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Periodization of the cultural  
sequence of America and  
Nicaragua



**Editor:**

Nora Zambrana Lacayo

**Writers:**

Oscar Pavón Sánchez

Carrie Dennett

Geoffrey McCafferty

Ronald Bishop

Juana Sunsín Castrillo

**Design and diagramation:**

Nora Zambrana Lacayo

**Owner:**

Peder Kolind

[www.mimuseo.org](http://www.mimuseo.org)

[mimuseo@hotmail.com](mailto:mimuseo@hotmail.com)

[www.facebook.com/mimuseo.granada](https://www.facebook.com/mimuseo.granada)

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# Periodization of the cultural sequence of America and Nicaragua\*



OSCAR PAVÓN SÁNCHEZ

Mi Museo Archaeologist

Archaeological research has established a general periodization of the cultural sequence of America and Nicaragua:

- Paleo-Indian Period (10,000?-8000 BC)
- Archaic Period (8000-2000 BC)
- Orosí Period (2000-500 BC)
- Tempisque Period (500 BC-AD 300)
- Bagaces Period (AD 300-800)
- Sapoá Period (AD 800-1350)
- Ometepe Period (AD 1350-1550)

\*English translation: Linda Heatherly and Manuel Bermúdez

## ***I.- The Paleo-Indian Period (10,000?-8000 B.C.)***

The earliest American peoples, who lived in the Paleo-Indian period, belonged to a society made up of small groups of hunter-gatherers. Their hunting tools consisted of projectile points finely carved in stone, with Clovis and Folsom points outstanding among these. Their weapons have been found with the remains of animals such as caribou, mammoth and bison. Archaeological evidence of their activity has been found in the United States, Mexico, Central and South America.

In Nicaragua, Paleo-Indian sites have not been reported, but faunal remains hunted in this time period have been found, for example, at the site El Bosque, at Estelí and in the community of Veracruz, Rivas. Mammoth remains were found and also, in Matagalpa, the remains of bison.

## ***II.- The Archaic Period (8000–2000 B.C.)***

According to Zambrana and Zambrana (2011) archaeological evidence relative to this time period is mostly absent from our archeological record. However, there are two sites which may belong to this period: the archaeological site of Punta Mono (Monkey Point) on the Caribbean coast with remains dating prior to 4000 BC. (Smutko), and the site Huellas de Acahualinca site in Managua, with footprints attributed to a preceramic people.

## ***III.- The Orosí Period (2000–500 BC)***

The Orosí period and the subsequent periods refer uniquely to the area of Gran Nicoya, which includes Pacific Nicaragua and Guanacaste, Costa Rica. This chronology was established as time periods for the socio-cultural development of the Pacific region, at least of its ceramic producing societies.

The presence of pottery in Nicaragua during the Orosí period cannot be corroborated through the carbon-14 dating method. The only confirmation comes from a comparative study done by Dr. W.Haberlan, in which ceramics found on Ometepe island were dated between 1500 - 1200 BC (Dinarte phase). This work was compared with samples of ceramics related to the Chaparron and Tronadora phases in Costa Rica, phases that have been dated by carbon-14 to around 2000 BC (Hoopes 1994:75).

The Dinarte phase is the beginning of the Nicaraguan cultural sequence, in which the manufacture of ceramic artifacts is the preferred indicator of socio-cultural change.

## ***IV.- Tempisque Period (500 BC–AD 300)***

In Nicaragua, the Tempisque period is thus far seen as the one which begins the ceramic sequence for Pacific Nicaragua.

After 500 BC, ceramic evidence becomes common in the Nicaraguan archaeological record, with the following types standing out: Bocana Incised Bichrome (500 BC-AD 300), Usulután Negative (500 BC-AD 500) and Rosales Zoned Engraved (500 B.C.–A.D. 500).

It's noteworthy of note that in an archaeological rescue conducted in 2008 on the site Las Delicias, Managua, ceramics from this period, were documented and rescued and that these have not yet been identified with a specific name.

## ***V.- Bagaces Period (AD 300–800)***

The information on this period has been gathered by Silvia Salgado (1994:121-137) through archaeological research carried out in Granada. She subdivides the period into three phases depending on the ceramic evidence collected, these being the Siu Phase (AD 300-500), the San Antonio Phase (AD 500-650) and the Ayala Phase (AD 650-800/900).

