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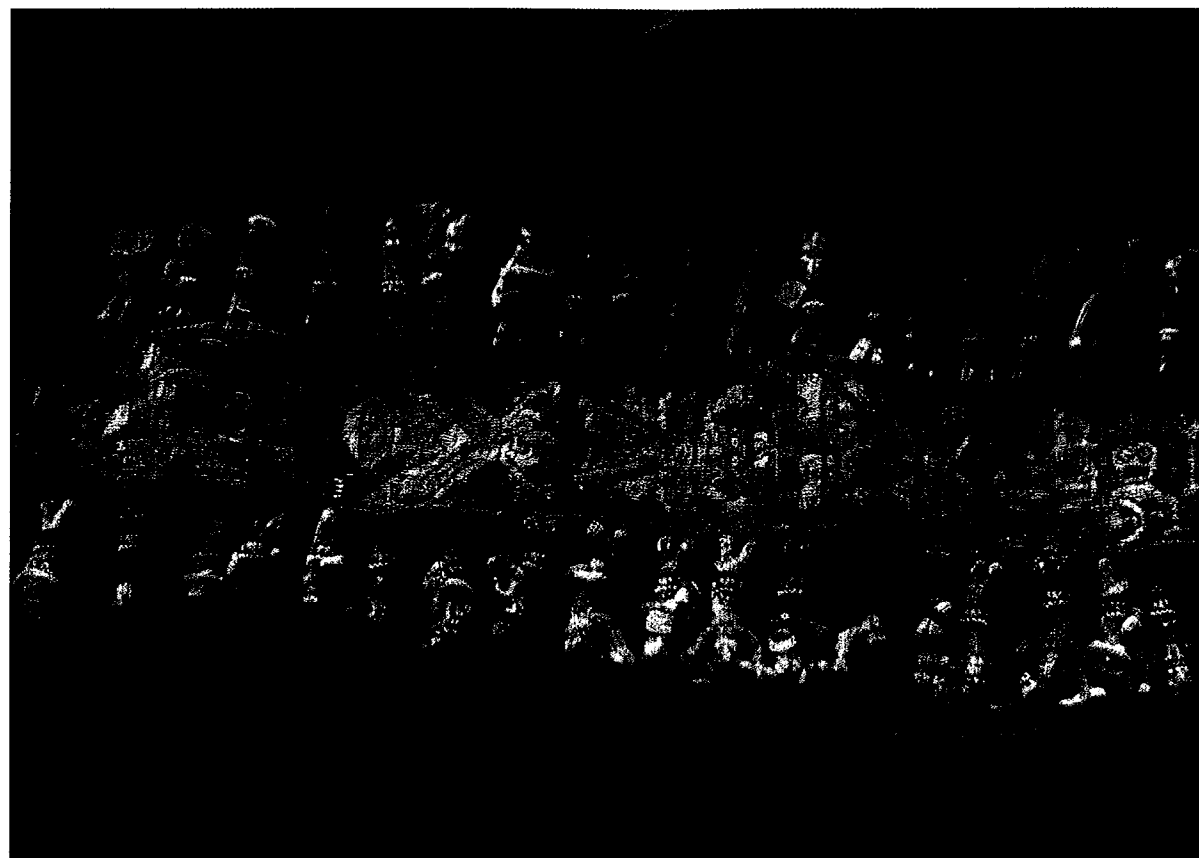


Fig. 10 Nasca textile with two different embroideries: two-dimensional (representing deities) and three-dimensional (representing dynamic figures of dancers with their hand fans) (Photographed by Anna Gruszczyńska-Ziółkowska).

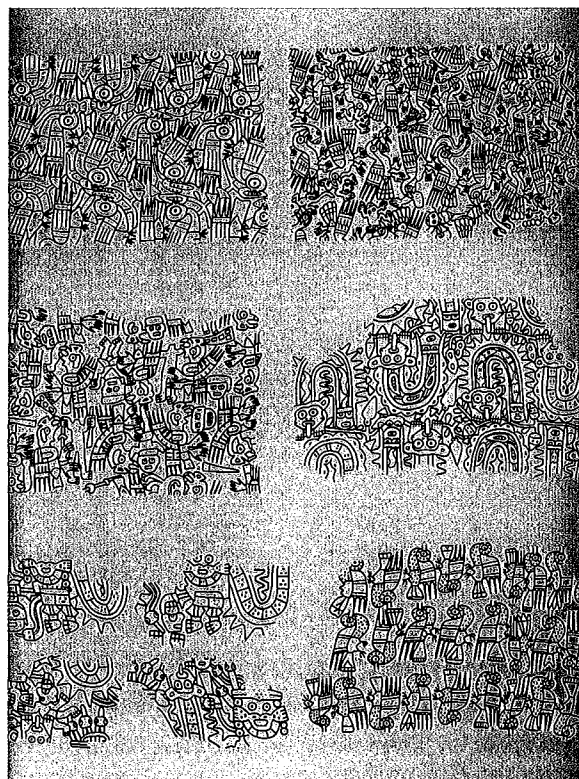


Fig. 11 Painted images from dresses that were included in the garment deposit at Cahuachi (after Orefici *et al.* 2009, 199 [Mary Frame]).

Ancient Aerophones of Coastal Oaxaca, Mexico The Archaeological and Social Context of Music

Sarah B. Barber – Guy David Hepp

Zusammenfassung

Die Autoren legen hier eine Auswertung von 42 intakten und fragmentarischen Keramik-aerophonen vor, die vom unteren Tal des Río Verde (Oaxaca, Mexiko) stammen. Dabei handelt es sich sowohl um Flöten als auch um Okarinas und Pfeifen. Zieht man sowohl den archäologischen Kontext der Instrumente als auch die künstlerischen und handwerklichen Aspekte der Verzierung in Betracht, dann lassen sich vorläufige Schlussfolgerungen zur Art der Musikproduktion in dieser Region während der späten (400–150 v. Chr.) und ausgehenden formativen (150 v. Chr. – 250 n. Chr.) Periode ziehen. Insbesondere zeigen die hier behandelten Instrumente, dass sich Menschen unterschiedlicher sozialer Stellungen musikalisch betätigten, wobei Flötenmusik der Elite vorbehalten gewesen sein dürfte. Die Fundumstände lassen vermuten, dass Musik zwar häufig in öffentliche Zeremonien eingebunden war, aber auch in nicht-öffentlichen Räumen unterschiedlicher sozialer Gruppen ausgeübt wurde. Die Einarbeitung figürlicher Darstellungen auf den Instrumenten legt nahe, dass die Musik eine Kommunikation zwischen Lebenden und übernatürlichen Wesen des mesoamerikanischen Universums ermöglichte.

