Etnoarchaeological approach to hunter-gatherers basketry of Tierra del Fuego-Patagonia (Chile and Argentina)

Anna Franch Bach, Luisa Vietri, Raquel Piqué Huerta

Correspondence

Anna Franch Bach[1], Luisa Vietri[2], Raquel Piqué Huerta[1]

[1] Departament de Prehistòria, Universitat Autònoma de Barcelona (UAB), Facultat de Filosofia i Lletres, Edifici B, Campus de Bellaterra. 08193 Barcelona.
[2] Independent Researcher.

*Corresponding Author: Anna.Franch@uab.cat

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Research

Abstract

Background: Tierra del Fuego and the Oriental Channels of Patagonia in Chile and Argentina comprise a vast area of channels, fjords, and islands. In pre-European times, these areas were inhabited by hunter-fisher-gatherer communities who navigated in these channels in their canoes. The Isla Grande of Tierra del Fuego was also home to pedestrian hunter-gatherers. Skilled basket making was a notable craft among the women of these groups, and some of these traditional techniques persist today.

Methods: Our research delves into the ethnohistorical documentation and ethnographic collections housed in various museums across Chile, Argentina, and Europe. The primary goal is to address several questions concerning the ecological and technical knowledge of these populations and the purpose of their organic containers. The outcomes of our investigation shed light on the diverse aspects of baskets, including variations in shapes, raw materials, sizes, and production techniques.

Results: Notably, our findings underscore the relationship between these variables and the function of the containers. The predominant use of these baskets was for transporting and storing food and belongings. Remarkably, there is a homogeneity in the raw material employed (*Marsippostermum grandiflorum*) and a noticeable low diversity in terms of shapes and technic. Its geographical origins and their significance within these hunter-gatherer-fisher societies are also discussed, in particular intergenerational transmission of knowledge.

Keywords: Basketry, rushes, Hunter-fisher-gatherers, Patagonia-Tierra del Fuego, ethnoarchaeology.

Background

The study of prehistoric basketry in hunter-gatherer societies poses significant challenges due to the organic nature of the materials involved, which are rarely preserved in the archaeological record (Hurcombe 2013). As a result, our understanding of the techniques, products, and functions of baskets remains limited, and we still have only a rudimentary knowledge of the role that basketry played in the daily lives and social structures of these groups. The scarcity of basketry remains in archaeological contexts introduces a substantial bias in the study of fiber-based technologies, hindering the reconstruction of their historical development, including raw material procurement and processing, manufacturing techniques, shape, and

functional variability. Furthermore, social implications—such as the transmission of technical knowledge and the gendered division of labor—remain unexplored.

Although basketry is seldom preserved, exceptional preservation conditions have revealed baskets, cords, and similar artifacts, allowing researchers to investigate their functionality, technical diversity, and cultural significance among prehistoric hunter-gatherers. In Europe, Cova de Santa Maira (Spain) has produced remains dated between 13.2 and 10.2 ka cal BP, providing insights into the complex use of plant resources during the Late Glacial and Early Holocene (Aura *et al.* 2020). In North Africa, the site of Takarkori in the Acacus Mountains (Libya), dated between ca. 9 and 7.5 ka cal BP, yielded baskets, mats, and cords that attest to a sophisticated use of plant fibers in early Saharan contexts (Di Lernia *et al.* 2012). Likewise, the Cueva de los Murciélagos (Spain) has yielded an exceptional collection of woven and braided artifacts dated to 9.6-9.1 ka cal BP, remarkably preserved in arid environments (Martínez-Sevilla *et al.* 2023). In South America, Cueva de Guitarrero (Perú) yielded basketry fragments dated between 13.1 and 12.6 ka cal BP, considered among the earliest evidence of fiber use in the region (Jolie *et al.* 2011). These findings confirm that basketry was a widely distributed technology among Late Pleistocene and Early Holocene hunter-gatherer groups. Despite its fragmentary and localized archaeological record, these discoveries highlight the technological and ecological knowledge required for their production, even if their exact functions—often linked to storage and transport—remain debated.

Plant macro remains, particularly those of plant fibers, are not commonly encountered in the archaeological record of Tierra del Fuego-Patagonia (now Chile and Argentina). In the archaeological sites of this region, only carbonized woody remains and seeds have been recovered (Berihuete-Azorín 2009, Caruso-Fermé 2012, Ciampagna 2015, Franch Bach 2022). The scarcity of basketwork remains in the archaeological record results in a significant bias in the study of productions involving plant fibers. For this reason, it is difficult reconstruct basket weaving the characteristics of the production process - procurement, selection and processing of raw materials, techniques used, typology and function of the baskets -. In this region where no direct evidence has survived ethnoarchaeology emerges as a key methodological tool for addressing invisible or absent technologies.Ethnoarchaeological approaches allow researchers to understand technical, functional, and symbolic aspects of traditional basketry through comparison with historical or contemporary groups.

Fueguinian societies were an attraction for ethnography in the late nineteenth and early twentieth centuries, when explorers, missionaries and ethnographers began to document the way of life of these societies, and in turn collected artefacts produced and/or used by these societies, creating ethnographic collections that were later transferred to different museums around the world (Butto & Fiore 2024). There is abundant ethnohistorical documentation and ethnographic material from Tierra del Fuego and Patagonia housed in museums across Chile, Argentina and Europe. Given the limited archaeological visibility of basketry, the analysis of ethnographic and museum collections has become a fundamental approach to reconstructing the social and technical practices associated with fiber work. Recent studies—such as Fortney's (2001) research on *Stó:lō* coiled basketry in the Northwest Coast of North America—have demonstrated that classification systems, technical language, and intergenerational knowledge transmission are key to understanding basketry as a culturally situated technology. Similarly, Murphy (2019) has shown that Cherokee baskets are understood and represented differently depending on the institutional frameworks that exhibit them—whether Native or non-Native museums—thus prompting a critical reassessment of Western categorization systems. These perspectives converge in highlighting the need for methodologies that are sensitive to the agency of objects, their trajectories, and their embeddedness in social contexts. In this sense, an ethnoarchaeological approach to basketry offers a powerful framework for bringing to light the intangible dimensions of past technologies and understanding their material, social, and symbolic roles both historically and today.

The aim of this study is to analyze ethnographic documents and basketry collections from Tierra del Fuego, Patagonia, in order to explore the production, use, and cultural significance of basketry among Fuegian hunter-gatherer societies. The research is guided by three specific objectives. First, to explore the primary uses of baskets in the daily lives of these groups, including their role in storage, transportation, and food preparation. Second, to understand what materials and techniques were used to produce baskets, how these raw materials were selected and processed, and how styles and techniques varied across environments and cultural groups. Third, to examine what basketry can reveal about the technological and social organization of these hunter-gatherer societies, including labor distribution, and knowledge transmission.