Among the best known ceramic types are these: Charco Black-on-Red (A.D. 300-500), Tola Trichrome (AD 300-500), Chávez White-on-Red (AD 500-800), León Punctate (AD 300-800), Potosí Appliqué (A.D. 500-1350) (Figure 1) and Galo Polychrome (AD 500-800).



Figure 1: Potosí Appliqué type (AD 500-1350), Mi Museo collection.

#### VI.- Sapoá Period (AD 800-1350)

According to Salgado (1994:131), the coastal areas of the Lake of Managua and the Isletas are populated for the first time during this period. A hierarchy of settlements becomes evident, and some areas are used exclusively as cemeteries.

With respect to pottery, a break with the tradition of the previous period takes place. Cinnamon-slipped ceramics are replaced by white-slipped ones with different motifs, surface finish and clay mixture. Also, Sacasa Striated dinnerware appears, replacing monochrome dinnerware. Like the polychromes of the period, the Sacasa Striated ceramics show changes in shape, surface finish, and clay mixture (Salgado 1994:132). As in the Bagaces period, Salgado identifies different phases, each characterized by changes in the ceramic types.

It should be clarified that a dozen C-14 datings carried out for the Santa Isabel site, Rivas, suggest that the Sapoá period has a range of dates defined as between 800 and 1200 AD. (McCafferty 2005, McCafferty and Steinbrenner 2009). The phases or sub-periods within the period embrace an interval of time in the following period. The explanation for this is that some ceramic types which appear at an earlier date disappear around 1200 AD, while others continue until very late in the subsequent Ometepe period. A new period is identified by the appearance of new types that appear about 1200 AD and continue until the conquest. For example, the Vallejo Polychrome type appears for the first time about 1200 AD.

The dominant ceramic types for this period are: Papagayo Polychrome (AD 800-1350), Sacasa Striated (AD 800-1520), Pataky Polychrome (AD 800-1350) (Figure 2) and Jicote Polychrome (AD 1000-1350).



Figure 2: Pataky Polychrome type (AD 800-1350), Mi Museo collection.

#### VII.- Ometepe Period (AD 1350-1550)

That the main decorative Sapoá types continue in the Ometepe ceramic assemblages makes it difficult to distinguish between the remains of surface treatment in the two different periods. This means that the last part of the Sapoá period covers the Ometepe period also. The ceramics of the regional Sapoá and Ometepe phases have Papagayo Polychrome as their main polychrome type, and Sacasa Striated as the principal type with modeled decoration. The other pottery types such as Vallejo, Madeira Polychrome, Luna Polychrome and Castillo Engraved, are part of the ceramic assemblage associated

with the last part of the Sapoá period and also with the Ometepe period (Zambrana and Zambrana 2011).

The precise distinction of materials assigned to Sapoá such as Vallejo becomes somewhat difficult, due to limited scientific research and especially to the limitation of dating the context in which these materials are found. However, recent research in the department of Rivas has provided absolute dates by the Carbon 14 method, showing that the Lago Black-Modeled type and others, which define the Ometepe period, make their appearance in the previous Sapoá period, and continue through the Ometepe period until the conquest (McCafferty 2005).

According to Salgado (1996), the characteristic ceramics of this period are these types: Vallejo Polychrome (Figure 3), Madeira Polychrome, Luna Polychrome, Castillo Engraved, Banda Polychrome and Bramaero Polychrome (Salgado 1996).



Figure 3: Vallejo Polychrome type (AD 1200-1550), Mi Museo collection.

## References

McCafferty, G. y Steinbrenner L.  
2005 Chronological Implications for Greater Nicoya from the Santa Isabel Project, Nicaragua. *Ancient Mesoamerica* 16 (1):131-146.

Zambrana, Jorge & Nora Zambrana Lacayo  
2011 La secuencia Cultural. En *Cerámica prehispánica del Pacífico de Nicaragua*. Colección Mi Museo / Prehispanic Ceramics of Pacific Nicaragua: Mi Museo Collection. Mi Museo, Granada, Nicaragua.

