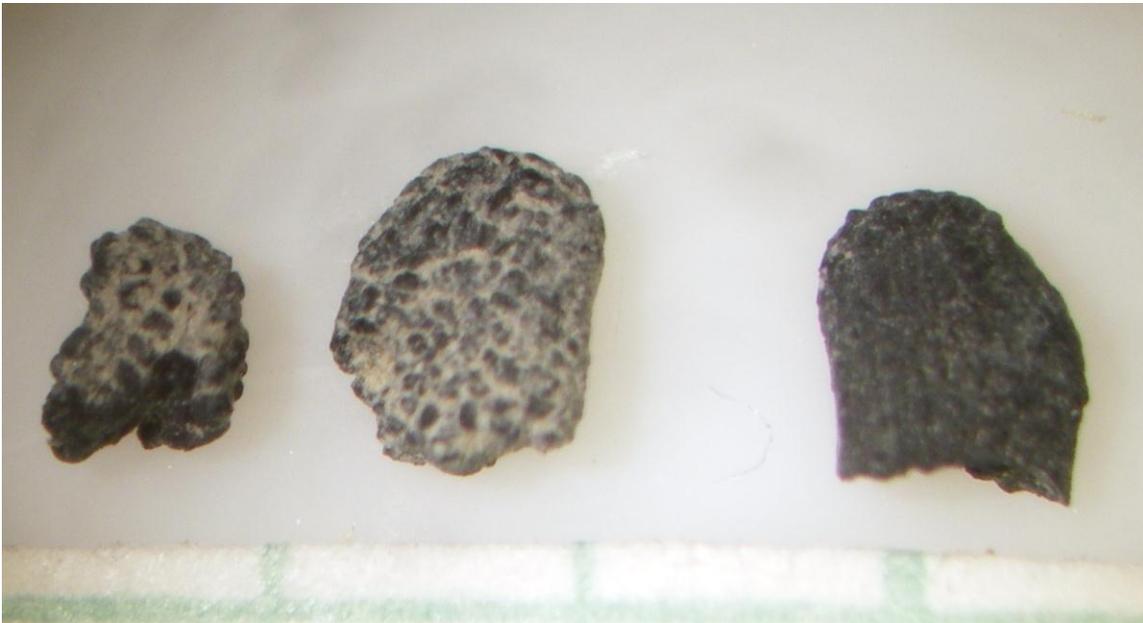
Solanaceae. Scale is in 2mm divisions.

**Hydrophyllaceae (Waterleaf Family):**

Two genera of the Waterleaf family are tentatively identified here: by five carbonized seed fragments: *Nemophila* cf. *menziesii* H. & A. with bullate surface texture and cf. *Eriodictyon* sp.



Cf. *Eriodictyon*. Scale is in 2 mm divisions.



*Nemophila* cf. *menziesii* H. & A on left, uncertain on right. Scale is in 2mm divisions.

**Unidentified plant parts**



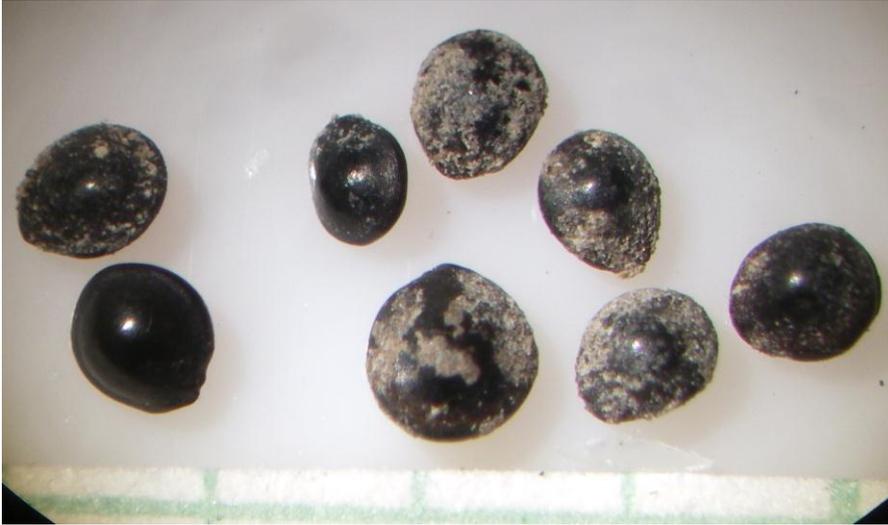
Unidentified carbonized spines. Scale is in 2mm divisions.