1 Introduction

This paper presents an analysis of 42 intact and fragmentary ceramic aerophones from the lower Río Verde valley, located in the state of Oaxaca, Mexico. Derived from midden and construction fill deposits at seven archaeological sites, most of the instruments date to the first and second centuries BC and AD. Ocarinas, whistles, and a handful of flutes or flute fragments are represented. Because the collection is quite large and has excellent provenience information, the group of instruments reported here offers a unique opportunity to evaluate the social context of music in a region of precolumbian Mesoamerica for which

written records are unavailable. A description of the collection is followed by a discussion of patterns in the formal and design characteristics of the instruments. When tied to data on archaeological contexts, it is possible to draw preliminary conclusions about the nature of musical production in the ancient lower Río Verde valley. Analysis of the instruments in the collection reveals that people of various social positions engaged in music production. Elites, in particular, may have been involved in music production during both public and domestic rituals. Finally, the design of the instruments, including both artistic elements and the location of the embouchure, suggests that music offered a means of communication between the everyday world and other realms of the Mesoamerican universe.¹

2 The Lower Río Verde Valley

The lower Río Verde Valley is located in the *Mixteca de la Costa* region of the western Pacific coast of Oaxaca (Fig. 1). The focus of regional settlement was the floodplain of the Verde River, which is the second-largest drainage in Pacific Mesoamerica.² The Chatino speakers who would have made and played the instruments in the collection reported here had linguistic and ideological connections with

¹ Music is used here to stand for soundmaking as an activity practiced by Oaxacans that would be largely recognizable as such according to modern categories. We recognize that many cultures, including those of indigenous Mesoamerica, do not define music as it is defined in the West. Modern Mixtecs in coastal Oaxaca use the term *yaa* to refer to dance, games, or music (Stanford 1966). To complicate matters, how precolumbian peoples regarded soundmaking is largely conjectural. Epiarchaeologists have determined that the Classic Maya glyph *uk'ees* was a general term for instrument, and some glyphs for particular instruments have also been decoded, but today, the K'iche' Maya term *k'ojom*, which literally means drumming, has been put into service as a general term for music simply because there was no existing one.

² Tamayo 1964.

the better-known Zapotec speakers of highland Oaxaca.³ Prior to 150 BC, small and medium-sized villages of maize agriculturalists dotted the valley.⁴ Between 150 BC and AD 250, the era to which most of the instruments of this collection date, an urban society developed with a political seat at the large site of Río Viejo.⁵ A political collapse followed in the Early Classic period (AD 250–500), and cycles of reunification and collapse continued until the arrival of the Spanish in 1522.⁶

3 Data Acquisition

The 42 instruments reported in this paper were obtained through archaeological excavations spanning two decades.⁷ All but six are well-dated to the Late (400–150 BC) and Terminal (150 BC–AD 250) Formative periods using associated diagnostic pottery. Five others may date as late as the Early Classic period and one, a double flute (see Fig. 7), may date to the Late Classic period (AD 500–800). The archaeological sites from which the instruments were excavated and the dates of the contexts containing instruments are listed below (see Fig. 1 and Tab. 1).

For each instrument, information on the archaeological context and physical characteristics were recorded in a spreadsheet. All instruments were photographed and drawn. The sound properties of the 19 artifacts well enough preserved to play were also documented, but are not reported here.

4 Description of the Collection

The instruments in the lower Río Verde valley collection were hand formed using local fine ware ceramic pastes. Their exterior surfaces were smoothed, and in some cases burnished. Apertures were rectangular and stops were round. In most cases, appliques had been added to the resonating chambers to transform the instruments into figural representations of anthropomorphs or zoomorphs. Most of the ocarinas and whistles (see definitions below) were freestanding. There is good chronological control for 37 of the instruments, and it is possible to date 16 to specific 150-year spans. However, there were no obvious chronological patterns in the distribution of instrument types or in decorative characteristics. All of the instruments in the collection had been discarded in middens or redeposited in earthen construction fill. It is therefore unsurprising that 26 instruments (62%) were in fragmentary condition. While 19 (45%) were in good enough condition to play, even six of this group were not intact.

Three general aerophone forms were present: tubular duct flutes (hereafter 'flutes'), ocarinas or globular duct flutes, and globular whistles. Flutes were the rarest of the three, with only nine examples (21%). Any narrow, tubular fragment was identified as a flute even if stops were not visible. Flutes were clearly part of the music technology of the lower Verde at this time, as exemplified by an intact bone flute that was recovered from the burial of a subadult male.⁸ Ocarinas predominated in the collection, with 15 examples (36%). Eleven whistles comprised 26 percent of the sample. Another seven instruments were either globular whistles or ocarinas (17%). The 32 globular instruments together comprised 79 percent of the collection (Fig. 2).

As with other collections from Oaxaca⁹ and elsewhere,¹⁰ all instruments had zoomorphic or anthropomorphic features. Zoomorphs comprised 50 percent of the entire collection, with 21 examples. Birds were the most common animal depicted, with eight examples (38% of all zoomorphs; 19% percent of the entire collection). Zoomorphs also included a possible deer, two canids, an armadillo and/or tortoise, and possibly a possum (Fig. 3). There were 11 identifiable anthropomorphs (26%), all of which appeared to be male. Four (36%) were characterized by personal adornment such as pectorals, lip plugs, or ear plugs (Fig. 4). Attached to one of the flutes was a male figure wearing ear plugs and a cape and seated in a palanquin (Fig. 5). It was not possible to determine what was being represented for the other ten examples in the collection (24%). There were no strong correlations between the design on the instrument and the type of instrument, although the small sample of tubular instruments did have proportionally more anthropomorphic designs than did other instrument types.

There were, however, some relationships between the design attributes of the instruments and their mechanical characteristics. In 25 instances, it was possible to identify the location of the mouthpiece in relation to the instrument as a whole. Among the zoomorphs, 74 percent of the mouthpieces were located where the tail would be (see Fig. 3). Birds, for instance, were always designed

with the mouthpiece at the tail. In two cases, the mouthpiece was the snout of a mammal. Most animal figures would thus have been facing outward, away from the players' faces and towards any listeners. Among the anthropomorphs, mouthpieces were located on the front of the body in four (67%) out of six instances where mouthpiece location could be identified. We also found mouthpieces located on the torso, above the legs, in the forehead, and in the back of anthropomorphs. The anthropomorph on the palanquin flute also faces the player. All of the anthropomorphic figures that face the player have some form of personal adornment. Among other reported collections from Oaxaca, anthropomorphic figures tend to face away from the player although inward-facing anthropomorphs are also known.¹¹ There is no correlation between the location of the mouthpiece and the kind of instrument.

