

Table 1. Summary of frequency of types, analysed Ni-Ri-44 rim sherds

		Variety	Type		Grouping	
Type	Variety	No.	No.	%	No.	%
LATE PERIOD POLYCHROMES					4527	39.5%
Papagayo (11 varieties)			1659	14.5%		
	Alfredo	502				
	Casares	194				
	Cervantes	102				
	Cristóbal	5				
	Culebra	31				
	Fonseca	211				
	Mandador	350				
	Manta	103				
	Papagayo Variety	27				
	Tablero	11				
	Tortuga	9				
	Var. Indeterminate, Red-Banded	55				
	Variety Indeterminate	59				
Madeira (6 varieties)			587	5.1%		
	Banda	100				
	Elegante	62				
	Gato	7				
	Las Marias	210				
	Madeira Variety	167				
	Sapo	32				
	Variety Indeterminate	9				
Vallejo (7 varieties)			536	4.7%		
	Cara	5				
	Lazo	118				
	Mombacho	10				
	Pepa	7				
	Pica	114				
	Raya	100				
	Vallejo Variety	96				
	Variety Indeterminate	86				
Pataky (4 varieties)			245	2.1%		
	Francisca	38				
	Ortega	9				
	Pataky Variety	148				
	Rojo	13				
	Variety Indeterminate	37				
Isabel		173	173	1.5%		
Granada (3 varieties)			112	1.0%		
	Bandera	22				
	Granada Variety	63				
	Sapo	17				
	Variety Indeterminate	10				
El Menco (5 varieties)			87	0.8%		
	El Menco Variety	26				

		Variety	Type		Grouping	
Type	Variety	No.	No.	%	No.	%
	Leyenda	16				
	Quixote	8				
	Rojo	1				
	Simio	36				
Bramadero		66	66	0.6%		
Misc. Other Polychromes			26	0.2%		
	Unspecified Simple Banded	14				
	Craneo Polychrome	5				
	Luna: Altagracia	3				
	Mora: Cinta	2				
	Mora: Mora Variety	1				
	Gillen Black-on-Tan	1				
Indeterminate Polychrome (by paste group)			1036	9.0%		
	PG-3	272				
	PG-4	97				
	PG-5	117				
	PG-X	550				
ELABORATE MONOCHROMES/BICHROMES					982	8.6%
Lago Monochrome		621	621	5.4%		
Castillo Engraved		217	217	1.9%		
Jorge Red-on-Buff		49	49	0.4%		
Ricardo Bichrome		47	47	0.4%		
Murillo Applique		42	42	0.4%		
Ometepe Red Slipped-Incised		3	3	0.0%		
Potosi Applique		2	2	0.0%		
Indeterminate Chocolate Punctate, PG-X		1	1	0.0%		
SIMPLE MONOCHROMES					5874	51.3%
Sacasa Monochrome			3644	31.8%		
	Plain	1001				
	Striated	2643				
Tolesmaida Monochrome			2144	18.7%		
	Tolesmaida	976				
	Striated	1006				
	Variety Indeterminate	162				
Indeterminate Red-Slipped, PG-X		50	50	0.4%		
Indeterminate Monochrome		34	34	0.3%		
Indeterminate "Crudware", PG-X		1	1	0.0%		
Combo Colander		1	1	0.0%		
TEMPISQUE/BAGACES TYPES					74	0.6%
Agurcia Polychrome		1	1	0.0%		
Bocana			3	0.0%		
	Incised	1				
	Palmar	1				
	Variety Indeterminate	1				
Charco Black-on-Red: Obando		1	1	0.0%		
Chavez White-on-Red			2	0.0%		
	Astorga	1				

		<i>Variety</i>	<i>Type</i>		<i>Grouping</i>	
<i>Type</i>	<i>Variety</i>	<i>No.</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
	White-on-Red	1				
	Galo (Indeterminate and/or Belo)	4	4	0.0%		
	Leon Punctate	13	13	0.1%		
	Momta Polychrome	1	1	0.0%		
	Rosales Zoned Engraved	6	6	0.1%		
	Schettel Incised	12	12	0.1%		
	Tola Trichrome	7	7	0.1%		
	Usulután-Related	2	2	0.0%		
	Indeterminate Tola, Chavez, or Rivas Red	12	12	0.1%		
	Indeterminate Early Period	10	10	0.1%		
TOTAL ANALYSED RIM SHERDS		11457				100.0%