Regional background

The Magellan-Fuegian archipelago is located at the southernmost tip of the American continent and includes Tierra del Fuego and the Oriental Channels of Patagonia in Chile and Argentina. Since the conclusion of the last glaciation approximately 11500 years ago, this area has been inhabited by hunter-gatherer-fisher societies (Clapperton 1992, Massone 1987, 2004). The

oldest known archaeological settlements in the region date back to 10000 years ago, marking the arrival of hunter-gatherer-fisher societies (Orquera and Piana 1999). In recent historical periods ethnographers and travelers described several groups. The channels of the archipelago was inhabited by the Yagán (or Yámana) and the Alakaluf (or Kawésqar), who were hunter-gatherer-fishers navigating in canoes and exploiting coastal resources (Fig. 1). They primarily subsisted on hunting marine mammals and birds, particularly seals, and engaged in fishing, collecting mollusks, eggs, berries, and mushrooms. Occasionally, they used beached large cetaceans (Lothrop 1928, Gusinde 1951, 1986, Orquera & Piana 1999, 2009). The Selk'nam and Haush occupied the north-central zone and the eastern end of the Isla Grande, relying on pedestrian hunting and gathering practices, with occasional use of coastal resources (Mansur and Piqué 2009) (Fig. 1). They primarily hunted terrestrial mammals, with a particular emphasis on guanacos, and supplemented their diet with the collection of mollusks, eggs, mushrooms, fruits, and various other plant resources (Gallardo 1910, Gusinde 1982, 1951, Chapman 1986, 1989). These societies maintained their traditional way of life until the late 19th Century when European settlers began establishing themselves on Isla Grande, the main island of the Magellan-Fuegian archipelago.

Abundant ethnohistorical and ethnographic sources documenting these populations exist, shedding light on plant-based technologies and the diverse uses of plants by the Fuegian societies. Although these sources are neither exhaustive nor highly detailed (Gallardo 1910, Gusinde 1982, 1951, Chapman 1986, 1989) they indicate that plant resources fulfilled a wide range of purposes. Several ethnographers and early travelers—such as Gusinde (1982, 1986, 1991), Lothrop (1928), Chapman (1986), Bridges (1948), and Hyades and Deniker (1891)—documented aspects of basket-making among these groups, often describing the use of *Marsippospermum grandiflorum*, the manufacturing process, and the social dimensions of this craft. Moreover, wood was utilized for fire and construction (Martínez-Crovetto 1968, 1982, Berihuete-Azorín 2009, 2016, Caruso-Fermé 2012, Mansur & Piqué 2009, 2012), as well as in the crafting of various tools and implements.

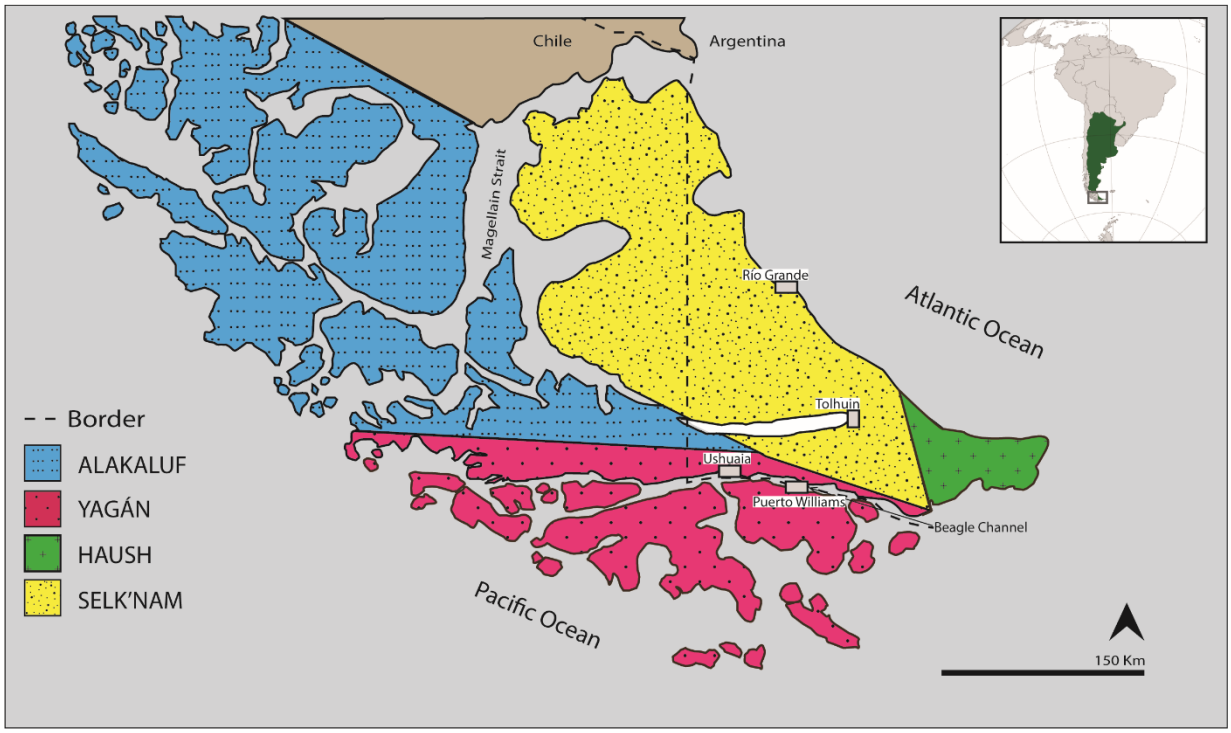

Figure 1. Map of the historical distribution of hunter-gatherer-fisher societies (*sensu* Chapman 1989).

Previous studies of Fuegian ethnographic collections have largely focused on the identification, documentation, and general description of materials housed in European and American museums, often conducted within the framework of broader projects (Estévez & Vila 2006; Vila & Estévez 2017; Prieto & Cárdenas 2002). More in-depth analyses have primarily concentrated on Italian collections, addressing their provenance and collection history (Vietri & Britz 2019). Other research has examined particular categories of materials, such as wooden artifacts (Piqué 2006; Caruso et al. 2011), visual representations (Fiore & Butto 2014), and lithic, bone, and bow-and-arrow implements curated in Argentine institutions, including the Museo Etnográfico Ambrosetti and the Museo de La Plata (Ratto 2003). In contrast, studies specifically addressing basketry remain relatively limited, focusing on selected collections and offering preliminary insights (Vietri & Britz 2019; Ochoa & Marticorena 2022; Vietri 2023).

