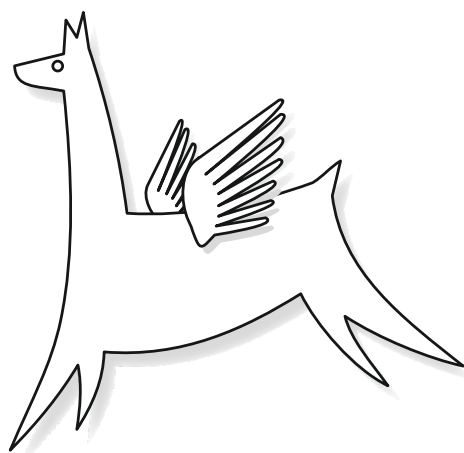




Edgardo Civallero

Turtle shells in traditional Latin American music



wayrachaki
editora

Edgardo Civalero

Turtle shells in traditional Latin American music

2° ed. rev.

Wayrachaki editora

Bogota - 2021

Civallero, Edgardo

Turtle shells in traditional Latin American music / Edgardo Civallero. –
2° ed. rev. – Bogota : Wayrachaki editora, 2021, c2017.

30 p. : ill..

1. Music. 2. Idiophones. 3. Shells. 4. Turtle. 5. Ayotl. 6. Aak. I. Civallero,
Edgardo. II. Title.

© 1° ed. Edgardo Civallero, Madrid, 2017

© of this digital edition, Edgardo Civallero, Bogota, 2021

Design of cover and inner pages: Edgardo Civallero

This book is distributed under a Creative Commons license Attribution-
NonCommercial-NonDerivatives 4.0 International. To see a copy of
this license, please visit:

<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Cover image: Turtle shell idiophone from the Parapetí River (Bolivia).
www.kringla.nu/.

Introduction

Turtle shells have long been used all around the world for building different types of musical instruments: from the *gbóló gbóló* of the Vai people in Liberia to the *kanhi* of the Châm people in Indochina, the rattles of the Hopi people in the USA and the drums of the Dan people in Ivory Coast. South and Central America have not been an exception: used especially as idiophones —but also as components of certain membranophones and aerophones—, the shells, obtained from different species of turtles and tortoises, have been part of the indigenous music since ancient times; in fact, archaeological evidence indicate their use among the Mexica, the different Maya-speaking societies and other peoples of Classical Mesoamerica. After the European invasion and conquest of America and the introduction of new cultural

patterns, shells were also used as the sound box of some string instruments.

The turtle shell consists of two halves —the upper one, or carapace, and the lower one, or plastron— naturally joined together. When the shell is used for building an idiophone (one of its most common applications), both parts are left together. The resulting musical instrument can be one of three types:

(a) Directly struck idiophone: the shell is struck with a stick made of wood, horn or bone, or with a mallet provided with a wooden or rubber head.

(b) Indirectly struck idiophone: the shell becomes the body of a rattle (which can be used as an anklet). Several small shells can be tied together in bundles, making a single rattle.

© Friction idiophone: a small section of the shell is smeared with resin or wax and rubbed with a finger or a rod, producing a squeaking sound. This type often accompanies singing as well as whistles or panpipes ensembles.

Izikowitz (1934) theorized that Latin American idiophones made of turtle shells arrived in the northern half of South America from Central America in ancient times; subsequent research has thrown this hypothesis into doubt, while confirming that these instruments were present in a much larger area, stretching from Canada (e.g. the *kanyahte'ka'nowa* of the Iroquois and the Seneca peoples) and the USA (the anklets used by the Creek, Yuchi, Cherokee, Seminole, Caddo and Natchez peoples) to northern Chaco, in South America.

According to anthropological and ethno-musicological studies, instruments made of turtle shell are unknown in Patagonia, the Pampas or the Andes, where the shell of different species of armadillo has been used instead for building percussion instruments (e.g. the *ápel* of the Aonik'enk people) and the sound box of many varieties of *charango*, the famous Andean chordophone.