Of the 15 ocarinas identified, ten (67%) had two stops. The location of the preserved stops of the other five instruments suggests that all (100%) of the ocarinas had two stops (Fig. 6). For example, the fragmentary ocarina shown in figure 6 b had at least one stop on its torso just below the animal's head. In all of the more intact examples from the Formative Period collection, the torso stops were always paired (Fig. 6 a). Furthermore, none of the intact ocarinas had more than two stops. The ocarinas were all small (compared to the flutes), with the largest having a long axis of only 8 cm. The stops were placed just where the player's fingers would touch the instrument, making it easy to play fast, trilling notes. The ability to play trilling notes has been observed by scholars studying other collections from Oaxaca¹² and Mesoamerica¹³ and almost certainly was intentional since it enabled the player to make birdlike sounds.¹⁴

The flutes were not well preserved, with most consisting of fragments of a tubular resonating chamber. Two of the more complete examples stood out for their unusual characteristics. The first is a double flute or whistle recovered from a context that dated between 150 BC and AD 100 (Fig. 7). Both the orange color of the ceramic paste and the style of the design, however, resemble Late Classic period ceramics from the region and raise questions about the age of the artifact. Regardless of the double flute's date, the location of the apertures on the ventral side (underside) of the resonating chambers demonstrates a long-term pattern among flutes in the lower Río Verde valley. All four of the flutes with preserved apertures had similar aperture placement. Ventral apertures were unusual among Mesoamerican flutes, but common for flutes in the lower Río Verde valley throughout the precolumbian era.¹⁵ The second unusual instrument was the aforementioned flute with attached

palanquin. It is an end-blown tubular flute with a cylindrical plug inside the tube to modulate the instrument's sound (see Fig. 5).

While modeled decoration made most of the aerophones objects of visual art, many were also forms of personal adornment. At least 14 (33%) instruments in the collection were punctured so they could be worn as pendants. Most were punctured through the eyes or at the top of the head so that, when suspended, they would be oriented in an upright position on the wearer's body (Fig. 8). Both ocarinas ($n = 9$; 64%) and whistles ($n = 4$; 29%) were punctured to be worn as pendants.

5 Patterns in Provenience

There is excellent provenience information for all but three of the instruments in the lower Río Verde valley collection. The locations in which instruments were found offer insight into where and by whom they were used. For instance, the provenience data indicate that flutes were instruments with restricted circulation – probably only accessible to and played by individuals with specialized ritual knowledge, many of whom were also of high social status. Ceramic flute fragments have been found in three kinds of archaeological contexts: middens deposited near public buildings as a result of ritual activities ($n = 2$; 22%), middens likely deposited as a result of high-status domestic activities ($n = 3$; 33%), and construction debris from a high-status residence ($n = 3$; 33%). The palanquin flute was a surface find and so provenience data are unavailable. The individual in the palanquin was depicted with personal adornment and was sitting in a form of transportation that required human porters, indicating that the individual depicted on the lower Río Verde flute was of high social status. It is improbable that a complex instrument of this kind that also depicted an elite would have been accessible to the average person. It is worth noting that the only other tubular flute known for this time period, an incised bone flute, was buried with a high-status individual.¹⁶ Based on these patterns in provenience, we believe that high-status people were the primary players of flutes and also the primary audience for flute music. The presence of flutes in middens near ceremonial structures further indicates that the instruments were used in ritual. The use of flutes in ritual would be in keeping with later

³ Josseland – Winter – Hopkins 1984; Joyce 1991; Joyce 1993; Urcid 1993.

⁴ Joyce 1991; Joyce 2010.

⁵ Joyce 2010; Joyce – Barber 2011.

⁶ Joyce 2010.

⁷ Barber 2005; Joyce 1991.

⁸ Barber 2005; Barber – Olvera 2012; Barber – Sánchez Santiago – Olvera 2009.

⁹ King 2003, 217–219; Sánchez Santiago 2005; Sánchez Santiago 2009.

¹⁰ Halperin 2007; Healey *et al.* 2009.

¹¹ Sánchez Santiago 2005.

¹² Sánchez Santiago 2009, 83.

¹³ Martí 1989.

¹⁴ Both 2006.

¹⁵ Barber – Sánchez Santiago – Olvera 2009.

¹⁶ Barber – Sánchez Santiago – Olvera 2009.

practice in Mesoamerica since flutes were depicted and discussed in ethnohistoric representations of precolumbian ritual.¹⁷

Ocarinas and whistles were also used in ritual. Eleven ocarinas and whistles (33 % of non-tubular instruments) were recovered from public ceremonial locations. In five cases, the instruments were fragments found in construction fill, which means their original location of use and deposition could have been elsewhere. The other six, however, were materials discarded as a result of ritual activity. This group of instruments included representations of two anthropomorphs, a bird, a lizard, and a possum. The sixth consisted only of a mouthpiece. There is thus no correlation between instrument type or form and their context: zoomorphs, anthropomorphs, flutes, ocarinas, and whistles were all used in public ceremonies.

Instruments were also used in domestic contexts. Twenty-three (55 %) of the instruments in this collection were recovered from domestic contexts. The 13 instruments from Cerro de la Virgen, which comprised the largest single source of instruments in the collection, were found at a single elite residence. The Cerro de la Virgen residence is the only fully excavated elite residence from the region for the Terminal Formative period, so there are no comparable contexts. We hope that future research will enable us to determine whether the large number of instruments at the residence resulted from a domestic specialization or whether instruments were a common element of domestic material culture among elites in the Terminal Formative period. The latter scenario seems likely given that elite residences in other times and place in Mesoamerica frequently held musical instruments.¹⁸ Elites were not the only people to use instruments, however. Except for the flutes, which we have already discussed, at least seven instruments were found in either fill or middens at non-elite residences. The use of instruments in non-elite domestic ceremonies is further indicated by four unusual instrument-containing contexts described by the excavators as “sherd dumps” or “concentrations of ash and shell”.¹⁹ One such deposit contained two ocarinas: a well-preserved mammal ocarina and a bird. We propose that these atypical deposits were set in place as a result of domestic ceremonies involving music, although future research will be required to confirm our hypothesis.