Materials and Methods

The present work focuses on the evidence of basketry made in historical times by the original communities of Tierra del Fuego and the western channels of Patagonia in the current states of Chile and Argentina. This work study in detail the ethnographic Fuegian basket collected in the 19th and early 20th centuries and nowadays preserved in 14 museums in Europe, Chile and Argentina: -Museo nazionale preistorico etnografico "Luigi Pigorini", Museo Missionario Colle Don Bosco, Museo delle Culture del Mondo (Castillo D'Albertis), British Museum, Musée del Homme (Musée du quai Branly), Peter the Great Museum of Anthropology and Ethnography, Ethnologisches Museum (Museum für Völkerkunde), Weltmuseum Wien (Museum für Völkerkunde), Museo Etnológico Anima mundi (Pontificio Museo Missionario Etnologico), Museo Nacional de Antropología, Museo Salesiano "Maggiorino Borgatello", Museo Regional de Punta Arenas, Museo del Fin del Mundo and Museo "Virginia Choquintel"-. The review and history of the ethnographic collections of several of the museums analyzed is detailed in the work of Vietri and Britz (2019). Additionally, we consulted ethnographic literature published in the early 20th century, which provided valuable historical context for our study.

The documentation of baskets is based on a review of materials accessible through open-access repositories and on firsthand analyses.

Firstly, information on the baskets was obtained from the open access digital repository: DIGITAL CSIC Humanidades y Ciencias Sociales (IMF), under the dataset ANAME: Etnoarqueología en Tierra del Fuego: Análisis arqueológico de materiales etnográficos, developed within the framwork of the project "*Contrastación arqueológica de la imagen etnográfica de los canoeros magallánico-fueguinos de la costa norte del canal Beagle, Tierra del Fuego, Argentina*" directed by Dr. Assumpció Vila-Mitjà and Dr. Jordi Estévez-Escalera between 1986-1987. This repository includes ethnographic collections from several European museums: British Museum (London), Musée del Homme (Paris), Peter the Great Museum of Anthropology and Ethnography (Saint Petersburg), Ethnologisches Museum (Berlin), Weltmuseum Wien (Vienna), Museo Etnológico Anima mundi (Vatican), Museo Nacional de Antropología (Madrid) (Estévez & Vila 2006).

Secondly, we conducted firsthand examinations of basketry collections from the *Museo Salesiano Maggorinio Borgatell*o and *Museo Regional* in Punta Arenas (Chile), as well as from the *Museo del Fin del Mundo* in Ushuaia and *Museo Virginia Choquintel* in Río Grande (Argentina), within the frame of the project "*Arqueología en el mar interior de Última Esperanza (Magallanes, Chile): navegación, intercambio y uso del bosque nativo durante el Holoceno tardío*" directed by Dr. Raquel Piqué).

Finally, the Fuegian ethnographic collections housed in three Italian museums: *Museo Preistorico Etnografico "Luigi Pigorini"* (Roma), *Museo Etnologico Missionario Salesiano de Colle Don Bosco* (Castelnuovo) and *Museo delle Culture del Mondo* (Genova) were studied by Luisa Vietri as part of her Masther's thesis.

The methodology consisted of recording technical and morphological characteristics of each basket, complemented by review of ethnographic literature. A database has been created, supported by photographic documentation and structured around the following fields: Museum, reference, collection, date of collection, ethnic affiliation, object, raw material, technique, shape, description, internal wear, measurements (height, rim diameter, and maximum diameter). In the "object" category baskets were classified into three general types: basket, basket with lid and basket base. The manufacturing technique was categorized according to coiling variants: -added half-hitch, half twisted ties and knotted. And finally, the shape was classified as globular, cylindrical, concave and others. When available, additional contextual information was recorded, such as the year of manufacture, artisan, donor, and year of donation to the museum. Due to conservation issues and the fragility of the baskets, in some cases it was not possible to take measurements. Each basket was documented through a series of general and detailed photographs (Fig. 2).

Our methodology involved a comprehensive review of ethnographic literature and the creation of a database of historical baskets stored in museums. Ethnographic and ethnohistorical sources provide rich and valuable insights into the plant resources utilized by various Fuegian hunter-gatherer-fisher societies (Hyades & Deniker 1891, Gusinde 1951, 1982, 1986, Gallardo 1910, Lothrop 1928, Bridges 1948, Martínez Crovetto 1968, 1982). However, like all ethnographic literature, this information requires critical evaluation. In the context of Magallanic-Fuegian hunter-gatherer-fisher societies, these records were predominantly authored by men during the nineteenth and twentieth centuries, reflecting the ethnocentric and androcentric biases of that era. Consequently, the contributions of women and children are often overlooked and inadequately documented (Mansur *et al.* 2007, Piqué 1999). Furthermore, it must be considered that most sources are late

work, since the contact occurred when these societies had already prolonged contact with European society (Orquera & Piana 1999).

Results

Basketry in fuegian ethnographic sources

Several ethnographers and travelers described the basketry of these groups, providing information on raw materials acquisition and processing, manufacturing techniques, and function, although there are some discrepancies between the data provided by different authors.

Ethnographic and ethnohistorical sources indicate *Marsippospermum grandiflorum* as the primary species used. *Marsippospermum grandiflorum* is a perennial herbaceous plant belonging to the Juncaceae family, typically growing to heights of 30 to 50 cm. It thrives in various environments such as wet sands, open moist peaty grasslands, lagoon and river margins, magellanic moorlands, and other poorly drained areas (Moore 1983). According to historical accounts, rushes were selected while still green and gathered approximately 50 cm long. Several authors consider that the rushes were first prepared by subjecting the stems to heat from fire, either by passing them through flames lengthwise or over ashes. Subsequently, they were coiled, and people softened the stems using their hands and teeth. This process of heating and coiling made the rushes more flexible and supple, making them suitable for basket weaving (Lothop 1928, Gusinde 1937, 1982, 1986). On the other hand, according to Hyades and Deniker (1891), rushes were used when partially dried.

For weaving, no special instruments were used, except for a small awl made from various materials, including wood and bone to create a small hole in the coil for inserting the next rush stem. To ensure a slow drying process and prevent deformation, the basket was filled with fresh grass or wet moss (Gusinde 1982).

Yagán, Selk´nam and Kawésqar people had different kinds of baskets, and they were more abundant among the Yagán. However, there is no agreement between ethnographic sources concerning the techniques used and classes of baskets produced. According to the works of Lothrop (1928) and Gusinde (1982), coiling and knotting were the main techniques, although twining was also described. According to Gusinde (1986), there were three types of coiling for the Yagán: *Tawêla* (Coiled firm, spiral coiling with added half-hitch), *Cefkaalax* (Loose coil, spiral coiling with half twisted ties) and *Keijims* (Coiled open, intertwined knotted). Lothrop (1928) considered a fourth type, the so-called *chaiwanush*, used for submersible nets. According to Gusinde, however, they cannot be considered as basketry, since they are not containers but submersible nets, tied to a long stick and intended to catch small fish.