Table 2. Summary of previously established, revised, and new ceramic types and varieties present in Ni-Ri-44 and NMN2-1 Unit C rim sherd databases

I. PREVIOUSLY ESTABLISHED POLYCHROMES WITH PROPOSED NEW/REVISED VARIETIES		
Established Type	Established Varieties	Proposed New or Reclassed Varieties
Bramadero	Bramadero Variety	--
El Menco Polychrome ¹	--	El Menco Variety Leyenda (previously subsumed into Pataky: Leyenda) Quixote Rojo Simio (previously Jicote: Luna)
Granada Polychrome	Granada Variety	Bandera Sapo
Madeira Polychrome	Madeira Variety Las Marias	Banda (previously Banda Polychrome) Elegante Gato Sapo
Vallejo Polychrome	Vallejo Variety Cara Lazo Mombacho	Pepa Pica (previously Papagayo: Pica) ² Raya
Papagayo Polychrome	Papagayo Variety Alfredo Casares Cervantes Culebra Fonseca Mandador Manta	Cristóbal Tablero Tortuga (previously subsumed into Fonseca)
Pataky Polychrome	Pataky Variety	Francisca Ortega Rojo (previously Papagayo: Pica) ²
Luna	Altagracia ¹	--
II. PREVIOUSLY ESTABLISHED TYPES, NO SUGGESTED REVISIONS		
Established Type	Established Varieties	
Ila. IMPORTED POLYCHROMES		
Agurcia Polychrome	--	
Galo Polychrome	Belo, Indeterminate	
Gillen Black-on-Tan	--	
Momta Polychrome	--	
Mora Polychrome	Mora Variety, Cinta	
Iib. MONOCHROMES		
Castillo Engraved	Castillo Variety	
Combo Colander	Variety Unspecified	
Murillo Applique	Murillo Variety	
Ometepe Red Slipped-Incised	Variety Unspecified	

IIC. TEMPISQUE/BAGACES TYPES		
Bocana Incised Bichrome	Incised, Palmar	
Charco Black-on-Red	Obando	
Chavez White-on-Red	Astorga, White-on-Red	
Leon Punctate	--	
Potosi Applique	Potosi Variety	
Rosales Zoned Engraved	Rosales Variety	
Schettel Incised	Schettel Variety	
Tola Trichrome	Tola Variety	
III. PROPOSED REVISED MONOCHROME TYPES		
Revised Type	Proposed Varieties	Comments
Lago Monochrome	Lago Variety	Previously Lago Black Modeled.
Sacasa Monochrome	Plain Striated	Previously all classed as Sacasa Striated (or as Istmo Plain)?
Tolesmaida Monochrome	Tolesmaida Striated	Tolesmaida: previously subsumed into Rivas Red. Striated: previously subsumed into Sacasa Striated.
IV. NEW POLYCHROME & BICHROME TYPES		
Proposed Type	Proposed Variety	Comments
Craneo Polychrome	Craneo	Potentially a Papagayo Polychrome variety.
Isabel Polychrome	Isabel	Previously identified as Papagayo & Mombacho; analogous to Gorin's (1990) Carlitos Polychrome.
Jorge Red-on-Buff	Jorge	Analogous(?) to Haberland's (1992) Tierra Blanca Applique.
Ricardo Bichrome	Ricardo	Previously subsumed into Rivas Red; linked to Lago and Castillo.
Unspecified Simple Banded Polychrome	--	Linked to Pataky?
<p>¹ The nomenclature of "El Menco" as a ceramic taxon is problematic. The ceramic type of El Menco applied here is based on Knowlton's (1996) proposed El Menco "type". However, this type is very dissimilar to the El Menco "variety" of Luna defined in Bonilla V. et al. 1990 (a.k.a., the <i>Vinculos</i> catalogue) which is alternatively classed in Knowlton's Luna typology as "Altagracia variety". In this study, Knowlton's superior Luna typology is preferred to the <i>Vinculos</i> typology for classifying Luna Polychrome varieties. See Appendix A type description of El Menco Polychrome for further discussion.</p> <p>² It is my belief that the material originally identified as Papagayo: Pica in Healy (1980) is very distinct from the material subsequently identified as Papagayo: Pica in the <i>Vinculos</i> catalogue, and that it was a mistake to lump this material together apparently based on the presumed shared trait of orange-painted walls. In fact, the material that Healy identified as Pica actually shares decorative elements with Pataky, while the material identified as the Pica variety of Papagayo in the <i>Vinculos</i> catalogue is actually more closely affiliated with established Vallejo types, though retaining a connection to Papagayo. See type descriptions of these two types for additional discussion of these reclassifications.</p>		