Unidentified carbonized plant remains. Scale is in 2mm divisions.

**Modern contaminants Amaranthaceae (Pigweed Family) and Chenopodiaceae (Goosefoot Family):**

Sixteen uncharred and presumed-to-be-modern *Amaranthus* seeds were found in the sample. Further work including an inventory of modern vegetation at the site may verify an identification of *A. cf. graecizans* L.

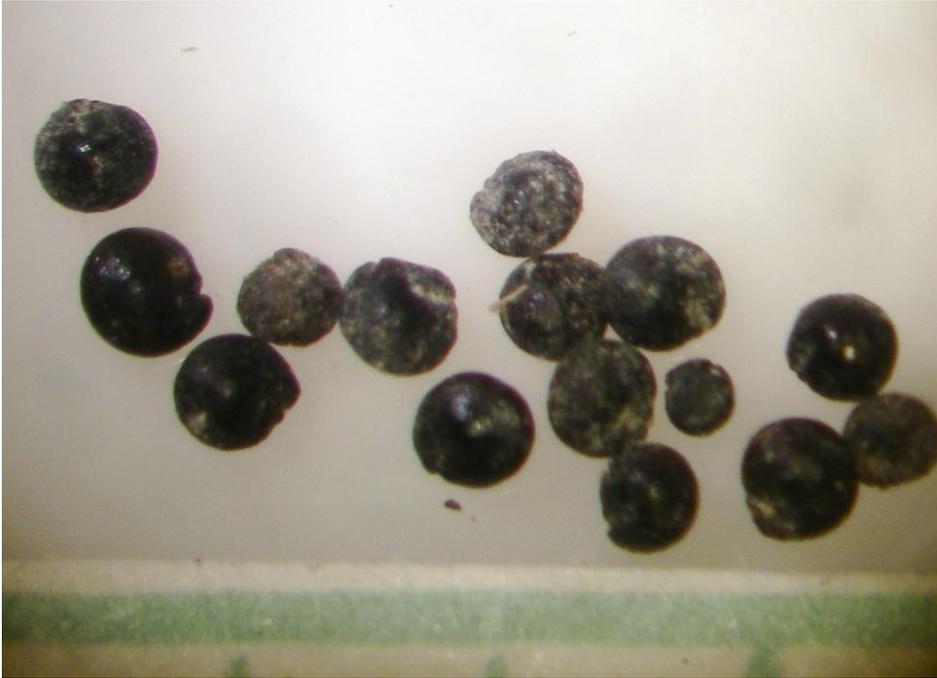


Modern *Amaranthus* sp. Scale is in 2mm divisions.



*Amaranthus* sp. seed cross-section showing embryo and endosperm. Scale is in 2mm divisions.

There are 144 uncarbonized *Chenopodium* sp. seeds. This number probably includes some immature *Amaranthus* sp. seeds.



*Chenopodium* sp. Scale is in 2mm divisions.

## Recommendations

The small sediment sample collected from the floor of House Pit 2 at site 26LN2978 has yielded a surprising variety of carbonized seeds from wild plants. Several genera identified indicate a late summer/fall occupation near a wetland or marsh. Further work with an extensive comparative collection is needed to secure identifications of the seeds. This should be followed by a thorough literature review to understand their cultural and paleoenvironmental significance. If further work is conducted at the site, an inventory of the modern vegetation would be important. The variety and abundance of seeds in this small exploratory sample indicates that additional testing and collection of sediment samples from a variety of site features could contribute significant information about the site. While the modern unburned contaminants are easily recognized, the possibility of carbonized contaminants must be evaluated relative to modern site area fire history and exposure to other types of disturbance.

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