For the Selk'nam people, only one coiling technique has been documented, known in ethnographic accounts as coiled basketry, also characteristic of the Yagán *Tawêla*. This consists of coiled firm, coiled in half ties (Gusinde 1982, Lothrop 1928). However, according to Gallardo (1910), the Selk'nam made two types of baskets, one with an open woven weave and another with a closed one. Finally, the Kawésqar people also use the same coiling technique as Selk'nam people, however the coils can be separated from each other, therefore the basket can be made looser or more compact (Gusinde 1991).

Skilled basket making was a notable craft among the women of these groups, and some of these traditional techniques persist today.

The ethnographic collection

A total of 144 baskets belonging to these 14 museums were studied, as they have an ethnic affiliation directly related to the Fuegian societies (Table 1, Supplementary material 1). Ethnic affiliation was sometimes unclear. However, it was evident that the Yaghan and Kawésqar baskets are the most abundant. The collection studied consists of whole or semi-whole baskets woven from rushes. Of these, 13 are miniature baskets, 4 are fragments of the base and 4 are baskets with lids.

There is a homogeneity in the type of technique used by the Fuegian societies to make baskets, there are only two types of baskets that have been documented in the museums (Fig. 2): -*Tawêla* type (Coiled firm, spiral coiling with added half-hitch) and *Keijims* type (Coiled open, intertwined knotted)-. Although within each set, and especially in the coiling with added half-hitch set, there are differences in relation to the type of handle, number and size of the coils, and the endings (Fig. 3).

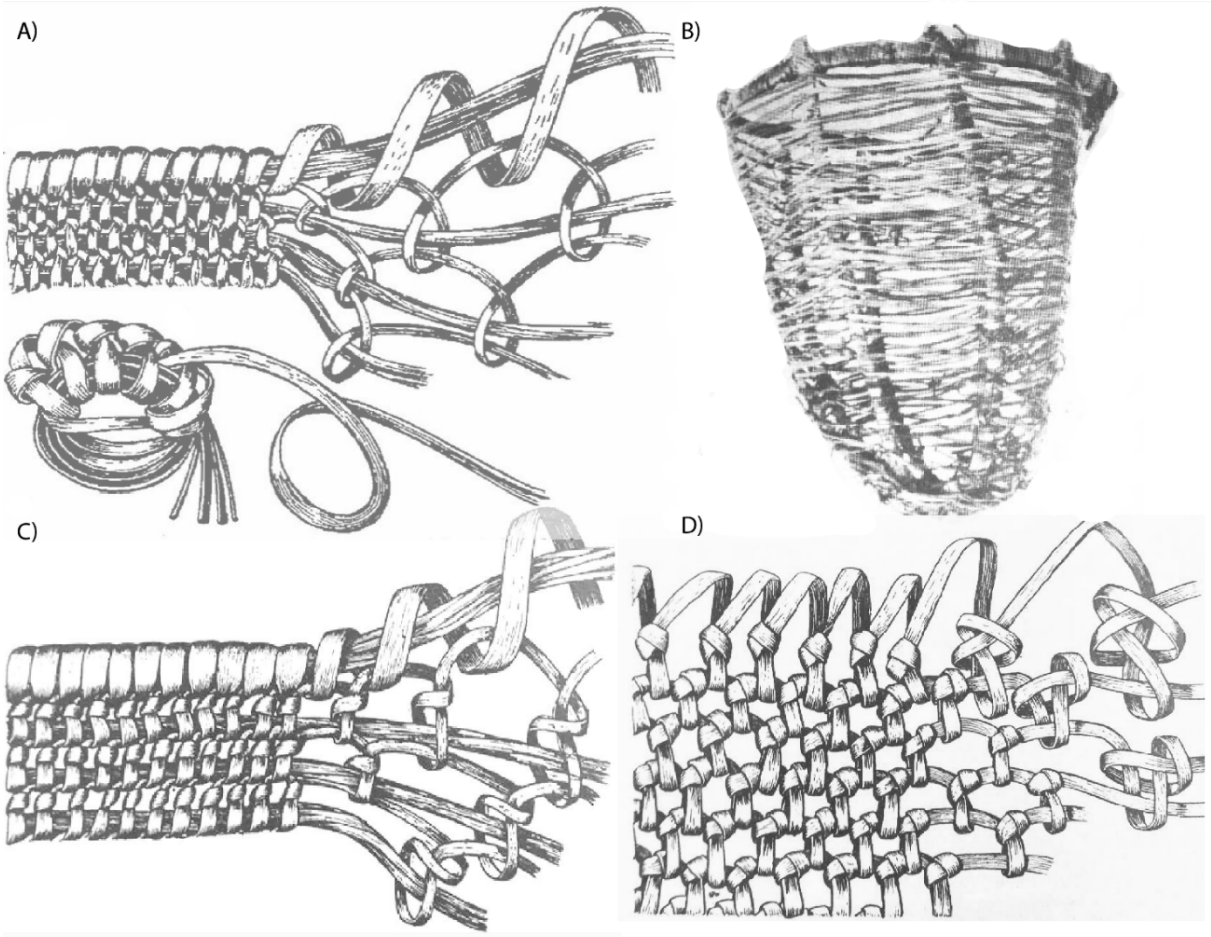

Figure 2. Drawings of details of the stitched spiral machining process: A) *Tawêla*, B) *Chaiwanush*, C) *Cefkaalax* and D) *Keijims* (*sensu* Lothrop 1928).

Table 1. Absolute counts (N) and relative frequencies (%) of basket weaving techniques.

Technique	**N**	**%**
Coiled firm, spiral coiling with added half-hitch	123	85,42%
Coiled open, intertwined knotted	21	14,58%
Total	**144**	**100%**

The macroscopic features allowed the identification of the raw material used in all the baskets were rushes, probably *Marsippospermum grandiflorum*, although it was not possible to take samples to verify this is the only rush growing in the region. Secondarily, thin branches between 8 and 5 mm in diameter were used to reinforce the edges of the knotted baskets in the 21 examples of this type. The handles were made of leather or rush, the latter made of braided rush of 3 or 4 fibres, or alternatively with covered handles (Fig. 3).