Table 3. Some previously assumed cultural affiliations of Nicaraguan ceramics.

<i>Cultural Group/Influence</i>	<i>Ceramic Types</i>
Chorotega	Papagayo Polychrome, Sacasa Striated
Nicarao	Vallejo Polychrome
Unspecified Mesoamerican/Mayan influence	Granada, Madeira, Pataky, and Bramadero polychromes
Potentially non-Mesoamerican group(s) of indeterminate and/or autochthonous ancestry	Luna Polychrome, Castillo Engraved, Lago Modelled, Rivas Red

Table 4. Major Nicaragua polychrome ceramic groups.

<i>Ceramic Group</i>	<i>Major Types</i> ¹	<i>Period</i>
Papagayo-Vallejo	Papagayo	early/late Sapoá
	Vallejo	late Sapoá
	Isabel	early?/late Sapoá
Granada-Madeira	Granada	early Sapoá
	Madeira	late Sapoá
	Bramadero ²	late Sapoá
"Transitional"	Pataky	early? Sapoá
	El Menco	late Sapoá

1. Several minor polychrome types (each of which comprised less than 1% of all polychromes at Santa Isabel) were also tentatively assigned to these groups in my dissertation work based on apparent commonalities with the various major types, but are excluded here because they were not included in the comparative analysis of the major types.

2. Bramadero, although a major type (comprising more than 1% of all Santa Isabel polychromes), was excluded from much of my comparative ceramic analysis because the type is associated only with a superhemispherical vessel form that was not included in the formal analysis (which focused on unrestricted bowls).

Table 5. Forms of tripod supports and appliqué bases associated with Nicaraguan serving-ceremonial vessels

	Pataky	Papagayo	Vallejo	Isabel	Granada	Madeira	El Menco	Castillo	Lago	Ricardo
Tripod Supports										
mammiform, hollow (SD-01)	X	X	X	?		CVD		?	?	
cylinder, short (SD-02)	CVD	X	X	?					X	
cylinder, tall (SD-03)	X	X	X			CVD				
tab or wedge (SD-06)	X	X		?						
stirrup (SD-08)	X	X								
modeled strap-loop (SD-09)	X									
modeled lifeform, hollow (SD-10a)	X	X	X		X	X	X	X	X	X
Applique Ring Bases										
simple annular		X				X		CVD	X	X
pedestal	X	X	X	X	X		X	X	X	X
Notes:										
<ul style="list-style-type: none"> • “X” denotes example identified in the Ni-Ri-44 database. • Specific forms of Isabel tripod supports could not be confirmed owing to the lack of examples of this type in the complete vessel database. However, Isabel tripod bowl sherds derived from bowls with clear Papagayo analogues that typically featured these support types. • “CVD” denotes tripod forms not identified at Ni-Ri-44 but present in the (C)omplete (V)essel (D)atabase. • Note that Castillo, Lago, and Ricardo represent monochrome and bichrome types excluded from the present discussion. 										

Table 6. Frequency of occurrence of discernable rim motifs on Ni-Ri-44 polychrome rim sherds

