HUNTER GATHERER ARCHAEOBOTANY OF A MORTUARY CONTEXT IN PATAGONIA (CUEVA GALPÓN, ARGENTINA): ARTEFACTUAL, CARPOLOGICAL, ANTHRACOLOGICAL AND OTHER PLANT MACRO-REMAINS FROM *CA.* 3300 BP

Aylén CAPPARELLI, Emiliano MANGE, María Laura CIAMPAGNA y Luciano PRATES

CONICET- Facultad de Ciencias Naturales y Museo, UNLP, Argentina. aylencapparelli@fcnym.unlp.edu.ar

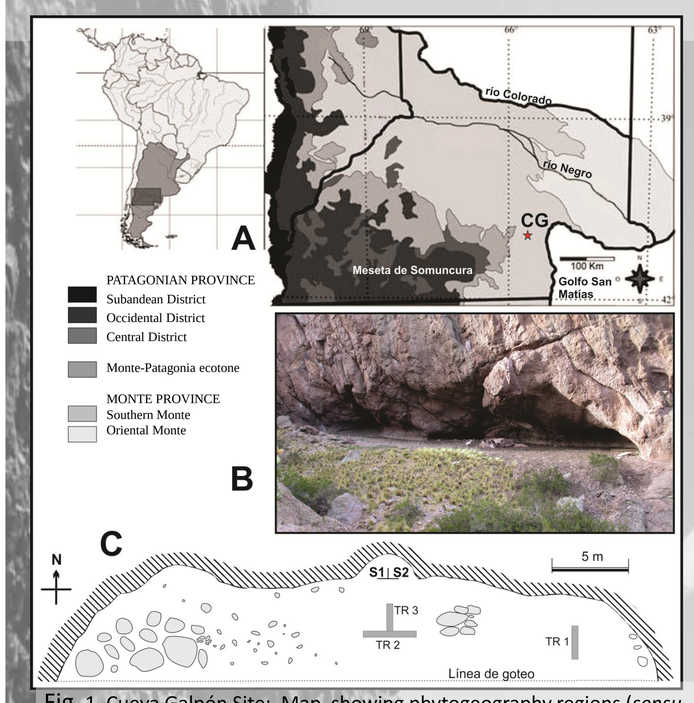

Fig. 1. Cueva Galpón Site: Map showing phytogeography regions (*sensu* León et al. 1998) (A); front view of the rock shelter (B); map of the rock shelter showing both excavation (S1, S2) and trenches (TR) areas.

Introduction

This paper deals with the archaeobotanical record of Cueva Galpón (Northern Patagonia, Argentina) which is located in the ecotone between the Monte and the Patagonian phytogeographic Provinces (León et al. 1998) (Fig. 1A,B). Cueva Galpón is a mortuary site, associated to a set of rock art, where at least two human bone assemblages were recognized (Carden and Prates 2015) (Fig. 2). Along with human bones, other kinds of material were found: ochre, animal bones, mollusk shells, and archaeobotanical remains. The latter, which are the subject of this paper, include anthracological, woody, carpological and manufactured items (e.g. textile, basketry, cordage and a probable “bed" structure). Radiocarbon dates of this context gave ages of 3,314 ± 51 (AA-91544) and 3,264 ± 38 (AA-91543) years BP (Carden and Prates 2015).

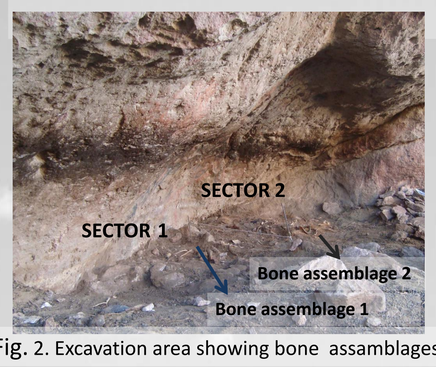

Fig. 2. Excavation area showing bone assamblages

Fig. 3. Environmental diversity of the area: hills (A), stream valleys (B), and Patagonian grass steppe in Somuncurá plateau (C)