In relation to the shape of the baskets, 3 types have been documented. The most ubiquitous is the globular with 82.6% (N= 119), followed by the cylindrical shape with 14.6% (N= 21), and finally the concave shape with 2.8% (N= 4). This last shape corresponds to the basket base fragments, what suggest can be fragments of globular baskets.

Figure 3. Photographs of the basketry techniques identified: A) Basket from Museo del Fin del Mundo, coiled firm, spiral coiling with added half-hitch (*Tawêla* type), and B) Basket from Museo Salesiano "Maggiorino Borgatello", coiled open, intertwined knotted (*Keijims* type).

All ethnic groups, according to the attributions documented by the people who collected the materials, made the materials with the two dominant techniques: knotted and spiral coiling with added half-hitch. The spiral coiling with added half-hitch was mainly used to obtain globular shapes, while the knotted technique was mainly used to make cylindrical shapes.

Regarding the measurements recorded in the baskets, the height ranges between 6.2 and 28 cm, although most of the baskets are between 12 and 18.45 cm. The border diameter ranged from 7 to 26.5 cm, the majority ranged from 11.58 to 18.5 cm, and finally the maximum diameter ranged from 9.5 to 33 cm, with the majority ranging from 15.6 to 22.9 cm (Fig. 4). It is necessary to mention that for this analysis the scale models of the baskets were omitted, because they are miniatures that do not represent the original measure of use. In addition, we excluded from the analysis the baskets that for various reasons: fragility of the basket, breakage, fragmentation, deformation, among others, do not represent the measurements recorded. In total, the measurements of 104 baskets have been analyzed, considering the two types of shape, globular and cylindrical.

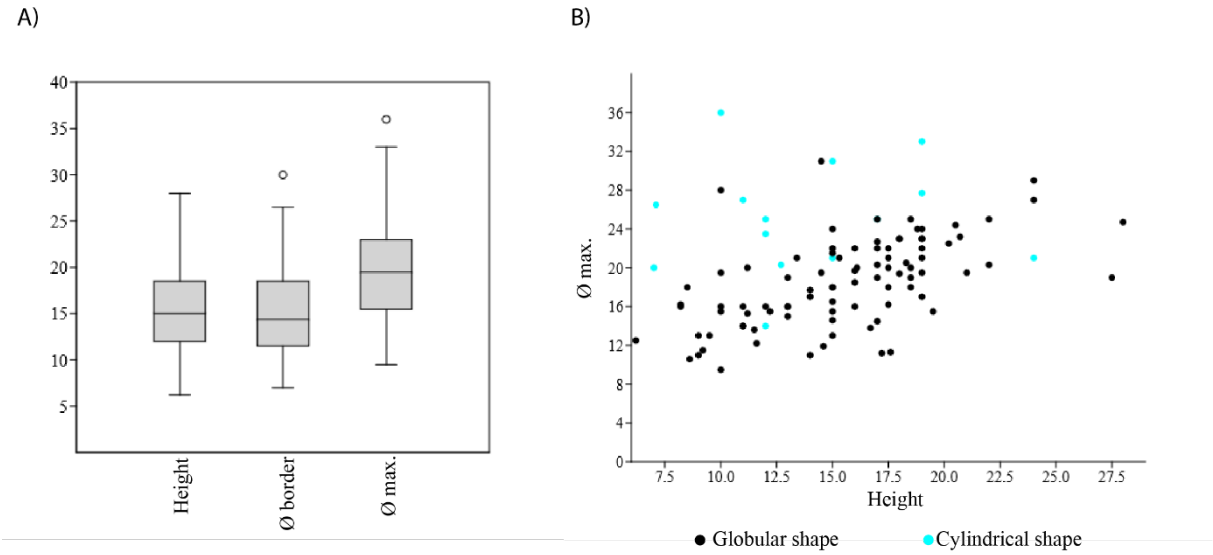

Figure 4. A) Box plots of height, border diameter and maximum diameter measured from baskets, and B) Scatter plot of height and maximum diameter, according to basket shape: -globular or cylindrical-.

Discussion

The limited preservation of basketry in the archaeological record of Tierra del Fuego and Patagonia has made it difficult to interpret flexible technologies in southern South America. However, this ethnoarchaeological approach, which is based on the systematic analysis of 144 baskets housed in museums, has revealed consistent patterns in raw material selection, manufacturing techniques, and formal attributes. These patterns can be interpreted in terms of functionality, social organization, and the transmission of technical knowledge.

One of the main findings is the low morphological variability in basket shapes, suggesting the use of standardized forms across different utilitarian contexts. This formal consistency points to shared design templates or functional archetypes among regional basket-making traditions. In contrast, basket size varied significantly, reflecting task-specific adaptations. A strong correlation between shape and technique was also observed: knotting was predominantly employed in cylindrical baskets, while coiling was mostly associated with globular forms. This indicates that construction methods were not arbitrarily selected but closely aligned with the functional requirements of each basket type.

These functional distinctions are further supported by the mechanical and structural properties of the baskets. Cylindrical forms, more flexible and featuring open-weave structures, were likely ideal for shellfish gathering, as the porous weave allowed for drainage. Globular baskets, by contrast, were more rigid and enclosed, making them well-suited for the storage and transport of fruits, eggs, or fungi. The interplay between form, materiality, and use reflects a high degree of technological intentionality.

Similar patterns have been extensively documented in ethnographic and archaeological contexts worldwide. In the American Southwest, Indigenous groups such as the Hopi, Pima, and Apache employed coiled baskets for storage and ceremonial purposes, while open-weave techniques—plaiting or twining—were used for winnowing and gathering (Jolie *et al.* 2011). In sub-Saharan Africa, coiled baskets were used to store grains, while open-weave varieties were used to carry agricultural or aquatic resources. Comparable trends have been observed in Southeast Asia and Oceania, where basketry techniques and forms are consistently linked to specific subsistence tasks (Barham 2000, MacKenzie 1991, King 1999). These cross-cultural parallels reinforce a common anthropological principle: basketry techniques and forms tend to co-evolve with their practical applications, shaped by material properties and ecological conditions (Barham 2000).

Beyond the context of the Fuegians, archaeological and ethnographic evidence of basketry in hunter-gatherer societies shows that the uses, forms, and techniques of fiber-based technologies have converged globally. Though rare due to the perishable nature of the materials used, basketry has been documented as early as the Upper Paleolithic and Mesolithic periods. It played a key role in transport, storage, and gathering. As Romero (2021) points out, fiber technologies may rival lithic tools in antiquity due to their central functional role in early societies. Examples include twined ca. 9000 years old fiber baskets from Cueva de los Murciélagos in Spain (Martínez Sevilla *et al.* 2023) and Takarkori in Libya (Di Lernia *et al.* 2012), fragments over 8,000 years old from the Dufuna rock shelter in Nigeria, and basket remains from the Fayum region in Egypt with equally ancient chronologies (Miret 2009, Wendrich 2016). These finds demonstrate that basketry was not an isolated innovation but a widely developed technology, adapted to specific ecological and social contexts (Romero 2021), as also evidenced by the Fuegian collections. Moreover, ethnoarchaeological analyses of museum collections in Europe and South America (Estévez *et al.* 2007) highlight the value of baskets not only as functional objects but as documents of technological knowledge, gendered labor, intergenerational transmission, and cultural exchange (Vietri & Britz 2019, Vietri 2023).