Chaco

The natural region known as Chaco (from Quechua *chaku*, "hunting place") that stretches across portions of what is today Argentina, Paraguay and Bolivia, is the homeland of a number of indigenous societies belonging to the Guaykuruan, Mascoyan, Matacoan, Tupian and Zamucoan linguistic families.

In current Paraguay, Szarán (1997) documents turtle shells among the Ayoreo or Ayoréiode people (departments of Boquerón and Alto Paraguay), who use them to make a maraca called *xoxo*, as well as among the neighboring Chamacoco or Yshyr people (department of Alto Paraguay).

The Chamacoco people used shells of small turtles to





Images 1 (prev. page.) and 2.
Turtle shells from the Parapetí River (Bolivia).
[Photos: www.kringla.nu/].

build the *polarosho* or *polasho*. Also made of hooves, seeds and/or snail shells, the *polarosho* is a rattle employed by shamans, who tie it to their wrists or ankles, or place it on the end of a stick or around their

waists. According to Sequera (2002), the shamans of the Tomárâho people (a Chamacoco subgroup) also take advantage of turtle shells (from *Chelonoidis carbonaria*, known as *enermitak* in the Yshyr language) to make their maracas *osecha* or *paikâra*.

Ultimately, for the shaman the rattle *paikâra* is like carrying the cosmos between his hands. The shamans often speak of the center of the sky (*porn hotypyte*), by referring to the top of the rattle, usually studded with six colorful feathers of parrots *ermo to tasyky kurege* (Psittacidae), whose feathers represent the stratification of the sky. Furthermore, the instrument body is painted with *orn turbo* (visual stories) in the shape of chained rhombuses inside which the *porrebija* stars can be seen.

In Bolivia, the Ayoreo people of the department of Santa Cruz use the shells (usually from *Chelonoidis chilensis* and *Acanthochelys pallidpectoris*, but also from *Chelonoidis carbonaria* and *Chelonoidis denticulata*) to make jingle bells called *orohoró* (Bórmida, 2005). They

Peruvian and Colombian lowlands

are provided with a wooden clapper made of *palo santo* (*Bulnesia sarmientoi*). Ayoreo hunters carry them hanging from their waists to communicate with each other; in addition, they believe that by taking parts of a turtle with them they become increasingly silent. They are also worn to enter as well as to leave the camp during the festival *asohsná*, one of the few religious ceremonies performed by the Ayoreo.

Each jingle bell is considered either "male" or "female" according to the gender of the turtle, which can be distinguished by the shape of the plastron (the female is flat and the male is sunk).

In the department of Beni, Cavour (1994) quotes the *resonador de peta*: a shell of a river turtle (called *peta* in eastern Bolivia) which is struck with a drumstick made of bone, or rubbed with beeswax and played with the fingers.

In the lowlands of eastern Peru, the Culina or Madija people living in the upper parts of the rivers Purús and Santa Rosa (department of Ucayali) play the *teteco*, a shell of *motelo* (*Chelonoidis denticulata*) that has one of its ends smeared with resin of the tree *cacaraba* (*Inga feuilleei*). The rosined end is rubbed with the fingers. The sound made by the *teteco* accompanies the melody of a panpipe made of 2 reed tubes, called *api* (SIL, 1999; Chavez *et al.*, 2008).

In Colombia, according to Miñana Blasco (2009), the Cubeo people from the Vaupés basin (departments of Vaupés and Guaviare and neighboring areas of the Brazilian state of Amazonas) use the shell of the turtles *makáku+nbó* (*macacûùbo* or *morrocoy*, *Geochelone*

carbonaria) and *jiákumi* (*jiacûùbo*, *Podocnemis expansa*) to build idiophones. They are used to perform instrumental music and to accompany popular songs (*yiriaino*) together with panpipes and whistles made of deer skulls (Mendoza Duque, 1992).