Materials and methods

The excavation of the site was performed in two sectors of 3m^2 each (Fig. 2) to 50 cm deep (layers 1 to 10). A volume of 40x40x40 cm of sediment delimited by plant mats was recovered as a whole and discriminated in laboratory (Fig. 4). For charcoal analysis subsample was taken by means of a curve of species richness for each archaeological level (Badal García 1992; Ciampagna 2015); wood was identified following IAWA List of Anatomical Features (1989). Carpo remains and manufactured specimens were identified by means of traditional taxonomic keys and a variety of diagnostic characters (Correa 1978; Metcalfe 1962-80; Pérez de Micou 2002, 2006; Rodríguez 2013), and using local collection of plants as comparative material. Manufacture techniques were described following Pérez de Micou (2006).

Results

- Excluded the material found in the “grass beds”, 1620 plant remains were recovered: a half corresponds to wood charcoal and another half to desiccated (a few partially charred) remains.
- The disaggregation of the pack of sediment coming from assemblage 2 shows a top cover of a mat (Fig. 4A) whose warp was made from stems at least of *Piptochaetium* sp. and/or *Stipa* cf. *tenuissima* (Fig. 5), and the weft from stems of *Sporobolus rigens*.
- These structures were tied to sticks of *Larrea cuneifolia* by braids of 4 threads of leather or animal sinew (Fig. 4A); below this several layers of entire grass plants were found between the bones (Fig. 4B). Another mat made from bundles of *Stipa* and/or *Piptochaetium* stems seems to be part of the bottom of the pack.
- The analyzed sample of wood charcoal (N=265) includes 8 local taxa (Fig. 6). *Larrea* sp. represents almost the 60% (Fig. 3); these remains might come from the mortuary complexes.
- Charcoal dominates from 6th to 10th layers (specially from layer 8th to 10th). Most of them might be related to bone assemblage 1, which was calcined. The layer 10th was the only one with a concentration of wood charcoal particles (assemblage 1) (Fig. 7).
- Others plant material shows a high diversity (Fig. 8): A) woody sticks (n=423); B) *Ephedra* stem (n=1); C) barks (n=98); D) thorns (n=4); E) *Schinus* galls (n=12); F) *Prosopis* fruit parts (n=135); G) *Condalia* endocarps (n=48); H) leaves (n=68); I) inflorescences of *Grindelia* sp. (n=2), aff. Nassauvia sp. (n=3), Poaceae (n=2) and indeterminates (n=4); J) fiber bundles (n=7); and marine algae (n=2).
- Plant material shows dominance of wood sticks from 2nd to 5th layer (Fig. 7); probably due to their association with the matrix of the “grass bed” structure.
- Associated with this context a partially carbonized arrow shaft of “colihue” cane (*Chusquea* sp.) was found (Fig.8K).
- Different kind of manufactures were associated to assemblage 1 (Fig. 9): textiles (plaiting techniques) made from an unidentified vegetal fiber (A); nine fragments of plant strings (lax and compact) of two threads made from *Cortaderia* sp., *Cyperaceae* (Fig. 8 B), and indet. species; one plaiting work of three threads was made also from *Cortaderia* sp. (Fig. 9E-G). Rests of the twining weft that forms the mats were found separately (Fig. 9G-J).

Fig. 4. Pack of sediment and plant mats from assemblage 2

Fig. 5. Dispersed tufts of the”bed" structure made at least by *Stipa tenuissima*