In the Patagonian and Fuegian contexts, basketry played a vital role in the daily lives of the Yaghan, Kawésqar, Selk'nam and Haush. Baskets were essential tools for subsistence, used to collect shellfish, transport goods in canoes, and store items in domestic spaces (Gusinde 1982, 1986, 1991, Chapman 1986, Bridges 1948). Despite differences in language, social organization, and mobility patterns, these groups showed remarkable similarities in their basketry practices, including raw material selection and construction techniques. This points to the existence of shared ecological and technological knowledge across cultural boundaries.

The analysis of bone awls from Fuego Patagonia through the study of use marks and the creation of experimental replicas, provides direct evidence that they were used to manipulate plant fibers (Zangrando *et al.* 2014, Álvarez *et al*. 2014, Franch *et al.* 2023). These tools exhibit micro-uses related to perforating of plant stems, which would reinforce the hypothesis of the prehistoric presence of basketry in the region, although the processed objects have not been preserved.

Equally important is the social and gendered dimension of basketry. Ethnographic and historical sources consistently describe basket-making as a female activity, passed down from mothers to daughters (Gusinde 1982, 1986, 1991, Chapman 1986, Bridges 1948). This is consistent with global patterns in which women are the primary holders and transmitters of technical knowledge related to daily subsistence (Joyce 2000). The persistence of basketry across different social groups in the region reinforces the idea of an embedded, long-standing system of ecological knowledge maintained through women's labor and agency.

In addition to their technical and functional significance, baskets carry profound symbolic and patrimonial value in the context of contemporary cultural revitalization. As Ochoa and Marticorena (2022) and Marticorena (2016) argue, for the Yaghan people, basketry remains a form of cultural resistance and continuity in the face of colonization, territorial dispossession, and discourses of extinction. Far from being obsolete, basketry serves as a living thread of intergenerational knowledge, a material link to ancestral territories, and a powerful marker of identity. Museum collections gain renewed relevance when they are reinterpreted and reclaimed by descendant communities, as is the case with the collection at the Yagan Usi - Martín González Calderón Territorial Museum in Puerto Williams, where basketry is actively integrated into processes of self-determination and heritage restitution. In line with this, Butto and Fiore (2024) show that Fuegian ethnographic collections—such as those compiled by Martin Gusinde and housed in the Monastery of Sankt Gabriel (Austria)—document not only material culture but also Indigenous agency, negotiation, and interaction within colonial contexts. Recognizing these dimensions allows us to treat collections not as static repositories but as dynamic archives of complex historical trajectories that link Indigenous peoples to their dispersed heritage. Basketry, in this sense, enables us to reconstruct technological histories and to reflect on present-day processes of cultural reemergence and reappropriation.

Finally, the analysis of Fuegian basketry enables us to recognize the significance of indigenous technologies as vehicles of knowledge. Intergenerational transmission, often occurring within female spheres, has played a pivotal role in the preservation and standardization of techniques, forms, and materials (Gusinde 1982, Chapman 1986, Joyce 2000). Recent studies emphasize that female agency and matrilineal transmission of knowledge challenge androcentric perspectives, with women acting as the primary custodians of technical knowledge in hunter-gatherer societies (Vietri & Briz 2019, Joyc 2000). Similarly, basketry is recognized as intangible heritage capable of expressing ecological knowledge, identities and cultural resistance in the face of colonization and territorial displacement (Marticorena 2016, Ochoa & Marticorena 2022, Butto & Fiore, 2024). This approach broadens the discussion beyond strictly functional considerations, positioning basketry as an active mediator of memory, identity, and heritage, and bringing it into dialogue with contemporary debates in social archaeology and postcolonial studies (Estévez *et al.* 2007, Murphy 2019, Romero 2021).

Conclusion

The ethnoarchaeological study of basketry in the hunter-fisher-gatherer societies of Tierra del Fuego and Patagonia provides critical insight into a technology that has long remained archaeologically invisible. By examining a large corpus of museum-held baskets, this research reveals coherent patterns of form, technique, and function that suggest a high degree of technological sophistication and cultural continuity.

The strong correlation between basket shape, size, and construction method reflects task-specific optimization, informed by ecological conditions and social organization. The predominance of certain materials and techniques across different cultural groups suggests shared knowledge systems that transcend linguistic and territorial boundaries.

This study also highlights the gendered nature of basket-making, consistent with global ethnographic patterns that associate fiber-based crafts with women's knowledge and labor. The intergenerational transmission of skills was essential for the preservation and stability of this tradition, and it continues to play a vital role in the cultural vitality of Indigenous communities today.

Beyond the material dimension, basketry emerges as a powerful lens through which to explore broader themes: gender dynamics, technical knowledge transmission, and meanings of material culture. In the context of postcolonial heritage reappropriation, baskets are not merely remnants of the past—they are agents of cultural resilience and instruments of memory.

Declarations

List of abbreviations: Not applicable

Ethics approval and consent to participate: Not applicable. The research was based exclusively on the analysis of ethnographic and museum collections and did not involve human participants or experiments.

Consent for publication: Not applicable

Availability of data and materials: All data analyzed during this study are included in this published article and its supplementary material.

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Literature cited

Álvarez M, Mansur ME, Pal N. 2014. Experiments in Bone Technology: A Methodological Approach to Functional Analysis on Bone Tools. In: Mansur ME, Alonso Lima M, Maigrot Y (eds). Traceology Today. Methodological Issues in the Old World and the Americas, Proceedings Vol 6, XVI UISPP British Archaeological Reports 2643. Archaeopres, Oxford, UK, Pp. 19-26.

Aura Tortosa JE, Pérez-Jordà G, Carrión Marco Y, Seguí Seguí JR, Jordá Pardo JF, Miret Estruch C, Verdasco Cebrián CC. 2020. Cordage, basketry and containers at the Pleistocene-Holocene boundary in southwest Europe. Evidence from Coves de Santa Maira (Valencian region, Spain). Vegetation History and Archaeobotany 29:581-594. doi: 10.1007/s00334-019-00758-x).