# Granada Red Ware Ceramics

CARRIE L. DENNETT, GEOFFREY G. MCCAFFERTY, AND RONALD L. BISHOP

Detailed criteria for classification are an essential requirement for ceramic analysis. In Mesoamerica, the classification system most commonly employed is known as the “Type-Variety” method, which generally uses characteristics of surface finish and decorative techniques to distinguish between the many potential variables found on ceramic fragments. In Pacific Nicaragua, this classification system was used by Paul Healy (1980) to create the first rigorous pottery typology. That system has undergone some minor development (e.g., Salgado González 1996a, 1996b; Steinbrenner 2010), but remains the cornerstone of Pacific Nicaraguan ceramic analysis; for example, the recently published *Cerámica Prehispanica del Pacífico de Nicaragua: Colección Mi Museo* (Zambrana 2011) relies heavily on Healy’s classification system.

Nevertheless, improved technologies allow new methods for studying ceramics. This was discussed in a recent article in *Mi Museo y Vos* (McCafferty et al. 2012) in which several techniques were presented for the scientific analysis of pottery, including petrography and instrumental neutron activation analysis

(INAA). These methods are particularly useful for the characterization of the mineral and chemical composition of ceramics (and other materials), and therefore provide important information about the location of ceramic manufacture. In ceramics, the paste composition is referred to as the ‘ware’ these techniques are beginning to allow for the construction of a supplemental “Ware-Type-Variety” classification based on paste.

This short article presents a reconsideration of burnished red pottery dating from the Bagaces period (300–800 d.C.) using a Ware-Type-Variety analysis. Traditional ceramic analyses distinguish between three ‘types:’ Tola Trichrome, León Punctate, and Chávez White-on-Red (Figure 1). All three feature a similar burnished red surface, and the distinguishing characteristics are based on decorative features such as paint colors, vessel form, and other decorative techniques.

During recent excavations at the El Rayo site in the Granada region (Figure 2), many examples of Late Bagaces period (500–800 d.C.) ceramics were discovered in a well-dated context, and this



Figure 1. Examples of (a) Chávez White-on-Red, (b) Tola Trichrome, and (c) León Punctate. Photos courtesy of Mi Museo, Granada.



Figure 2. Map indicating the location of Granada and the site of El Rayo.

material has become an important element of Dennett's doctoral research at the University of Calgary. She is using a combination of techniques to characterize the composition of ceramics in order to consider questions of manufacture and exchange during the Bagaces and Sapoa time periods. This project will provide new and important insight into the ancient ceramic economy of the Greater Nicoya region as well as long distance exchange networks. Her research builds on a database of ceramic compositional groupings developed by Ron Bishop of the Smithsonian Institution working in collaboration with Fred Lange.

Analyzing petrographic thin sections of pottery from El Rayo, Dennett noted that examples of Tola Trichrome, León Punctate, and Chávez White-on-Red were virtually identical in terms of mineral and temper composition, indicating a similar recipe for the ceramic paste preparation and manufacturing techniques (Figure 3). This relationship was tentatively chemically identified by Bishop and Lange in the 1980s in samples collected primarily from

Rivas and Ometepe (Bishop et al. 1988, 1992), however, the location of manufacture could only be generally restricted to the Pacific Nicaragua subregion of Greater Nicoya. Following on that source attribution, Bishop invited Dennett to submit samples of these types for chemical analysis using the Smithsonian Institution-National Institute of Standards program of neutron activation. Those results reinforced that the composition of the ceramic paste in each type sampled was, as anticipated, also chemically related (Figure 4).

The significance of these results is that all three types share a similar 'ware,' and therefore come from the same manufacturing zone and represent a similar potting tradition (see also Steinbrenner 2010). Based on geological and volcanic features of the region, Dennett proposes that this 'ware' group likely originates in or around the Granada area, and that examples were widely distributed within the Granada area itself, as well as southward into the Rivas area and even the Nicoya peninsula. Based on this data we further propose the new category of Granada Red Ware to incorporate these existing locally manufactured types.

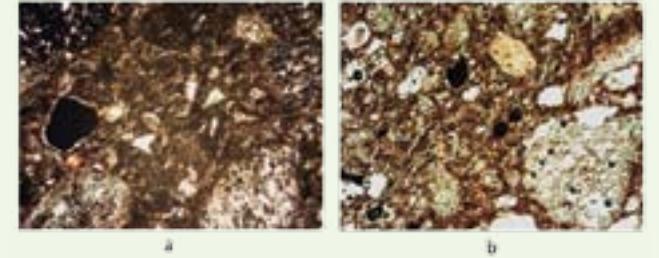


Figure 3. Petrographic examples of paste from (a) Chávez White-on-Red (sample NPC030/CE40) and (b) Tola Trichrome (sample NPC022/CE43). Digital micrographs taken at 5x PPL.