Miñana Blasco also mentions the *kjúumuhe* of the Bora people (department of Amazonas), a friction idiophone that is no longer in use since the large collective fishing activities where it was played together with a small panpipe are no longer carried out (Novati and Ruiz, 1984).

The Camsá or Camentsá people (departments of Putumayo and Nariño) have an instrument similar to the former one, called *torturés* (Igualada and Castelví, 1938); the Ika or Arhuaco people (Sierra Nevada de Santa Marta) own the turtle shell *kúngüi* (Bermudez, 2006); and the Tikuna people from the Colombian "Amazonian Trapezium" (and nearby areas of Brazilian state of Amazonas) possess the turtle shell *torí*. A gift from the Tikuna mythical hero Yoi or Yoí, the latter is struck with a twig of *ubu* tree to accompany household songs, or

played during community festivals like the *yüü*, the female initiation. In addition to the last two instruments, Bermudez (1985) also mentions a turtle shell idiophone played by the Inga people (department of Putumayo).

Regarding the Tukano or Yepa-masa people (departments of Vaupés and Guaviare, and the Brazilian state of Amazonas), there are museum references to turtle shells (ICANH, 2012) apparently played by friction — like the ones collected during the expedition of Gerardo Reichel-Dolmatoff to the Vaupés area in 1967.

In the department of Vaupés, the Carapana or Karapana people play the *ujerica*, and the neighboring Barasana, Paneroa or Southern Barasano people, the *gu coro*. Settled in that same region, the Bara, Waimaja or Northern Barasano, the Piratapuyo or Wa'ikâná and the Tatuyo peoples also use turtle shells as musical instruments; the first ones play them together with a panpipe, and the Piratapuyo call them *kuú* (ILV, 1973). According to the same source, the Cagua or Kakwâ people (department of Guaviare) play shells to accompany small panpipes with



2-3 tubes, as also do the Macuna or Southern Buhágana people, who call the instrument *gusiraga coro*. All of them have a piece of beeswax attached to one end and are played by finger or palm friction.

Image 3 (prev. page).
Turtle shell of the Tukano people (Colombia).
[Photo: coleccionetnograficaicanh.wordpress.com/].

Venezuela, the Guayanas and Brazil

In Venezuela, according to Hurtado Dueñez (2007), the Piaroa or Wötihä people (Amazonas state) use the *rere*, and the Ye'kuana or Maquiritare people (Bolívar and Amazonas states and neighboring regions of Brazil), the *wayaamö ji'jo* or *kodedo*.

The *rere* is a shell of turtle *chipiro* or *terecay* (*Podocnemis unifilis*) with an end covered with wax or resin against which the thumb or index finger is rubbed. It is used only by men in secular contexts, such as the *re-re* dance, before and after the *wärime*, an elaborate harvest ritual celebrated annually. The *wayaamö ji'jo* is a shell of *morrocoy* (*Chelonoidis carbonaria*) played in the same fashion (wax rubbed with the edge of the hand) and also by men to accompany the sound of the panpipe



suduchu (Coppens *et al.*, 1975), which, in this particular case, is usually blown by a different musician (Olsen and Sheehy, 1998).

This combination of panpipes and rubbed turtle shells also appears among the Wayana people of the Litani and Maroni rivers, on the border between Suriname and French Guiana. The flute is called *luweimë* and has 5 pipes; the idiophone is named after the turtle species whose shell is used (*kuliputpë*, *Chelonoidis denticulata*, and *pupu* or *terecay*, *Podocnemis unifilis*). The musician holds the *luweimë* with the left hand and the shell under the left armpit, and rubs the plate with a stick, using his right hand. Unfortunately, this distinctive way of playing is becoming increasingly rare (Musique du Monde, n.d.).