Barham AJ. 2000. The Fibre Revolution: Textile Extensification, Ethnographic Analogy, and Pleistocene Expansion in Sahul. Australian Archaeology 50:39-48.

Berihuete-Azorín M. 2009. El papel de los recursos vegetales no leñosos en las economías cazadoras-recolectoras. Propuesta para el estudio de su gestión: El caso de Tierra de Fuego (Argentina). Phd dissertation, Universidad Autónoma de Barcelona.

Berihuete-Azorín M. 2016. More than a list of plants: a proposal of systematization of ethnobotanical information for archaeobotanical interpretation. Quaternary International 404:4-15. doi: 10.1016/j.quaint.2015.10.114.

Bridges EL. 1948. The uttermost part of the Earth. Emecé editores, Buenos Aires, Argentina.

Butto A, Fiore D. 2024. Fuegia en el monasterio. Primer registro completo de la colección de artefactos de Pueblos Originarios Fueguinos trasladados por Martin Gusinde al Monasterio de Sankt Gabriel (Austria). Revista Arqueología 30(1):195-220. doi: 10.34096/arqueologia.t30.n1.12654.

Caruso-Fermé L. 2012. Los recursos vegetales leñosos. In: Mansur ME, Piqué R. (eds). Arqueología del Hain Investigaciones etnoarqueológicas en un sitio ceremonial de la sociedad selknam de Tierra del Fuego. Implicancias teóricas y metodológicas para los estudios arqueológicos. Treballs d'etnoarqueologia 9. Consejo Superior de Investigaciones Científicas, Barcelona, Spain, Pp. 97-136).

Caruso-Fermé L., Álvarez M., Vásquez M. 2011. Análisis arqueobotánico de piezas de madera del extremo austral americano. Magallania 39(1):221-240. doi: 10.4067/S0718-22442011000100014.

Chapman A. 1986. Los Selknam. La vida de los Onas. Emecé editorial, Buenos Aires, Argentina.

Chapman A. 1989. El fin de un mundo: los Selk'nam de Tierra del Fuego. Vazquez Mazzini Editores, Buenos Aires, Argentina.

Ciampagna ML. 2015. Estudio de la interacción entre grupos cazadores recolectores de Patagonia y las plantas silvestres: el caso de la costa norte de Santa Cruz durante el Holoceno medio y tardío. PhD dissertation, Universidad Nacional de La Plata.

Clapperton CM. 1992. La última glaciación y deglaciación en el Estrecho de Magallanes: Implicaciones para el poblamiento de Tierra del Fuego. Anales del Instituto de la Patagonia 21(1):113-128.

Di Lernia S, Massamba N'Siala I, Zerboni A. 2012. Saharan Waterscapes. Traditional Knowledge and Historical Depth of Water Management in the Akakus Mts. (SW Libya). In: Mol L, Sternberg T. (eds). Changing Deserts: Integrating people and their environment. White Horse Press, Cambridgeshire, UK, Pp. 101-128.

Estévez J, Vila A. 2006. Colecciones de museos etnográficos en Arqueología. In: Departament d'Arqueologia i Antropologia UAB y Institució Milà i Fontanals CSIC (eds), Etnoarqueología de la prehistoria: más allá de la analogía. UAB-CSIC, Barcelona, Spain, Pp. 241-253.

Estévez J, Vila A, Barceló JA, Berihuete M, Briz I, Castillejo AM, ... Zurro D. 2007. Twenty years of ethnoarchaeological research in Tierra del Fuego: some thoughts for European shell-midden archaeology. In: Milner N, Craig OE, Bailey GN. (eds). Shell Middens in Atlantic Europe. Oxbow Books, Oxford, Pp. 183-195.

Fiore D, Butto A. 2014. Violencia fotografiada y fotografías violentas. Acciones agresivas y coercitivas en las fotografías etnográficas de pueblos originarios fueguinos y patagónicos. Nuevo Mundo Mundos Nuevos. Nouveaux mondes mondes nouveaux-Novo Mundo Mundos Novos-New world New worlds. doi: 10.4000/nuevomundo.67326.

Fortney SM. 2001. Identifying Sto: lo basketry: exploring different ways of knowing material culture. PhD dissertation, University of British Columbia.

Franch Bach A. 2022. La gestión de los recursos vegetales y las sociedades cazadoras-recolectoras de la faja central de la Isla Grande de Tierra del Fuego (Argentina). PhD dissertation, Universidad Nacional de La Plata.

Franch Bach A, Parmigiani VE, Mansur ME, De Angelis HH, Alvarez Soncini MC. 2023. Bone Awls and Basketry in Tierra del Fuego: Complementarity between Ethnography and Experimentation. Ethnoarchaeology 15(1):1-23. doi: 10.1080/19442890.2023.2210357.

Gallardo R. 1998 [1910]. Los onas de Tierra del Fuego. Zagier & Urruty Publications, Ushuaia, Argentina.

Gusinde M. 1937. The Yahgan: The Life and Thought of the Water nomads of Cape Horn. Anthropos-Bibliothek, Mödling bei Wien, Austria.

Gusinde M. 1951. Hombres primitivos en la Tierra del Fuego (de investigador a compañero de tribu). Escuela de estudios hispano-americanos, Sevilla, Spain.

Gusinde M. 1986. Los indios de Tierra del Fuego. Tomo 2: Los Yamana. 3 vol. Centro Argentino de Etnología Americana, Buenos Aires, Argentina.

Gusinde M. 1982. Los indios de Tierra del Fuego. Tomo 1: Los Selk'nam. 2 vol. Centro Argentino de Etnología Americana, Buenos Aires, Argentina.

Gusinde M. 1991. Los indios de Tierra del Fuego. Tomo III: Los Halakwulup. 2 vol. Centro Argentino de Etnología Americana, Buenos Aires, Argentina.

Hurcombe LM. 2014. Perishable material culture in prehistory: investigating the missing majority. Routledge, London, UK.

Hyades PDJ, Deniker J. 1891. Anthropologie Et Ethnographie. Mission Scientifique de Cap Horn (1882-1883), T.VII. Gauthiers-Villars, Paris, France.

Jolie EA, Lynch TF, Geib PR, Adovasio JM. 2011. Cordage, textiles, and the late Pleistocene peopling of the Andes. Current Anthropology 52(2):285-296.

Joyce RA. 2000. Gender and Power in Prehispanic Mesoamerica. University of Texas Press, Texas, EUA.

King JE. 1999. Basketry of Island Southeast Asia: Technique and Use. Journal of Material Culture 4(3): 311-330.

Lothrop SK. 2002 [1928]. The Indians of Tierra del Fuego. Zagier y Urruty publications, Ushuaia, Argentina.