There are two contexts in which instruments are rare or entirely missing: burials and caches. The Formative Period burial sample from the lower Río Verde valley is very large, consisting of 156 individuals recovered from six sites.²⁰ Only one burial contained a musical instrument as an offering. Musical instruments are completely absent in Formative Period caches despite a large sample

of public and domestic caches from five sites.²¹ In this regard, the Formative Period lower Río Verde valley pattern contrasts with that of other regions and time periods. Instruments were offerings in Early Postclassic burials in the region,²² in burials and caches from the Classic Period in the Valley of Oaxaca,²³ and in caches of the Late Postclassic Period in the Valley of Mexico.²⁴

6 Instruments, Players, Auditors

While instrument provenience can provide valuable information regarding the social status of players and the locations in which music was produced, both the decorative and mechanical features of the instruments offer insight into the social context of music in the ancient lower Río Verde valley. The figural representations of humans and animals, for instance, almost certainly had significance in indigenous worldviews. Several anthropomorphs and one ‘transformational’ figure – a figure that represented the melding of anthropomorphic and zoomorphic characteristics (Fig. 9) – are adorned with pectorals, lip plugs, and ear spools.²⁵ While personal adornment was not necessarily an indicator of high status in later time periods,²⁶ in the Formative Period in the lower Río Verde valley such elements are consistently tied to high status.²⁷ Given that all of the adorned anthropomorphic instruments face the player, we believe this group of instruments represents entities with whom the player would have been communicating directly.

Zoomorphic figures and transformational figures may refer to the process by which human ritual practitioners contacted or “saw through the eyes of” other non-human beings,²⁸ a common responsibility of Mesoamerican elites.²⁹ We believe that the placement of the mouthpiece on the back side of an instrument indicates one way of enabling ritual practitioners to shift perspective and experience the non-human world. Nearly all of the zoomorphic ocarinas and whistles in this collection would have been played so that the animal faced

away from the player and out toward any listeners. The mouthpiece in such cases was almost always near the bottom of the figure, which would have put the animal in front of the face of the musician, effectively serving as an avatar, particularly when animated through breath or wind.³⁰ To play instruments that were designed to face auditors was to speak with the voice of the depicted entity, or perhaps more accurately to give a voice to the depicted entity so that it might itself speak.³¹ Music not only would have enabled players to experience the world from a non-human perspective, but also allowed listeners to participate in communicate with non-human entities. An audience is thus implied by the design of outward-facing instruments.

If music offered a means of communication with other existential realms, then instruments on which the figure faces the player suggest another kind of interaction. Three anthropomorphs (60 % of five instruments where it was possible to determine mouthpiece location) and three zoomorphs (19 % of 16 instruments where it was possible to determine mouthpiece location) are designed so that the depicted figure faces the player. Although the anthropomorph percentage may be high due to the small sample size, the proportional difference in orientation between anthropomorphs and zoomorphs is considerable. We view the player-facing instruments as evidence for a more intimate kind of communication, perhaps between the player and the entity that ‘spoke’ through the instrument. That these entities were disproportionately anthropomorphic suggests that they were ancestors or deities since both are human-like beings with whom the living would have had considerable impetus to communicate. Ancestors, divinities, and sentient natural forces ensured human survival in the form of bountiful harvests, success in warfare, and continued social and physical reproduction, to name a few possibilities.³² Mesoamerican musical instruments, as sound-producing objects, were understood to be animate in indigenous ontology.³³ The

audience, if that term is even appropriate, would be the musician in cases where the instrument faced the player. While other people may have been present or involved when player-facing instruments were used, the design of these instruments suggests that they were played in private or exclusive settings. Since anthropomorphic instruments were relatively uncommon in the lower Río Verde valley collection and several depict high-status individuals, we posit that less public rituals were largely conducted by elites.

7 Conclusions

Both the characteristics of the instruments and their archaeological proveniences demonstrate the diversity of musical practices during the Formative and Early Classic periods in the lower Río Verde valley. While high status individuals and ritual practitioners probably had access to a wider range of instruments and played music in more varied social situations than did non-elites, the presence of instruments in non-elite domestic middens confirms that people of various social positions produced music. There was also diversity in the situations in which music was played. Music was part of public and likely widely-accessible actions that took place in public ritual facilities like temples. It was also a domestic activity, where small groups of people would have played and listened to music. Additionally, it may have been very private, with only the instrument and the musician involved in musical production. In all cases, we view instruments as living entities in indigenous ontologies, entities that participated in human life rather than functioning simply as soundmaking tools.

³⁰ Taube 2001; Houston – Stuart – Taube 2006.

³¹ Barber – Olvera 2012; Taussig 1993.

³² Joyce 2000; Schele – Miller 1986.

³³ Barber – Olvera 2012; Houston – Stuart – Taube 2006.

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¹⁷ Olivier 2002; Olivier 2003.

¹⁸ Stockli 2007; Inomata – Stiver 1998.

¹⁹ Joyce 1991; Workinger 2002.

²⁰ Barber *et al.* (in press).

²¹ Barber – Workinger – Joyce n.d.

²² King 2003, 217. 291 fig. 6, 40.

²³ Caso – Bernal 1952; Sánchez Santiago 2005.

²⁴ Both 2005.

²⁵ Hepp 2007; Hepp – Joyce (in press); Hepp – Hepp (in press).

²⁶ Hepp – Hepp (in press); Krejci – Culbert 1995.

²⁷ Barber 2005.

²⁸ Bartolomé – Barabas 1996, 221–228; Viveiros de Castro 2004.

²⁹ Joyce 2000; Joyce – Winter 1996.

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Site Name	Number of Instruments	Dates for Contexts Containing Instruments
Cerro de la Cruz	3	Surface finds, date prior to CE 500
Cerro de la Virgen	13	CE 100–250
Cerro del Chivo	1	CE 100–250?
Corozo	1	150 BC–AD 100
Río Viejo	12	400 BC–AD 500
San Francisco de Arriba	1	AD 250–500?
Yugüe	11	150 BC–AD 250

Tab. 1 Distribution of instruments by site and date.