Rim Motif "Family" (with number of subsumed rim motifs in this assemblage)	Coded Rim Motifs Included in Family (this assemblage)	Recorded Appearances of Rim Motif (or Rim Motif Family) on Rim Sherds			% of All Recorded Instances on Rim Sherds
		Exterior Surface	Interior Surface	Both Surfaces Combined	
PAINTED POLYCHROME RIM MOTIFS					
Step-Fret, Basic (18)	22,22R, 25, 25R, 26, 26R, 26a, 26b, 27, 28, 31, 31a, 31aR, 32, 42, 44, 44a	166	75	241	17%
Step-Fret, Lazy-Z (6)	02, 04, 04a, 04b, 05, 05a, 29	72	133	205	15%
Pyramid, Stepped (8)	20, 21, 23, 38, 38a, 38b, 38c, 45	161	1	162	12%
Step-Fret, "Feather" Hook & Spiral (12)	Hooks: 10, 10a-f, x; Spirals: 09, 09a-c	16	76	92	7%
Step-Fret, Lazy-S (6)	01, 01a, 01b, 01c, 06, 33	44	48	92	7%
Pyramid, Triangle (6)	11, 11a, 11b, 11x, 12	79	--	79	6%
Dotting (3)	08, 08a, 08b	28	50	78	6%
Frog (3)	35, 35a, 35b	28	22	50	4%
"Kernel" (5)	14, 15, 17, 18, 19	9	34	43	3%
Miscellaneous Motifs (18) ¹	03, 07, 13, 16, 24, 30, 34, 34a, 36, 37, 39, 40, 41, 43, 45, 47, 70, rm-xx	87	115	204	15%
Indeterminate Motifs (2) ²	rm-28a; rm-ind	75	68	143	10%
TOTAL INSTANCES OF RIM MOTIFS ON RIM SHERDS		765	624	1389	100%
INCISED MONOCHROME RIM MOTIFS (CASTILLO ENGRAVED ONLY)					
Miscellaneous Castillo Motifs (23)	48, 48a, 49-68	246	--	246	N/A
<p>¹ <i>Miscellaneous motifs</i> include unrelated motifs that could not be subsumed into larger groupings. Although grouped together in this summary, several of the most common motifs are treated individually in the chapter 9 analysis. Motifs that appeared to be distinctive yet which remained too fragmentary to be clearly defined at present were assigned the tentative designation of rm-xx.</p> <p>² <i>Indeterminate motifs</i> were designated as rm-ind when the presence of motifs could be discerned but the motifs were too eroded to be ever clearly identified and as rm-28a when they were sufficiently well-preserved to be associated with either rm-01 (Lazy-S Step-Frets) or rm-26 (Basic Step Frets), but not with either of these motifs specifically.</p>					

Table 7. Motif sets identified in the Ni-Ri-44 and NMN2-1 polychrome rim sherd assemblages

Motif Set Code	Description	Counts	
		Ni-Ri-44	NMN2-1 Unit C
SIMPLE PAINTED BANDS (INTERIOR & EXTERIOR)			
B-, R-band , R-band (outlined)	single painted band (PB)	1289	59
BB-, RR-, BR-, RB-band	double PBs	2075	90
BBR-, BRR-, RBB-band	triple PBs	67	7
BRBR-, RBRR-band	miscellaneous multiple PBs	2	1
EXCLUSIVELY EXTERIOR DESIGNS			
ms-00a, ms-00b, ms-00c	Granada-Madeira bands & lines	117	--
ms-00d	Papagayo-Vallejo Group bands & lines	60	15
ms-10	Cervantes loop panels	16	--
ms-18	Bramadero-style panels	74	2
ms-20	Madeira support panels	80	2
ms-22	effigy toads or birds	16	--
ms-23	effigy bowl hanging loops	69	1
ms-24	Cara integrated face	2	7
ms-25	Vallejo paneling	11	3
ms-26	"Tinker-toy" net pattern	4	--
ms-32	Tortuga banding	9	2
ms-33	Anthropomorphic Vallejo design	4	--
ms-34	Vallejo "winged head" (?)	1	--
ms-35	"feathered serpent"	16	21
ms-39	Craneo head	5	--
ms-41 ¹	Cristóbal decorated bands (DBs)	--	1
ms-42 ¹	Vallejo: Vallejo simple panels	--	1
EXCLUSIVELY INTERIOR DESIGNS			
ms-04	"shields & standards"	100	--
ms-11 ²	Alfredo bird	13	--
ms-15	Papagayo: Papagayo scorpion frieze	25	2
ms-30	Fonseca flower	2	1
ms-38	Leyenda winged head	10	--
ms-40	coiled serpents	1	--
DESIGNS APPLIED TO EXTERIOR & INTERIOR SURFACES			
ms-01a-1; ms-01b; ms-01d	Single decorated band (DB)	374	21
ms-01f; ms-01g	doubled/multiple DBs	247	27
ms-01c ²	single DB, carination point	23	--
ms-01a-2; ms-01a-3; ms-01a-4; ms-01a-5	DBs w/spandrel	204	15
ms-01a-x	DB, indeterminate configuration	10	4
ms-02	alternating red-orange panels	708	40
ms-03	crouching animal-zoomorph	104	--
ms-05	"Sapo" patterning	51	--
ms-06	"creature-feather-shield"	11	--
ms-07	feathered headdress	130	--