Nearby, the Wayampi (Wayãpi) people of the Camopi and Oyapock rivers (French Guiana) possess a similar

luweimë panpipe, which is played together with a *pupu* turtle shell (Beaudet, 1980, 1998). The Waiwai people (southern Guyana and bordering areas of the Brazilian states of Roraima and Pará) make the *oratín* from a shell of swamp turtle *kwochí* (Bentzon, 1963); its sound blends with that of a cane whistle to accompany a dance.

In Brazil, besides the shells used by the indigenous societies described above, Bentzon (1963) documented an instrument similar to the one used by the Waiwai among the Hixkariyana, the Mawayana, the Kaxuyana, and the Shereó peoples (northern areas of the state of Pará). Some museum collections (e.g. Národní Muzeum, 2009) include turtle shell idiophones made by the Karajá people (states of Goiás and Tocantins).

Image 4 (prev. page).

Turtle shells of the Patamona people (Guayana).

[Photo: www.kringla.nu/].

Central America

In Panama, the Emberá or Ėpërá people (Comarca Emberá-Wounaan and Darien province) build and play the *chimiguí*, a turtle shell beaten with a wooden stick, while the Ngäbe or Guaymí people (Comarca Ngäbe-Bugle, and Bocas del Toro, Veraguas and Chiriquí provinces) use the *ñelé*, which has an edge smeared with wax and is played by rubbing it with the edge of the hand — from the wrist to the fingertips. Also called *guelekuada* or *seracuata*, the *ñelé* is associated with a myth concerning the first time the *balsería* or *krun* took place (Brenes Candanedo, 1999), a traditional celebration that brings together different communities and where the instrument plays a leading role.

The same author notes that the Kuna or Guna people



(Comarcas Guna Yala, Madugandí and Wargandí) use a turtle shell they call *morrogala* during a ceremonial dance after pubescent girls "first haircut", which is treated as a female rite passage.

Further north, the Garífuna people of the Caribbean coast (Belize, Guatemala, Nicaragua and Honduras) play the *taguel bugudura*, and the neighboring Miskito people, living in the Honduran Caribbean coast, do so with their *kuswataya* — literally, "the terrapin's skin" (CEDTURH, n.d.). Both idiophones are sounded by being struck with a wooden stick, a long nail, or even a deer's horn. Also in the Honduran Mosquitia, the Tawahka people play the *cuah untak* (SETUR-IHT, n.d.).

Finally, the *tucutítutu* or *tucutícutu* can be heard throughout Guatemala: a percussive turtle shell with an

Image 5 (prev. page).
Turtle shell and deer horns from Central America.
[Photo: Unknown source].



Image 6.
Tucutítutu from Guatemala.
[Photo: servicios.prensalibre.com/].

onomatopoeic name, which is played to accompany carols during "Las Posadas", popular festivals that take place nine days before Christmas.

Mexico

In Mexico, the turtle shell has a special meaning dating back to pre-Hispanic times. Ancient legends link turtles to music and to the rain gods; they also appear in a number of important origin myths, such as the one explaining the birth of the maize. They are included in ancient narratives (e.g. the manuscript entitled *Histoyre du Mechique*) and, of course, in countless traditional stories derived from them — the heritage of different contemporary Mexican indigenous societies (García Garagarza, 2014).

Turtle shells, used as musical instruments, have been featured in Mesoamerican iconography, such as the pre-classical murals of San Bartolo, in the Guatemalan department of Petén (Bourg, 2005), showing Olmec

influences. The Mexica (Aztec) people and those who fell under their influence called them *áyotl* ("turtle"; Stevenson, 1976), *ayot icacahuayō* or *ayotapalcatl*. In his *Historia General de las Cosas de la Nueva España* [General History of the Things of New Spain] (ca. 1540), Franciscan friar Bernardino de Sahagún writes:

...and they also carried their *teponaztli* and their rattles, and the turtle shell to play.
Book II, chapter 35, the feast of Atemoztli.

...and continues...

...they used turtle shells made of gold, which they went along playing, and now they use the natural turtle shells.
Book VIII, chapter 9.