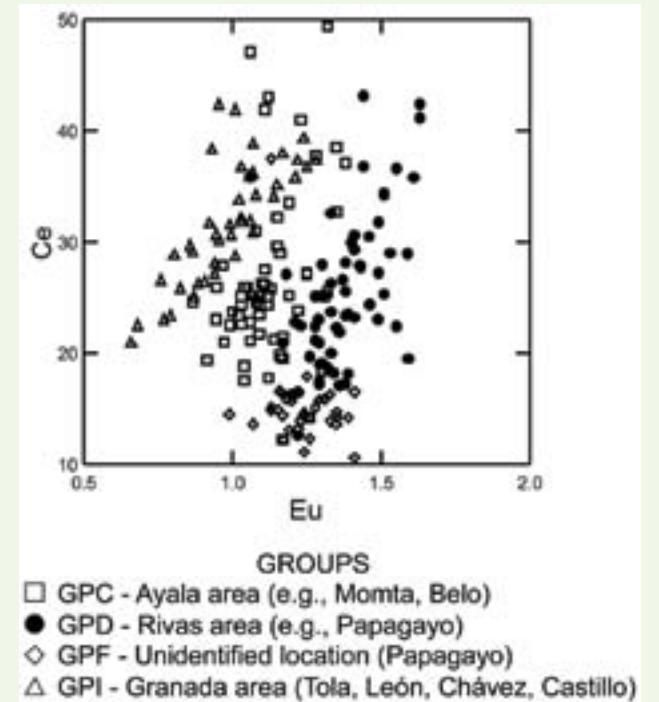


Figure 4. Instrumental neutron activation analysis (INAA) results. Group "GPI" plots the chemical (Ce-Eu) clustering of Tola Trichrome, León Punctate, Chávez White-on-Red, and Castillo Engraved types against other chemical groups from Pacific Nicaragua.

Based on the results of this research we propose that the existing type names be formally clarified as: Granada Red Ware, Tola Trichrome (including the Tola and Lopez varieties); Granada Red Ware, Chávez White-on-Red (including Chávez and Punta varieties); and Granada Red Ware, León Punctate. A more complete type description would also include typical vessel forms and a catalogue of particular design motifs. These are an example of the types of refinements possible utilizing compositional analyses. In the future we look forward to coordinating with other investigators for an elaboration of the Granada Ware typology and a more comprehensive revision of the entire established classification system for Greater Nicoya ceramics.

Another intriguing discovery was made in the process of this research. The paste composition of the Sapoá period diagnostic type Castillo Engraved (and at least some examples of the Rivas Red type) is also chemically and compositionally related to that of Granada Red Ware, suggesting that the Bagaces period potting tradition which manufactured Tola Trichrome, León Punctate, and Chávez White-on-Red continued into the subsequent time period, albeit with different surface color (achieved through firing reduction technology) and decorative techniques. While these conclusions are preliminary in nature, we can suggest that full identification should be corrected to be Granada Red Ware, Castillo Engraved type. It was also noted that some, albeit infrequent, vessel forms of Castillo are identical to forms

found in earlier Granada Red Ware types (e.g., collared jar), which provides additional support for considering that there was continuity in potting traditions.

This revision to the ceramic typology for the Bagaces period of Pacific Nicaragua will enable further refinements to the overall regional chronology, as well as clarifying processes of change and continuity during the Bagaces to Sapoá transition. Ethnohistorical accounts and previous archaeological interpretations suggest a dramatic break in cultural processes that occurred about 800 d.C. when foreign groups of possible Mesoamerican origin entered into, and subsequently occupied, the Greater Nicoya region. While some dramatic innovations are found in the material culture, including the introduction of a greater diversity of polychrome types, this new evidence for the Granada Red Ware potting tradition also supports the idea of cultural continuity between the two periods. The implication is that existing indigenous groups, possibly of Chibchan linguistic and ethnic stock, were not completely driven out as has been the traditional assumption, but rather absorbed newly arriving Mesoamerican peoples, likely the Chorotega of the Oto-Manguean language family. This presents a more dynamic context for investigating emergent ethnogenesis at this time—the development of a new ‘culture group’ and associated material culture from the long-term mixing of previously separate cultural groups (McCafferty 2011; McCafferty and Dennett 2013).