MacKenzie M. 1991. And Their Memory Was a Woven Thread: Basketry of Indigenous Australia. National Museum of Australia, Syndey, Australia.

Mansur ME, Piqué R. 2009. Between the forest and the sea: hunter-gatherer occupations in the subantarctic forests in Tierra del Fuego, Argentina. Arctic Anthropologist 46(1-2):144-157.

Mansur ME, Piqué R. 2012. Arqueología del Hain. Investigaciones etnoarqueológicas en un sitio ceremonial de la sociedad selknam de Tierra del Fuego. Implicancias teóricas y metodológicas para los estudios arqueológicos. Treballs d'etnoarqueologia 9. Consejo Superior de Investigaciones Científicas, Barcelona, Spain.

Mansur ME, Maximiano A, Piqué R, Vicente O. 2007. Arqueología de Rituales en Sociedades Cazadoras-Recolectoras. Una aproximación desde el Análisis del Espacio Socialmente Producido. In Morello F, Martinic M, Prieto A, Bahamonde G. (eds). Arqueología de Fuego-Patagonia. Levantando piedras, desenterrando huesos…y desvelando arcanos. Ediciones CEQU, Punta Arenas, Chile, Pp. 741-754.

Marticorena F. 2016. Tejiendo una colección: la cestería yagán. In: Subdirección General de Documentación y Publicaciones (eds). La memoria femenina: Mujeres en la historia, historia de mujeres. Programa Ibermuseos y el Ministerio de Educación, Cultura y Deporte de España, Spain, Pp. 64-74.

Martínez-Crovetto R. 1968. Estudios Etnobotánicos. IV- Nombres de Plantas y Sus Utilidades Según los Indios Onas de Tierra Del Fuego. Etnobiologica 3:12-19. doi:10.30972/etn.032150.

Martinez-Crovetto, R. 1982. Breve panorama de plantas utilizadas por indios de Patagonia y Tierra del Fuego. Sumplemento Antropologico XVII(1):61-97.

Martínez-Sevilla F, Herrero-Otal M, Martín-Seijo M, Santana J, Lozano Rodríguez JA, Maicas Ramos R, ... Piqué Huerta R. 2023. The earliest basketry in southern Europe: Hunter-gatherer and farmer plant-based technology in Cueva de los Murciélagos (Albuñol). Science advances 9(39):eadi3055.

Massone M. 1987. Los cazadores paleoindios de Tres Arroyos (Tierra del Fuego). Anales del Instituto de la Patagonia (Serie Ciencias Sociales) 17:47-60.

Massone M. 2004. Los cazadores después del hielo. Colección de Antropología 7. Ediciones de la Dirección de Archivos y Museos, Punta Arenas, Chile.

Miret J. 2009. Sistemes tradicionals de conservació dels aliments en fosses i sitges. Un enfocament multidisciplinar. Josep Miret-Mestre, Barcelona, Spain.

Moore DM. 1983. Flora of Tierra del Fuego. Anthony Nelson, London, UK.

Murphy DE. 2019. Matter That Matters: A Study of Cherokee Baskets and the Museums That Display Them. Master dissertation, University of North Carolina.

Ochoa G, Marticorena F. 2022. Lazos de resistencia: cestería yagan y vitalidad cultural en el sur austral. Proyecto Bajo la Lupa, Subdirección de Investigación, Servicio Nacional del Patrimonio Cultural. Servicio Nacional del Patrimonio Cultural, Punta Arenas, Chile.

Orquera LA, Piana E. 1999. La vida material y social de los Yámana. Editorial Buenos Aires, Universitaria de Buenos Aires, Argentina.

Orquera LA, Piana E. 2009. Sea nomads of the Beagle Channel in Southernmost South America: Over six thousand years of coastal adaptation and stability. Journal of Island and Coastal Archaeology 4:61-81.

Parmigiani V, Franch Bach A, Alvarez Soncini MC, De Angelis HH, Mansur ME. 2021. Stones, Bones and Rushes Operating Chains in Manufacture and Use of Artifacts for the Production of Basketry in the Societies of Tierra del Fuego. In: Beyries S, Hamon C, Maigrot Y. (eds). Beyond Use-Wear Traces: Going from Tools to People by Means of Archaeological Wear and Residue Analyses. Sidestone Pres, Leiden, Netherlands, Pp. 89-100.

Piqué R. 1999. Producción y uso del combustible una evaluación arqueológica. Treballs d'etnoarqueologia 3. Consejo Superior de Investigaciones Científicas & Universitat Autónoma de Barcelona, Barcelona, Spain.

Piqué R. 2006. L'uso del legno nelle società fuegine: manufatti dalle collezioni del Museo Pigorini. In: Salerno A, Tagliazzo A. (eds). Finis Térrea. Viaggiatori, esploratori e missionari italiani nella Terra del Fuoco. *Ministero per i Beni e le Attivita Culturale, Superintendenza al Museo Nazionale Prehistórico Etnografico "Luigi Pigorini",* Roma, Italy, Pp. 182-192.

Prieto Iglesias A, Cárdenas R. 2002. Las Colecciones etnográficas fuego/patagónicas en los museos europeos. Anales del Instituto de la Patagonia 30:65-77.

Ratto N. 2003. Estrategias de caza y propiedades del registro en la Puna de Chaschuil (Depto Tinogasta, Catamarca, Argentina). PhD dissertation, Universidad de Buenos Aires.

Romero S. 2021. Cordes i cistells elaboratos amb fibres vegetals entre el 5300-800 cal BC al nord-est peninsular i balears: Tecnologia, materia primera i funció. PhD dissertation, Universitat Autónoma de Barcelona.

Vietri L. 2023. Cestería de Tierra del Fuego: un análisis etnoarqueológico. Master dissertation, Universitat Autónoma de Barcelona.

Vietri L, Briz Godino I. 2019. De los archivos históricos a los archivos etnográficos: las colecciones italianas de Tierra del Fuego. Revista de Arqueología Americana 37:75-121.

Vila A, Estévez J. 2017. Etnoarqueología en Tierra del Fuego: Análisis arqueológico de materiales etnográficos, Fotografías de cestos fueguinos en museos europeos. http://hdl.handle.net/10261/159173 (Accessed 09/10/2025).

Wendrich W. 2016. Basketry in Ancient Egypt. Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures. Springer, Dordrecht, Netherlands.

Zangrando AF, Borrazo K, Tivoli AM, Alunni D, Martinoli MP. 2014. El Sitio Heshkaia 35: Nuevos Datos Sobre la Arqueología de Moat (Tierra del Fuego, Argentina). Revista del Museo de Antropología 7: 11-24. doi:10.31048/1852.4826.v7.n1.9090.