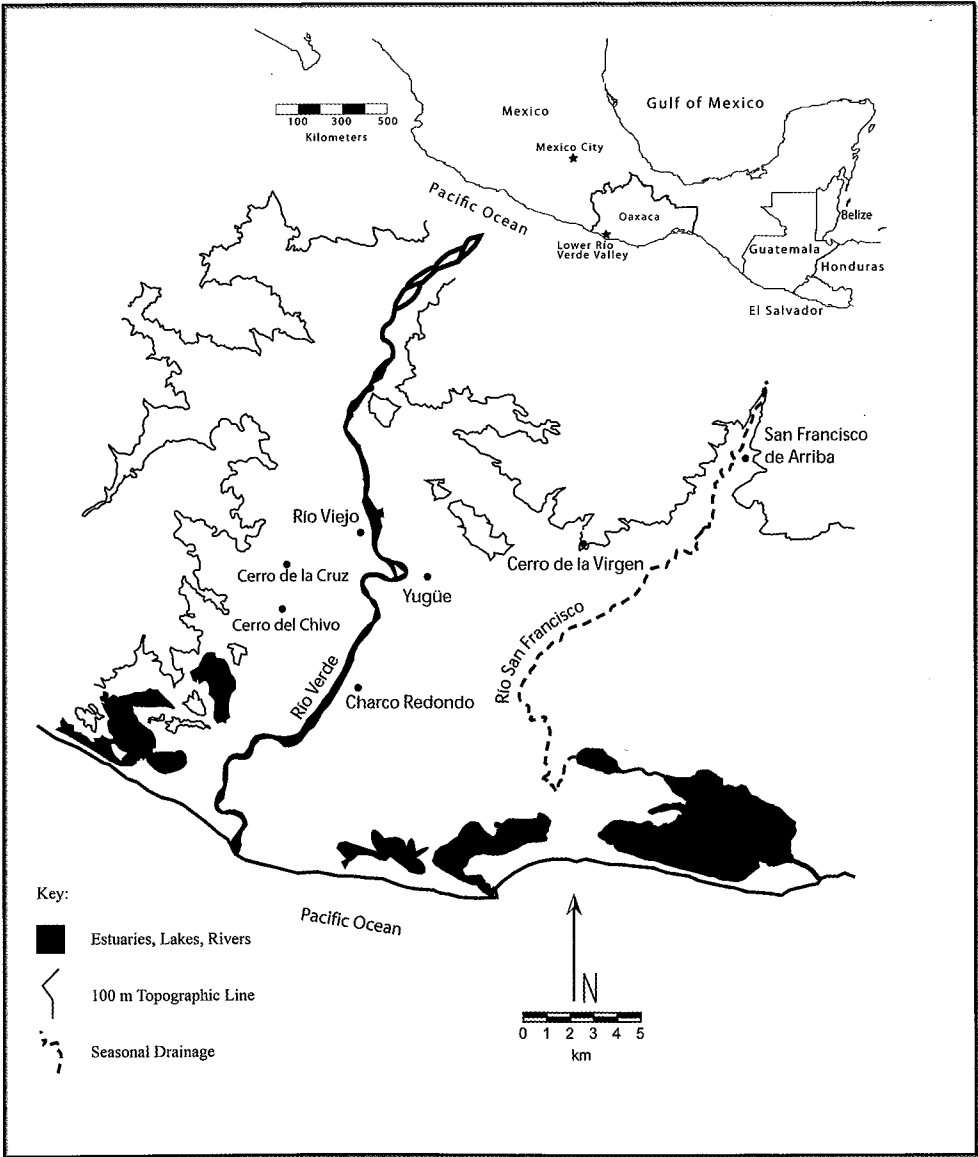


Fig. 1 The Lower Río Verde Valley showing sites mentioned in the text (Sarah B. Barber and Guy D. Hepp).

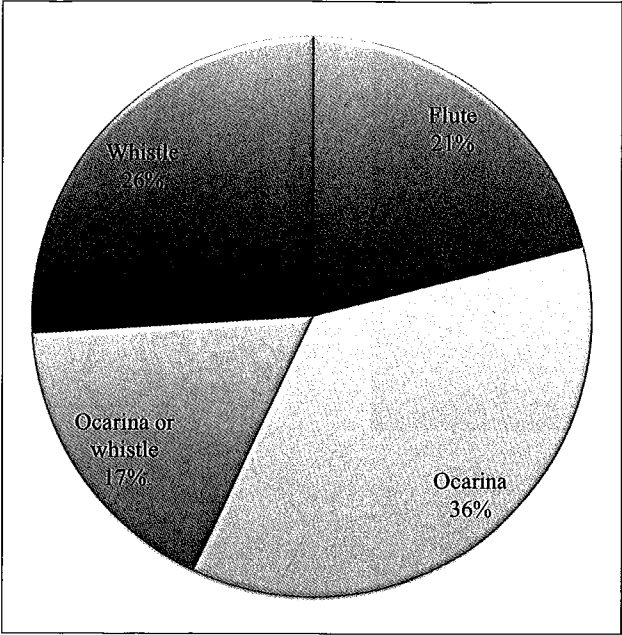


Fig. 2 Proportion of instrument forms (Guy D. Hepp).

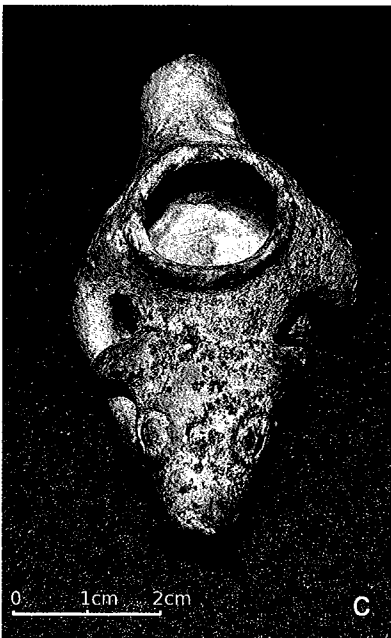
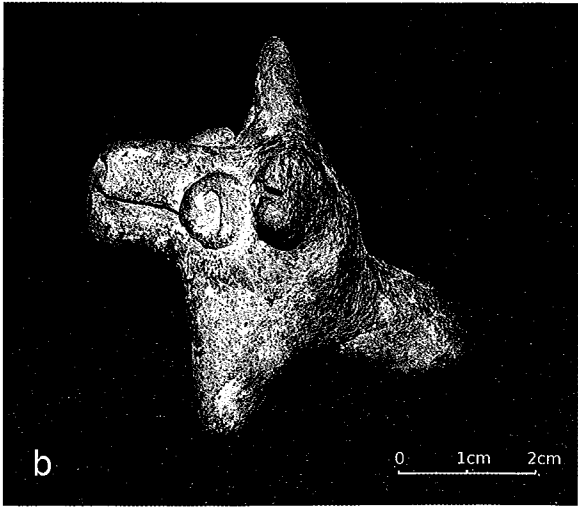
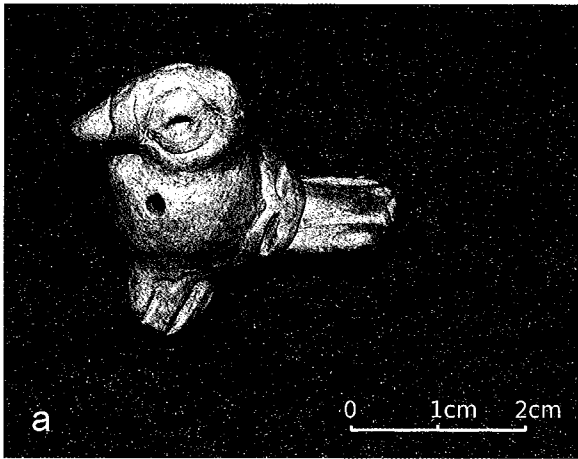


Fig. 3 Zoomorphic ocarina or whistle forms. – a. Bird. – b. Canid (courtesy of Arthur Joyce). – c. Possum (courtesy of Andrew Workinger; photographs by Guy D. Hepp).