Motif Set Code	Description	Counts	
		Ni-Ri-44	NMN2-1 Unit C
ms-08	"two-headed dragon"	328	35
ms-09	colour panels	201	3
ms-12	red-orange walls	311	13
ms-13	El Menco winged head	24	2
ms-14	Casares paneling	151	1
ms-16	hanging fringe	15	--
ms-17	"spider monkey"	33	2
ms-19	hanging monkey	35	--
ms-21	red painted walls	146	3
ms-27	Culebra "crocodilian"	7	4
ms-28 ²	Culebra profile head	10	--
ms-29	Culebra figure w/extended arm	4	--
ms-36	Leyenda "headdress" (?)	3	--
ms-37	Leyenda paneled rim	8	--
ms-43 ^{1 2}	"Moyogalpa" patterning	--	--
ms-44	"shield" & "cross-bones"	31	--
ms-xx	miscellaneous potentially identifiable motifs	46	7
TOTAL RECORDED INSTANCES OF MOTIF SETS ON RIM SHERDS		7283	392
VERTICAL BANDING			
VB-01	undiagnostic thick black descending PBs/lines	65	--
VB-02	Casares-style red descending PBs/lines	164	3
VB-03	Vallejo-style red or black descending PBs/lines	52	1
TOTAL RECORDED INSTANCES OF VERTICAL BANDING ON RIM SHERDS		281	4
¹ Motif set absent from Ni-Ri-44 assemblage.			
² Present in NMN2-1 assemblage but not in Unit C sample.			

Table 8. Contributions made by major polychrome types to total pool of rim motif decorative variation for Ni-Ri-44, based on rim sherds (families of rim motifs listed at left)