Interestingly, he did not enumerate the idiophone among the instruments kept in the *mixcoacalli* (Book VIII, chapter 14), the place where the court musicians of Tenochtitlan practiced and shared their knowledge.



Image 7.
Turtle shells on pottery from the Late Classical period.
[Pictures: Zender, 2005].

The instrument is also mentioned in the *Codex Borbonicus* (Castellanos, 1970), in Hernando de Alvarado Tezozómoc's *Crónica Mexicayotl* (ca. 1598, describing the dedication of the Great Temple of Tenochtitlan in 1487), and in the *Codex Magliabechiano* (Gómez Gómez, 2006), among others.

The turtle shells were also employed by the Mixtec people (as shown in the Oaxacan *Codex Becker I*, 12th century) and by the P'urhépecha people (as quoted in the *Relación de las ceremonias y ritos y población y gobierno de los indios de la provincia de Michoacán* [The Description of the Ceremonies, Rites, Population, and Government of the Indians of the Province of Michoacan], 1541).

There have been found both turtle shells (*áak*) used as musical instruments and their iconographic representations (Bourg, 2005) dating back to the classic period of Maya civilization. Called *kayab* according to Stevenson (1976), the instruments were part of ensembles which also included a *huehuetl* and a couple of rattles or *chinchines* (Stöckli, 2004). They can be seen in the frescoes of Bonampak (García Gómez, 2013) as well as in different designs on pottery (see Zender, 2005). Diego López de Cogolludo, in his *Historia de Yucatán* [History of Yucatan] (1688), explained that in the Maya cultural area the turtle shells were played by hitting them with deer antlers (see Guzmán *et al.*, 1984.):

Yucatecan music can be characterized as both religious and martial, because every war was consecrated to the gods and always solemnized with notes of their music. This was very imperfect, and its instruments consisted of the famous American timpani, tunkúl or tunkul, drums, trumpets, marine conch as a bugle, a range of whistles, rattles and flutes, and the turtle shell struck with the antler of a deer.

Diego de Landa, in his *Relación de las cosas del Yucatán* [Description of the Things of Yucatan] (ca. 1566), mentions these idiophones, and points out a different performance technique:

...they have other instrument, made of the entire turtle with its shell, and once the flesh is removed, they strike it with the palm of the hand, and it has a mournful and sad sound.

In the *Informe contra los adoradores de ídolos del Obispado de Yucatán, año de 1639* [Report against the



Images 8 and 9.
Players of *concha* from Tecacahuaco (Atlapexco, Hidalgo state, Mexico).
[Photos: www.jornada.unam.mx/].

idols' worshipers of the Bishopric of Yucatan, year 1639], Pedro Sanchez de Aguilar wrote:

...and now they dance and sing according to the Mexicans' customs, and they had and have their main singer, who sings, and teaches what is to be sung, and they adore him, and venerate him, and offer him a seat in the Church, and in their meetings, and weddings, and they call him Holpop; he is in charge of the drums, and musical instruments, such as flutes, trumpets, turtle shells, and teponaguaztli, which is made of hollow wood, whose sound is heard from two, and three leagues, depending on the wind.

Nowadays, the Chontal or Yokot'an people (state of Tabasco) beat the shells of the *hicotea* or *jicotea* turtle (*Trachemys callirostris*) with a wooden stick, a rib or the traditional deer antlers to accompany, together with a cane flute or *pito*, the dance of the blanquitos, among other cultural native expressions. Turtle shells are also played by the Tzeltal people (state of Chiapas) during

some of their dances and ceremonies (Pitarch Ramón, 1996). The Huave or Ikood / Ikoot people (state of Oaxaca) beat the *carapacho* with deer antlers; together with a drum and a reed flute, it lends music to the dance of the culebra (snake), the dance of the pez sierra (sawfish) and the son of the pez espada (swordfish). In the same state (CDI, n.d.), these instruments appear in the hands of the Zapotec or Binni Zaa people, who call them *bigu*. It is part of a traditional ensemble known as *pitu nisiaba* or *muní* (Cruz, 2012) that includes a reed flute and a drum or *caja* to accompany songs.