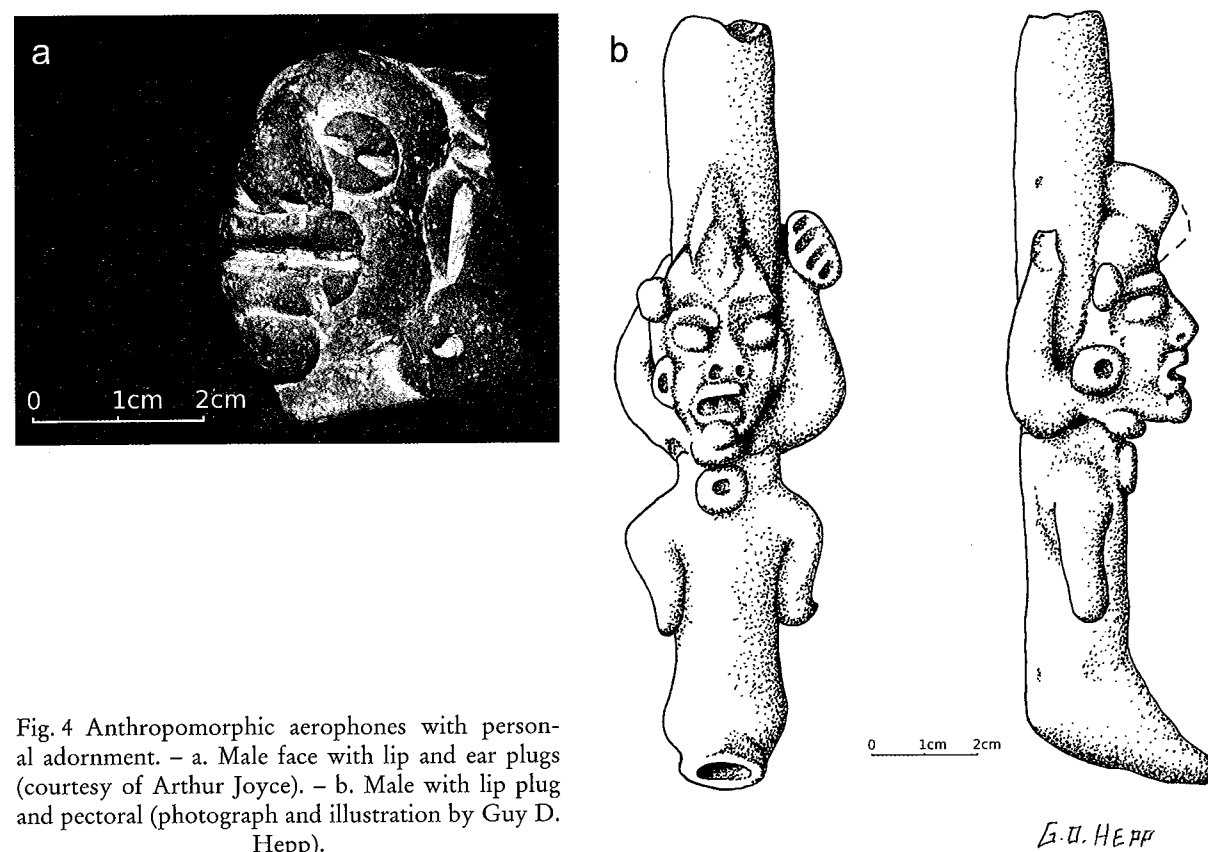


Fig. 4 Anthropomorphic aerophones with personal adornment. – a. Male face with lip and ear plugs (courtesy of Arthur Joyce). – b. Male with lip plug and pectoral (photograph and illustration by Guy D. Hepp).

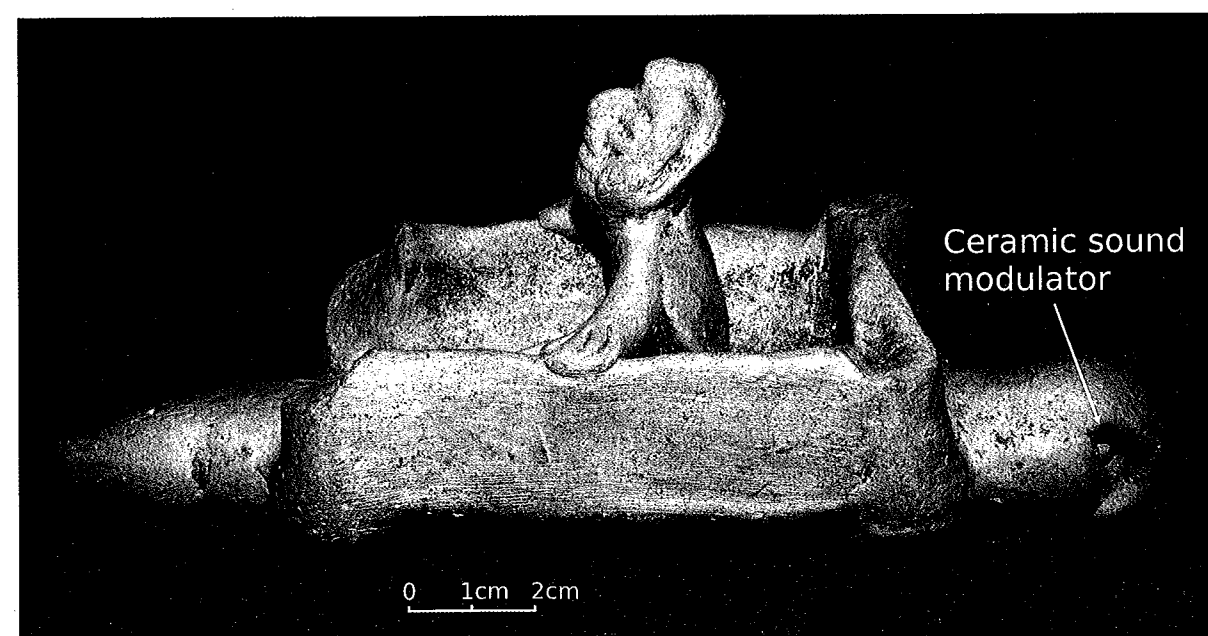


Fig. 5 Flute with modeled anthropomorph and palanquin (courtesy of Arthur Joyce; photograph by Guy D. Hepp).