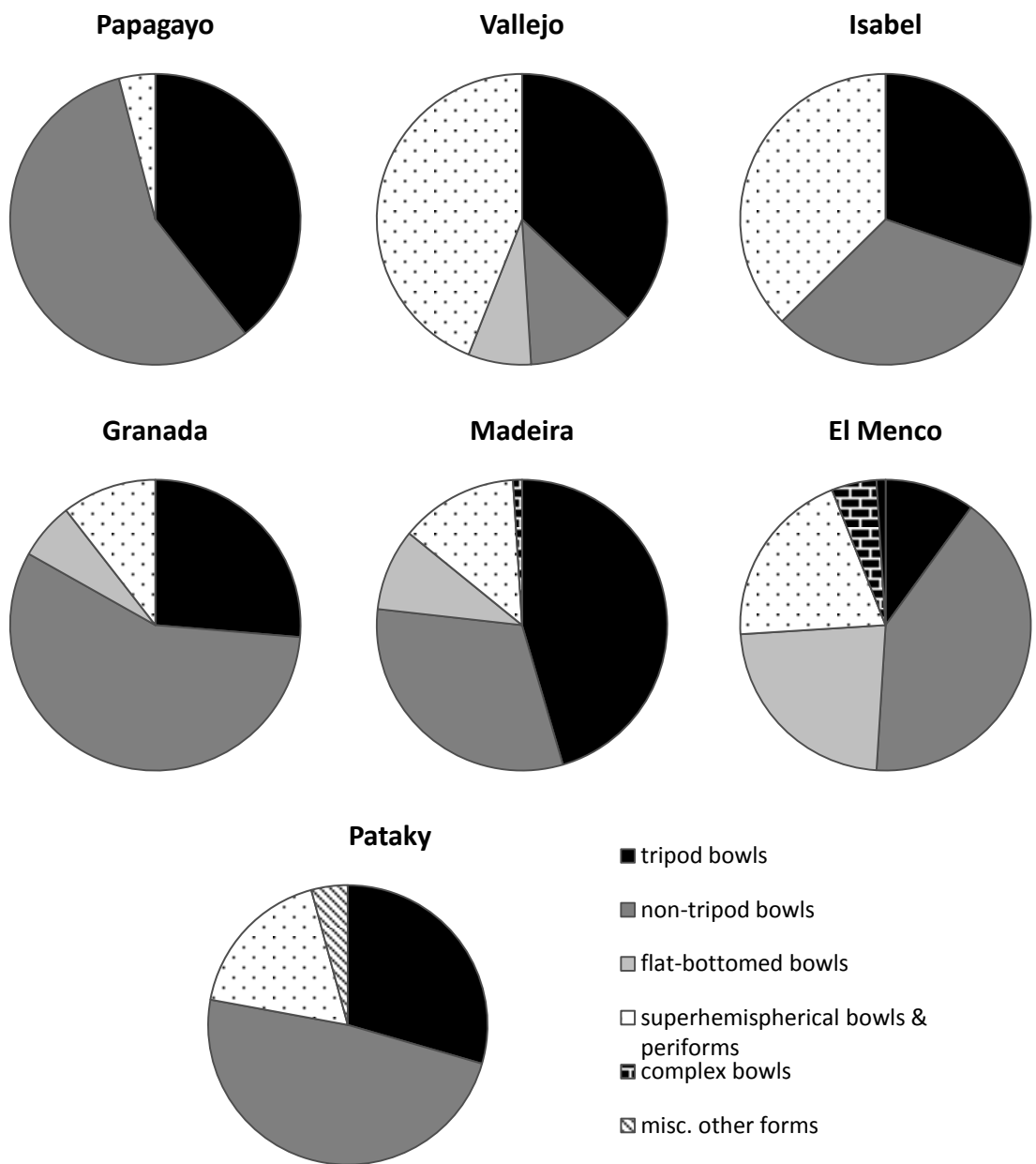
Ceramic Group	Papagayo-Vallejo			Trans.	Granada-Madeira		Trans.	?	Total sample size
	Isabel	Papagayo	Vallejo	Patakay	Madeira	Granada	El Menco	Other	
% of poly. assemblage comprised by this type	3.8	36.7	11.9	5.4	13	2.5	1.9	2.1	
EXTERIOR SURFACES									
STEP-FRET, BASIC	2%	36%	40%	4%	13%		4%		166
PYRAMID, STEPPED	71%	1%	27%				1%		161
PYRAMID, TRIANGLE		1%	99%						79
rm-24 (black/red lines)	93%				7%				14
rm-30 (checkered)		100%							11
FROGS		82%			11%	4%	4%		28
STEP-FRET, LAZY-Z		4%	47%		35%	11%	3%		72
STEP-FRET, LAZY-S		2%	14%		66%	2%	16%		44
STEP-FRET, HOOK/SPIRAL			44%		19%	31%	6%		16
KERNELS			11%		89%				9
rm-07 (black fringe)	6%		13%	38%	38%	6%			16
DOTTING					57%		36%	7%	28
INTERIOR SURFACES									
STEP-FRET, BASIC		52%	17%	25%	4%		1%		75
STEP-FRET, HOOK/SPIRAL		4%		53%	4%	21%	16%	3%	76
KERNELS				47%	3%	47%		3%	34
STEP-FRET, LAZY-Z		8%	7%		77%	8%		1%	133
DOTTING				42%	30%		28%		50
STEP-FRET, LAZY-S		4%			92%	2%	2%		48
rm-07 (black fringe)	5%	5%		35%	55%				40
rm-16 (cog teeth)		63%		4%	17%	17%			24
rm-39 (red dot)		4%			39%	57%			23
FROGS					41%	59%			22
ALL STEP-FRETS (COMBINED)									
EXTERIORS	1%	21%	38%	2%	26%	5%	6%		298
INTERIORS		16%	7%	18%	46%	8%	4%	1%	332
Notes:									
<ul style="list-style-type: none"> • Shading is used here to highlight those ceramic types that provide the greatest absolute contributions of individual decorative modes to the total "pool" of decoration found in the Ni-Ri-44 polychrome rim sherd assemblage. Grey shading marks contributions of 5-9%; black shading marks contributions of 10% or greater. • "Families" of rim motifs are denoted by CAPITAL LETTERS in the first column (e.g., STEP-FRET, BASIC). • While Bramadero Polychrome accounts for 1.5% of the "Other" polychrome types, it is not separated in this analysis because the type does not employ any rim motifs. 									