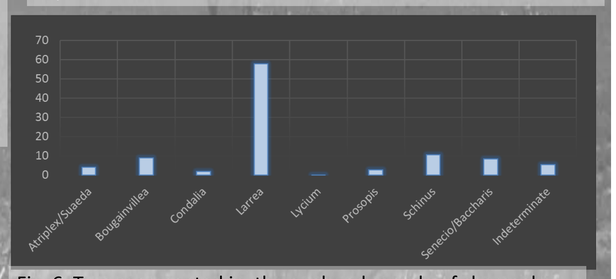

Fig. 6. Taxa represented in the analyzed sample of charcoal

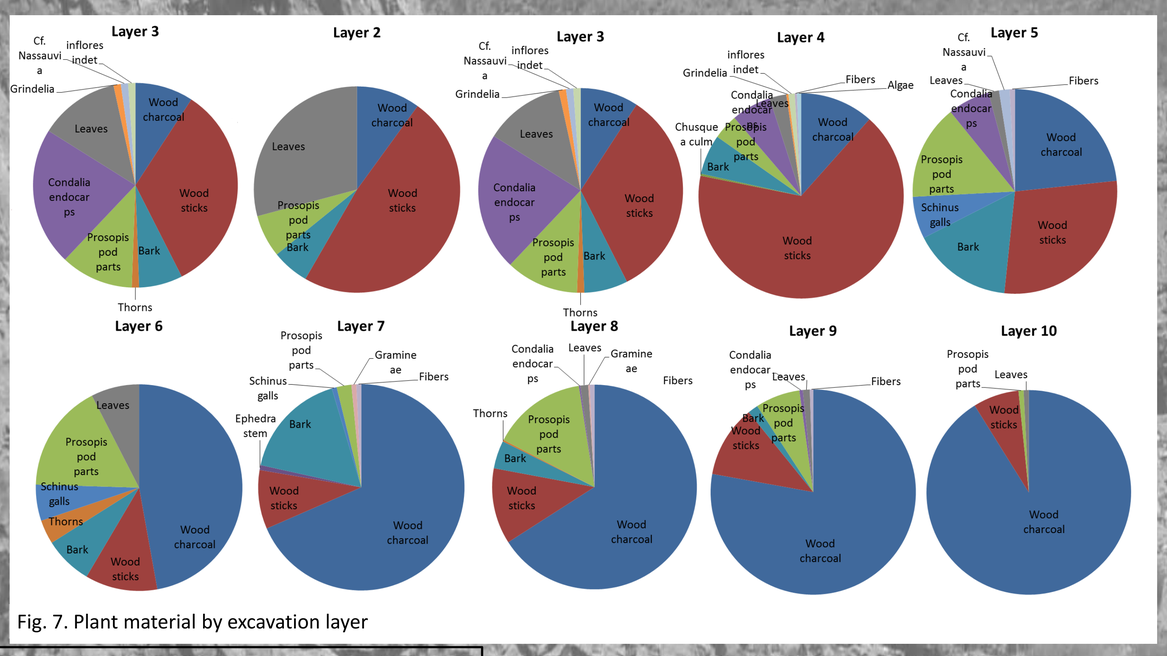

Fig. 7. Plant material by excavation layer

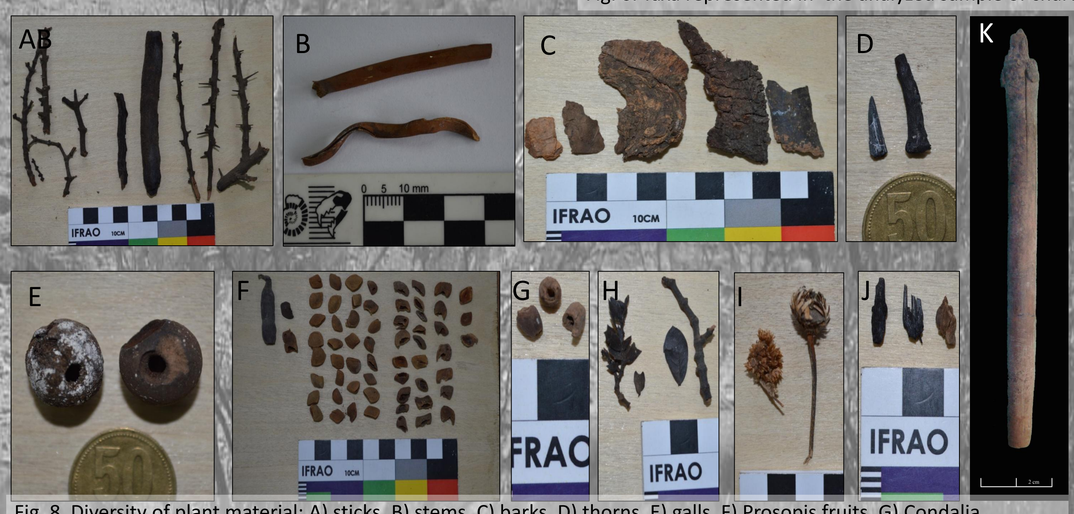

Fig. 8. Diversity of plant material: A) sticks, B) stems, C) barks, D) thorns, E) galls, F) Prosopis fruits, G) Condalia endocarps, H) leaves, I) inflorescences, J) fiber bundles , K) Colihue cane

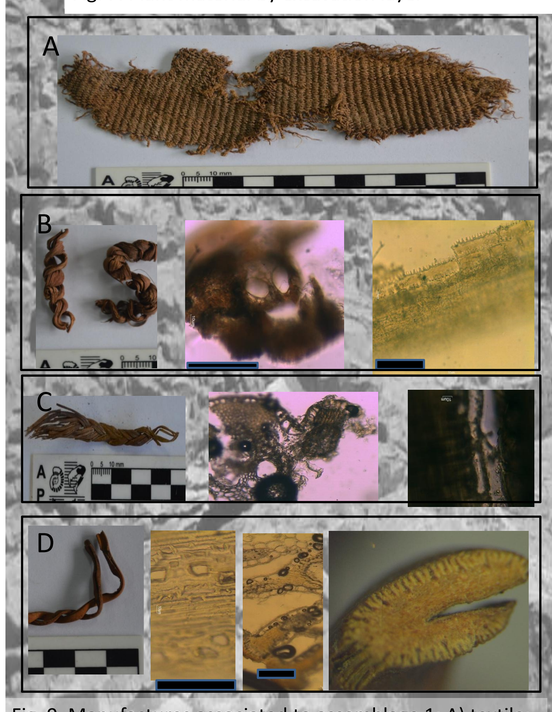

Fig. 9. Manufactures associated to assemblage 1: A) textile; B) threads made from *Cyperaceae;* C) plaiting work of three threads was made also from *Cortaderia* sp.; D) twining weft fragment made from *Sporobolus rigens*

Final remarks

Most of archaeobotanical remains of Cueva Galpón were strongly associated with the mortuary context.

Fibrous and woody materials (*Stipa*, *Sporobolus*, *Cortaderia*, *Cyperaceae*, *Larrea*) were used as raw and processed material for preparing the mortuary assemblage. The coincidence between wood used for preparing the mortuary assemblage 2 and wood charcoal particles, suggests the latter might have come from the mortuary assemblage itself and not from a domestic hearth (cf. Crivelli Montero et al. 1996).

Edible fruits (*Prosopis* and *Condalia*) and possible medicinal plants (bark, *Ephedra* and Asteraceae (with contents of alkaloids -ephedrine- or other chemical principles) (Pérez de Micou 1995)) may have been either consumed on the site during the mortuary ritual or left as funerary offering along with human corps. The taphonomic complexity of the site does not allow validating any of these hypotheses yet.

Though most of the plants used on the site may have been locally available, the presence of *Chusquea* sp. (coming from the Andean forest) and seaweed (coming from the Atlantic Ocean) suggests a high mobility range of the hunter gatherer of the area.

The presence of dry endocarps of *Condalia* sp. (piquillín), endocarps of *Prosopis* sp. (algarrobo), and aff. *Grindelia* sp. flowers, suggests a spring/summer seasonal occupation of the site.

Finally, it is worth mentioning that, together with basketry remains from Campo Moncada II (Pérez de Micou 2002), plant mats from Cueva Galpón are the earliest basketry remains recovered in all Patagonia so far.

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