## References

- Bishop, Ronald, Frederick Lange y Peter Lange  
1988 Ceramic Paste Compositional Patterns in Greater Nicoya Pottery. In *Costa Rican Art and Archaeology: Essays in Honor of Frederick R. Mayer*, edited by Frederick W. Lange, pp. 11-44. Johnson Books, Boulder, CO.
- Bishop, Ronald R. Frederick W. Lange, Suzanne Abel-Vidor y Peter C. Lange  
1992 Compositional Characterization of the Nicaraguan Ceramic Sample. In *The Archaeology of Pacific Nicaragua*, edited by Frederick W. Lange, Payson D. Sheets, Anabel Martínez y Suzanne Abel-Vidor, pp. 135-162. University of New Mexico Press, Albuquerque, NM.
- Healy, Paul F.  
1980 *Archaeology of the Rivas Region, Nicaragua*. Wilfrid Laurier University Press, Waterloo, Ontario.
- McCafferty, Geoffrey G.  
2011 Etnicidad chorotega en la frontera sur de Mesoamerica. *La Universidad* 14/15:91–112. Universidad de El Salvador.
- McCafferty, Geoffrey G. y Carrie L. Dennett  
2013 Ethnogenesis and Hybridity in Proto-Historic Period Nicaragua. *Archaeological Review from Cambridge* 28:1, en prensa.
- McCafferty, Geoffrey G., Carrie Dennett, William Glanzman y Larry Steinbrenner  
2012 Técnicas para el análisis cerámico: Ejemplos de Nicaragua. *Mi Museo y Vos* 21:5–14.
- Salgado González, Silvia  
1996a Social Change in the Region of Granada, Pacific Nicaragua (1000 B.C.–1522 A.D.). Ph.D. dissertation, State University of New York, Albany, NY.
- 1996b The Ayala Site: A Bagaces Period Site near Granada, Nicaragua. In *Paths to Central American Prehistory*, edited by Frederick W. Lange, pp. 191–220. University of Colorado Press, Boulder.
- Steinbrenner, Larry  
2010 Potting Traditions and Cultural Continuity in Pacific Nicaragua, A.D. 800–1350. Ph.D. dissertation, Department of Archaeology, University of Calgary, Calgary, AB.
- Zambrana, Nora (editor)  
2011 *Cerámica Prehispánica del Pacífico de Nicaragua: Colección Mi Museo*. Mi Museo, Granada, Nicaragua.

# Treasures of the Archaeology Department Museum, University of Calgary



DR. GEOFFREY MCCAFFERTY

University of Calgary

create a small exhibition of some of the objects. Fifteen graduate and advanced undergraduate students participated in the class. They selected different themes based on the collection to research, described and photographed objects relating to those topics, and then created posters and an exhibition that opened at the annual Chacmool conference in November.

In 2012, the museum of the Archaeology Department of the University of Calgary received from the Glenbow Museum of Calgary (Alberta, Canada) a donation of over 2000 archaeological pieces (Figure 1). The majority of the artifacts pertain to pre-Columbian cultures of Central America, and include ceramic vessels, figurines of clay and stone, carved metates, jade objects, and zoomorphic ocarinas.

Beginning in September, I directed a class in museography to initiate the process of cataloguing the collection, and to



Figure 1: Museum collection in Archaeology Department.

Most students selected topics relating to the Greater Nicoya region of Pacific Nicaragua and northwestern Costa Rica, in part because many of the artifacts pertain to that region and also because it is the focus of long-term research by members of the Archaeology Department. For example, Jessica Manion studied periform vessels from the Greater Nicoya region, especially those with feathered serpent imagery (Figure 2). Joseph Donnelly, who has excavated in the Granada region, focussed on zoomorphic and anthropomorphic vessel supports. Two other students, Tatum McKelvie and Aurora Thuroo considered specific elements of ceramic iconography: monkey imagery and shamanism, respectively.

One of the most prominent aspects of the new collection was carved 'metates' from Costa Rica (Figure 3). These elaborately carved slabs resemble functional

grinding stones in form, but the intricate decoration implies a more symbolic use, perhaps as thrones or 'seats of authority.' Matt Abtosway and Tiana Christiansen both worked on about 35 of these objects, with Matt studying their functionality through microscopic use-wear analysis while Tiana considered the iconography, including engraved textile patterns on the surface.