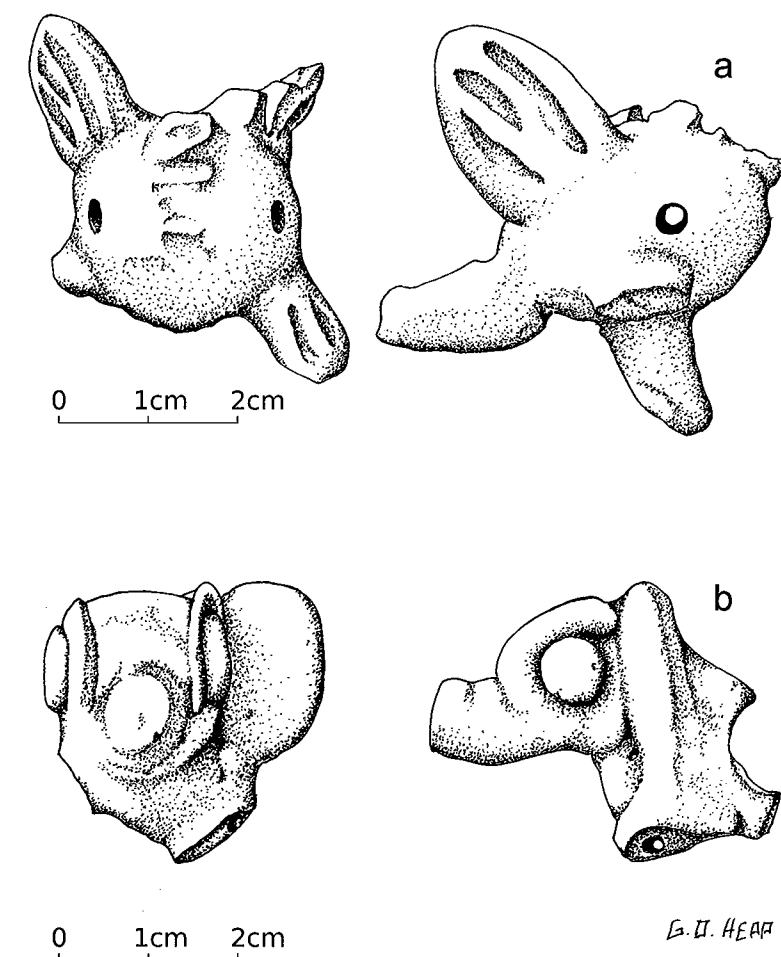


Fig. 6 Location of stops on ocarinas. – a. Intact bird ocarina (courtesy of Arthur Joyce). – b. Fragmentary ocarina with stop visible in profile (illustrations by Guy D. Hepp).

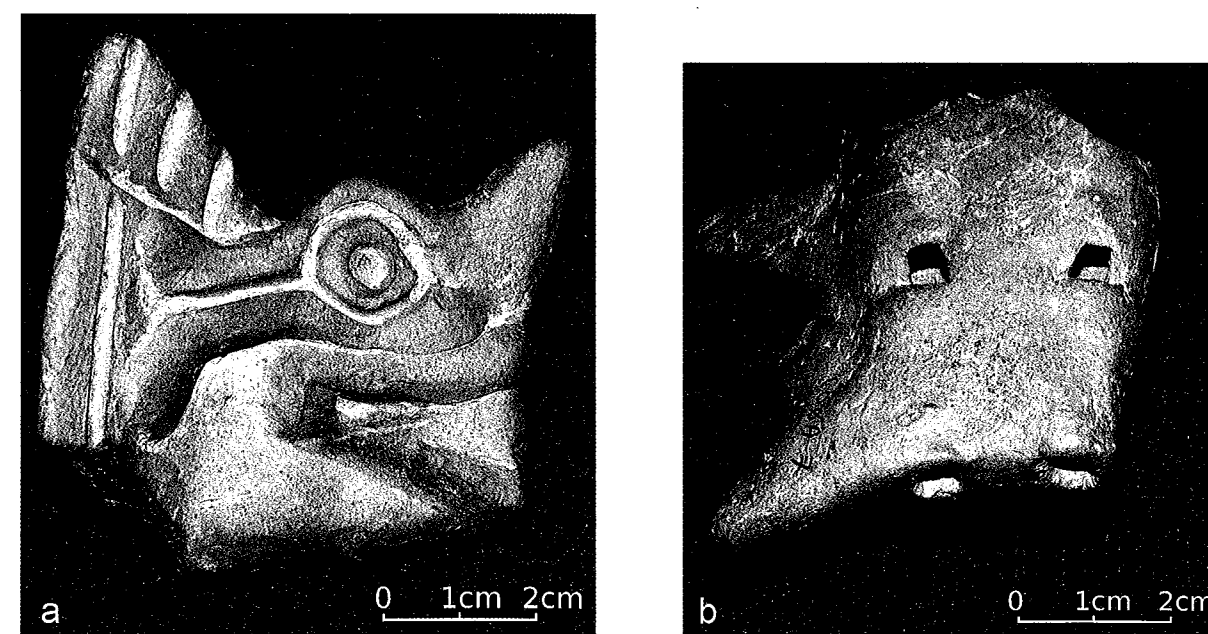


Fig. 7 Double-flute. – a. Dorsal view. – b. Ventral view (courtesy of Arthur Joyce; photographs by Guy D. Hepp).

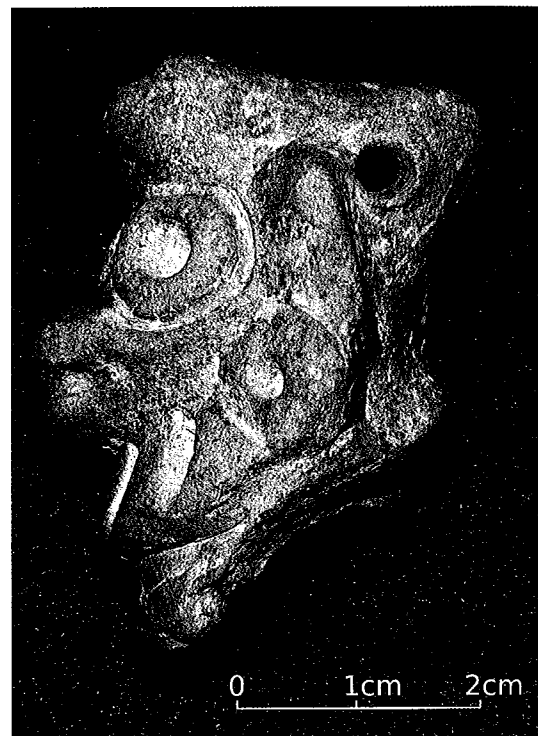


Fig. 8 Ocarina with puncture for suspension as a pendant (Guy D. Hepp).