Table 9. Contributions made by major polychrome types to total pool of motif set decorative variation for Ni-Ri-44, based on rim sherds (motif sets listed at left)

Ceramic Group		Papagayo-Vallejo			Tran.	Granada-Madeira		Tran.	G-M?	?	shared by..
Ceramic Type		Isabel	Papagayo	Vallejo	Pataky	Madeira	Granada	El Menco	Bramadero	Other	
% of poly. assemblage comprised by this type		3.8	36.7	11.9	5.4	13	2.5	1.9	1.5	0.6	
Code	Description										
EXTERIOR SURFACES											
<i>Commonly associated with both of the two main polychrome groups</i>											
B-, R-band , R-band (outlined)	single (B)lack or (R)ed PB	2%	17%	2%	25%	41%	6%	5%		2%	5(7)
ms-01a-1; ms-01b; ms-01d	single DB	9%	9%	13%	1%	59%	10%				5(6)
ms-01c	single DB, carination point			13%		43%		43%			3
ms-02	alternating red-orange panels (subsumes ms-08, 14, & 18)	6%	71%	9%	<1%				14%	<1%	4(6)
<i>Primarily associated with only one of the two main polychrome groups</i>											
BB-, RR-, BR-, RB-band	double (B)lack or (R)ed PBs	<1%	82%	15%	<1%	3%				<1%	2(5)
ms-00d	PV-Group bands & lines		85%	15%							2
ms-08	"two-headed dragon"		90%	10%							2
ms-01f; ms-01g	doubled/multiple DBs			98%		2%					1(2)
ms-23	effigy bowl hanging loops	1%	1%	97%							1(3)
ms-01a-2 – ms-01a-5	DBs w/spandrel	65%	35%								2
ms-14	Casares paneling		100%								1
ms-21	red painted walls		93%		5%			2%			2(3)
ms-09	colour panels		88%	4%	8%						2(3)
ms-03	crouching animal		3%		53%	34%	9%				3(4)
ms-00a-c	Granada-Madeira bands & lines					83%	17%				2
ms-05	"Sapo" patterning					50%	50%				2
ms-20	Madeira support panels					100%					1
ms-13	El Menco winged head							100%			1
ms-18	Bramadero-style panels	1%						9%	89%		2(3)

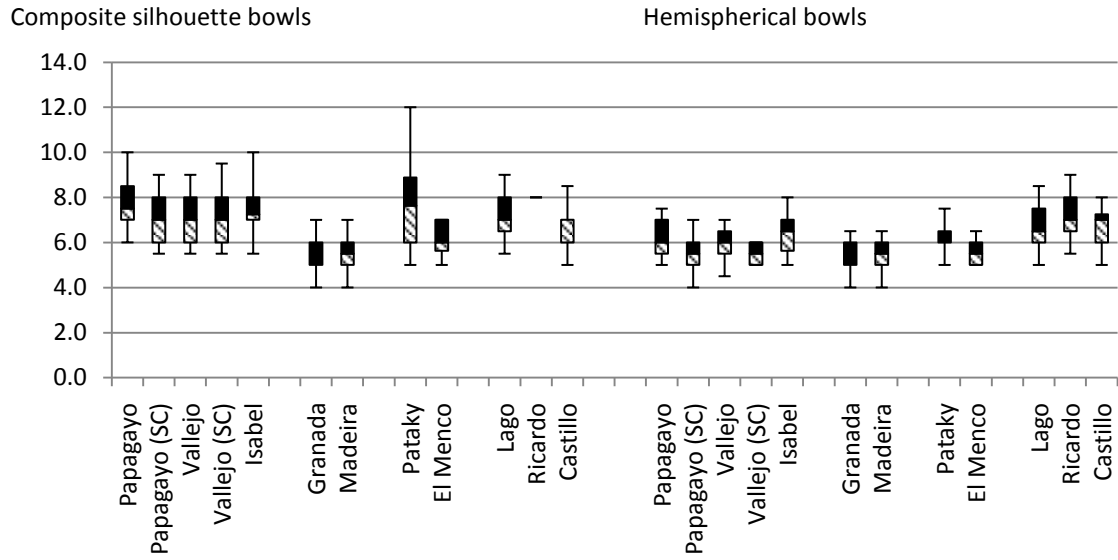
Table 9 (continued). Contributions made by major polychrome types to total pool of motif set decorative variation for Ni-Ri-44, based on rim sherds (motif sets listed at left)