Other students considered additional facets of the groundstone collection. PhD student Cara Tremain studied jadeite blades and beads, probably from Costa Rica (Figure 4). Tyson Smith worked with a large collection of groundstone mace heads (Figure 5), also from Costa Rica, that were likely used as staffs of authority. A related artifact type of groundstone axe, or celt, was analyzed by Derrick Plante and Paula Calzada. Cheyanne Lepka studied small basalt statues that possibly represented shamans. Based on the exotic nature of these materials and their high labor investment these are



Figure 2: Papagayo Polychrome vessel with feathered serpent imagery.



Figure 3: Carved 'metate/throne'.



Figure 4: Jadeite axe with carved bird decoration.

all considered to have been symbols of ritual power held by chiefs or shamans, and incorporating religious significance in their iconography.

Clay has the flexible quality to be formed in a variety of ways, and some students in the class considered other shapes in addition to ceramic vessels. For example, Katrina Kosyk worked with a large collection of clay whistles and ocarinas (Figure 6), and even recorded the sounds that they produced in an attempt to compare different tonal ranges. Courtney Verschuren studied alligator imagery on Central American pottery, especially on Potosi Appliqué incense burner lids (Figure 7). Using figurines from outside of



Figure 5: Mace head with feline imagery.

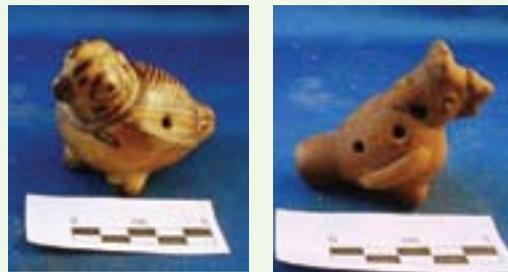


Figure 6: Ceramic ocarinas.

the Greater Nicoya region, Stephanie Rivadeneira and Marco Barbi considered anthropomorphic figurines from the Mexican Gulf Coast from the perspective of their social identities.



Figure 7: Crocodilian image on Potosi Appliqué incensory lid.

In the two months from the beginning of the class until the opening of the exhibition, students worked extremely hard on their research topics (Figure 8). Exhibition cases are on display on the 8th floor of the Earth Sciences Building at the University of Calgary, and posters of individual research projects are also on exhibit, and can also be viewed on the Central American Art and Archaeology web site:

<http://arky.ucalgary.ca/caadb/en/central-american-archaeology-display-treasures-university-calgary%E2%80%99s-archaeology-museum>. An on-line catalogue of the objects is being developed for scholars world-wide.

Central American archaeology is not well-known outside of the region, but students from the University of Calgary are fortunate to have participated in field projects in Nicaragua in the past. With plans underway for further excavations in Nicaragua beginning in 2013, the experience these students has gained through working with the museum collection will be put to good use as they continue their explorations of the fascinating past of these pre-Columbian cultures.



Figure 8: Jessica Manion, Aurora Thuroo, and Tatum McKelvie (l-r) preparing exhibition.

# Visitors to Mi Museo\*



JUANA SUNSÍN CASTRILLO

Responsible for Mi Museo guides

In the quarter from 28 September to 21 December 2012, during the exhibition "The Indigenous Market (800-1550 AD)," Mi Museo received 3066 visitors, which correspond to 1429 foreigners, 632 nationals and 1005 students.

Below are the countries of origin of foreign visitors:

Nicaragua 632	Switzerland 26	Japan 6	Turkey 1
U.S. 421	Mexico 25	Honduras 5	Romania 1
Costa Rica 136	Denmark 25	Venezuela 5	Vanuatu 1
France 117	Brazil 20	Finland 4	Uruguay 1
Germany 109	Sweden 17	Poland 4	India 1
Holland 92	Austria 13	Philippine 3	Israel 1
England 88	Italy 12	Norway 3	Chile 1
Canada 82	Russia 12	Scotland 2	Portugal 1
Spain 47	Guatemala 11	Czech Republic 2	NZ 1
Belgium 40	Argentina 9	Iceland 2	
El Salvador 38	Puerto Rico 7	Ireland 2	
Australia 27	Ecuador 6	Slovenia 2	

\*English translation: Manuel Bermúdez

Mi Museo, Calle Atravesada 505, Frente a Bancentro.  
Granada, Nicaragua.  
Telf. (505) 2552-7614  
E-mail: [mimuseo@hotmail.com](mailto:mimuseo@hotmail.com)  
Horario de atención: Lunes-Domingo: 8:00 a.m. - 5:00 p.m.  
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