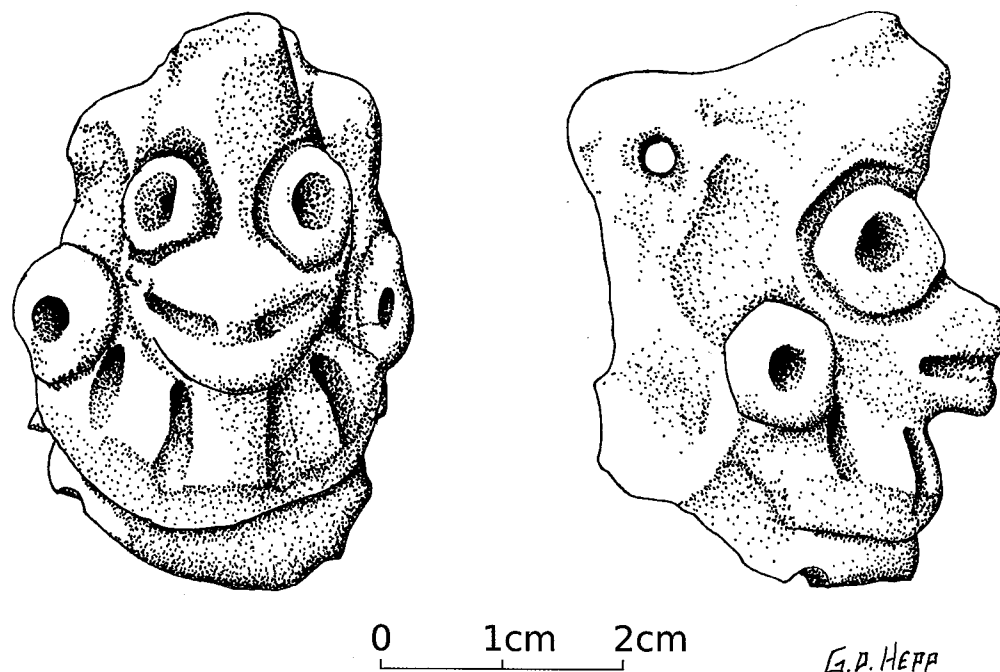


Fig. 9 Ocarina depicting a 'transformational' figure (Guy D. Hepp).

Music and Psychedelic Substances A Case Study in Archaeological Remains from Northern Chile

Francisca Gili

Zusammenfassung

Im traditionellen südamerikanischen Kontext ist Musik oft mit schamanischen Praktiken verbunden. In vielen Kulturen des Kontinents gehört dazu auch der Gebrauch von Pflanzen, die einen besonderen Bewusstseinszustand hervorrufen. Belege hierfür finden sich sowohl in Form archäologischer Objekte als auch in den bis heute lebendig gebliebenen Traditionen. Traditionell wurden verschiedene Pflanzen verwendet: In Südamerika zeugen archäologische Reste vom Gebrauch der Samen des Anathenathera Colubrina var. Cebil, eines Baumes aus der Familie der Hülsenfrüchte, der in den subtropischen Gebieten Amerikas wächst. Zum Schnupfen und Rauchen dieser Samen wurden Schnupftäfelchen und Pfeifen aus Holz verwendet, die aufgrund der exzellenten Erhaltungsbedingungen in der Atacamawüste sehr gut erhalten sind. Die Darstellungen auf den Objekten geben Auskunft über den Gebrauch und die Bedeutung dieser magisch-religiösen Erfahrung. Einige dieser Funde tragen Figuren eines Panflötenspielers. Der Beitrag konzentriert sich darauf, mit Hilfe der archäologischen und ethnologischen Zeugnisse das Verhältnis zwischen Musik und dem Gebrauch von Anathenathera Colubrina var. Cebil zu verstehen. Hierbei wird versucht zu klären, welche Rolle die Bilder des Panflötenspielers auf den Täfelchen bei der Einatmung von Halluzinogenen spielen.

The aim of this research is to understand the relationship between the iconography that represents the playing of music instruments and the use of artifacts where these themes appear. With this perspective, my work has sought to explore the relationships between representation of musical iconography and the function of these sound-making artifacts, specifically in the area of Atacama, where the motif of the panpipe player appears on snuffing trays. The utilitarian function of these trays was traced in archaeological and ethnographic sources from a geographical radius extending

beyond Atacama to better view their associations with music.

As an explorative research method, a literature review was conducted using various sources that have reported on the use of snuffing trays. From these reference ideas of contextual use, this research has sought for other references associating music with substances inhaled by the use of snuffing trays. This search began with archaeological evidences of neighbouring areas and went further with ethnographic references. Representations in archaeological contexts showing musical instruments being played are rare in the study area but they are one of the ways to understand the cultural dynamics and the social and economic context of the music played in ancient times. Snuffing trays are widespread in the Andean region in parts of Peru, Bolivia, northern Chile, northwest Argentina, and the Amazon Basin.¹ The Atacama Desert in northern Chile has the largest concentration of these wooden artifacts known so far, due to dry environmental conditions that allow an excellent preservation of archaeological remains.²

When first reported, Ambrosetti and Lehmann suggested that this type of device was used for placing offerings.³ Not long after this theory was proposed, Uhle established the use of these devices for snuffing.⁴ Subsequently there have been several studies focused on establishing classifications and types of snuffing trays according to their chronology and distribution.⁵

Psychedelic substances have a long history of use in this zone. The earliest evidence of their use appears as residue in smoking pipes from the Formative Period (1000 BC – 300 AD). It is during

¹ Torres 1987.

² Torres 1998–1999, 56.

³ Ambrosetti 1899, 42–45; Lehmann 1902, 10–11, in: Llagostera – Torres – Costa 1998, 67.

⁴ Uhle 1912, 513, in: Llagostera – Torres – Costa 1998, 67.

⁵ Horta 2010; Llagostera – Torres – Costa 1998; Llagostera 2001; Torres 1986; Torres 1987; Torres *et al.* 1991; Torres 1993; Torres 1998–1999; Torres 2001; Wassén 1965, among others.