Finally, among the Nahua, the Huasteca or Téenek, the Tepehua and the Totonaca peoples (states of San Luis Potosi, Veracruz, Hidalgo and Puebla), turtle shells are a key element in the performance of the songs welcoming the souls of the dead each November 1, during the *xantolo* (Barranco Jurado, 2013).

References

Beaudet, Jean-Michel (1998). *Wayãpi of Guyane: An Amazon soundscape*. [CD]. Paris: Le Chant du Monde; Collection du CNRS / Musée de l'Homme.

Bentzon, Fridolin Weis (1963). Music of the Waiwai Indians. In Fock, Niels. *Waiwai: Religion and society of an Amazonian tribe*. Copenhagen: Nationalmuseet.

Bermúdez, Egberto (1985). *Los instrumentos musicales en Colombia*. Bogotá: Universidad Nacional de Colombia.

Bermúdez, Egberto (2006). *Shivaldamán: Música de la Sierra Nevada de Santa Marta*. [CD]. Bogotá: Fundación de Música.

Bórmida, Marcelo (2005). Ergon y mito: Una hermenéutica de la cultura material de los Ayoreo del Chaco Boreal. *Archivos*, 3 (2).

Bourg, Cameron (2005). *Ancient Maya music now with sound*. Louisiana: State University. [Online]. http://etd.lsu.edu/docs/available/etd-11162005-171011/unrestricted/Bourg_thesis.pdf

Brenes Candanedo, Gonzalo (1999). *Los instrumentos de la etnomúsica de Panamá*. Panama: Autoridad del Canal de Panama.

Castellanos, Pablo (1970). *Horizontes de la música precortesiana*. Mexico: Fondo de Cultura Económica.

Cavour, Ernesto (1994). *Instrumentos musicales de Bolivia*. La Paz: E. Cavour.

CDI [Comisión Nacional para el Desarrollo de los Pueblos Indígenas] (n.d.). *50 encuentros de música y danza indígena*. [Online]. <http://mowlac.files.wordpress.com/>

CEDTURH [Centro de Documentación Turística de Honduras] (n.d.). *Instrumentos musicales autóctonos de Honduras*. [Online]. <http://cedturh.iht.hn/>

Coppens, Walter *et al.* (1975). *Music of the Venezuelan Yekuana Indians*. [LP]. Washington: Smithsonian Folkways Recordings.

Cruz, Natalia (2012). Guze Gola, en la interpretación del Grupo Gugu Huiini'. *Comité Melendre*. [Online]. <http://comitemelendre.blogspot.com.es/2012/12/guze-gola-en-la-interpretacion-del.html>

Chávez, Margarethe *et al.* (2008). *Instrumentos musicales tradicionales de varios grupos de la selva peruana*. Datos Etnolingüísticos (Instituto Lingüístico de Verano), 36.

García Garagarza, León (2014). La tortuga, o el trueno y la lira. *La Jornada de Morelos*, July, 12. [Online]. http://www.jornadamorelos.com/2014/7/12/cultura_nota_01.php



Lámina 5
Caparazón de Tortuga (Ijka)
Sierra Nevada

García Gómez, Arturo (2013). Histoyre du Mechique de André Thévet. Patrimonio musical de la conquista. *Neuma*, 6 (2), pp. 28-45.

Gómez Gómez, Luis Antonio (2006). La documentación de la iconografía musical prehispánica. *Revista Digital Universitaria*, 7 (2).

Guzmán, José Antonio *et al.* (1984). Glosario de instrumentos prehispánicos. *La música de México*. Mexico: UNAM.

Hurtado Duéñez, Nina (2007). *Instrumentos musicales indígenas del Amazonas venezolano*. [Thesis]. Caracas: [n.i.]. [Online]. <http://www.acnilo.org/Demo/index.htm>

Image 10 (prev. page).
Turtle shell of the Ika people (Sierra Nevada, Colombia).
[Photo: Bermúdez, 1985].

ICANH [Instituto Colombiano de Antropología e Historia] (2012). Caparazón de tortuga tukano. *Colección Etnográfica ICANH*. [Online]. <http://coleccionetnograficaicanh.wordpress.com/>

Igualada, Francisco de; Castelví, Marcelino de (1938). Musicología indígena de la Amazonia colombiana. *Boletín Latinoamericano de Música*, 4, pp. 675-708.

ILV (1973). *Aspectos de la cultura material de grupos étnicos de Colombia, I and II*. Bogota: Instituto Lingüístico de Verano, Ed. Townsend.

Jurado Barranco, María Eugenia (2013). Ayot Icacahua-yo. *La Jornada del Campo*, 70, July, 20. [Online]. <http://www.jornada.unam.mx/2013/07/20/cam-hidalgo.html>

Mendoza Duque, Diana Alexandra (1992). *Música de ritual: Umbral del tiempo*. [Thesis]. Bogota: Universidad Nacional.



Miñana Blasco, Carlos (2009). Investigación sobre músicas indígenas en Colombia. Primera parte: un panorama regional. *A Contratiempo: Música en la cultura*, 13. [Online].

Musique du Monde (n.d.). *Musique instrumentale des Wayana du Litani*. [CD]. Paris: Buda Musique.

Národní Muzeum (2009). *In the Shadow of the Jaguar. Exhibitions*. [Online]. <http://www.nm.cz/m/Naprstek-Museum/Exhibitions-NpM/IN-THE-SHADOW-OF-THE-JAGUAR.html>

Novati, Jorge; Ruiz, Irma (1984). *Mekamunaa. Estudio etnomusicológico sobre los Bora de la Amazonia peruana*. [LP]. Buenos Aires: Instituto Nacional de Musicología

"Carlos Vega".

Olsen, Dale A.; Sheehy, Daniel E. (eds.) (1998). *The Garland Encyclopedia of World Music. Vol. 2: South America, Mexico, Central America, and the Caribbean*. London: Routledge.

Pitarch Ramón, Pedro (1996). Animismo, colonialismo y la memoria histórica tzeltal. *Revista Española de Antropología Americana*, 26, pp. 183-203. [Online]. <http://revistas.ucm.es/index.php/REAA/article/viewFile/REAA9696110183A/24160>

Sequera, Guillermo (2002). *A la búsqueda de una cultura desconocida: los Tomárâho del Alto Paraguay*. [Online]. <http://guillermosequera.files.wordpress.com/2011/03/chamacoc.pdf>

SETUR-IHT [Secretaría de Turismo, Instituto Hondureño de Turismo] (n.d.). *Compendio cultural*. [Online]. <http://cedturh.ihh.hn/docs/Culturas-Vivas-otros.pdf>

Image 11 (prev. page).
Turtle shell (Colombia).
[Photo: Bermúdez, 1985].

SIL [Summer Institute of Linguistics] (1999). *Ididenicca ima / Relatos de nuestros antepasados. Culina (Madija)*, vol. 2. Lima: Instituto Lingüístico de Verano (SIL).

Stevenson, Robert (1976). *Music in Aztec and Inca Territory*. Berkeley: University of California Press.

Stöckli, Matthias (2004). Iconografía musical. In LaPorte, Juan P. et al. (eds.) *Actas del XVIII Simposio de Investigaciones Arqueológicas en Guatemala*. [Online]. <http://www.famsi.org/reports/03101es/55stockli/55stockli.pdf>

Szarán, Luis (1997). *Diccionario de la música en el Paraguay*. [Online]. <http://www.luisszaran.org/>

Zender, Marc (2005). Para sacar a la tortuga de su caparazón: Ahk y Mahk en la escritura maya. *PARI Journal*, 6 (3), pp. 1-14.