Ceramic Group		Papagayo-Vallejo			Tran.	Granada-Madeira		Tran.	G-M?	?	shared by...
Ceramic Type		Isabel	Papagayo	Vallejo	Pataky	Madeira	Granada	El Menco	Bramadero	Other	
% of poly. assemblage comprised by this type		3.8	36.7	11.9	5.4	13	2.5	1.9	1.5	0.6	
Code	Description										
INTERIOR SURFACES											
<i>Commonly associated with both of the two main polychrome groups</i>											
B-, R-band , R-band (outlined)	single (B)lack or (R)ed PB	24%	10%	12%	4%	42%	2%	1%	2%	3%	5(8)
BBR-, BRR-, RBB-band	triple PBs	2%		24%		73%				2%	2(4)
ms-01a-1; ms-01b; mos-01d	single DB	4%	13%	13%	1%	62%	8%				4(6)
ms-02	alternating red-orange panels (subsumes ms-08, 14, & 18)		48%		23%	29%					3
ms-21	red painted walls	0	37%	0	14%	34%	6%		3%	6%	5(6)
<i>Primarily associated with only one of the two main polychrome groups</i>											
BB-, RR-, BR-, RB-band	double (B)lack or (R)ed PBs	1%	90%	6%	<1%	<1%		1%		1%	2(6)
ms-12	red-orange walls		55%	45%	<1%						2(3)
ms-09	colour panels		76%	6%	18%						3
ms-14	Casares paneling		99%		1%						1(2)
ms-15	Papagayo: Papagayo scorpion frieze		100%								1
ms-07	feathered headdress		78%		18%			4%			2(3)
ms-04	"shields & standards"				38%	62%					2
ms-03	crouching animal				51%	21%	28%				3
ms-05	"Sapo" patterning					45%	55%				2
ms-01f; ms-01g	doubled/multiple DBs						100%				1
ms-17	"spider monkey"					4%		96%			1(2)
ms-44	"shield" & "cross-bones"					100%					1
ms-19	hanging monkey					100%					1
Notes:											
<ul style="list-style-type: none"> • Shading is used here to highlight those ceramic types that provide the greatest absolute contributions of individual decorative modes to the total "pool" of decoration found in the Ni-Ri-44 polychrome rim sherd assemblage. Grey shading marks contributions of 5-9%; black shading marks contributions of 10% or greater. • The "Shared by ..." column summarises the number of major polychrome types with which a given mode is associated in the rim sherd assemblage. (This count excludes the "Other" category.) The first number in this column indicates the number of types that make absolute contributions of 5% or greater—i.e., sizable contributions—for a given decorative mode. The second number (in parentheses) indicates the total number of types in which the mode is simply present, and includes types that contribute negligible quantities of the mode (e.g., one or two rim sherds) to the total pool of decoration. • Although tentatively assigned to the Granada-Madeira Ceramic Group in chapter 7, Bramadero is listed separately here because this assignment cannot be confirmed based on decoration alone. 											



	Papagayo	Vallejo	Isabel	Granada	Madeira	El Menco	Pataky
tripod bowl	39%	37%	30%	25%	45%	10%	28%
non-tripod bowl	56%	12%	32%	54%	31%	41%	46%
flat-bottomed bowl		7%		6%	9%	23%	
superhemispherical bowl/periform	4%	44%	37%	10%	13%	20%	17%
complex bowl					1%	5%	
miscellaneous other form						1%	4%

Figure 1. Proportions of vessel forms represented in rim sherd assemblages from the seven major Ni-Ri-44 polychrome types



Composite silhouette bowls include tripod, flat-bottom, and annular-based bowls. SC = San Cristóbal.

Figure 2. Wall thicknesses (mm), based on rim sherds from serving-ceremonial vessel bowls with unrestricted orifices (winsorised batches)

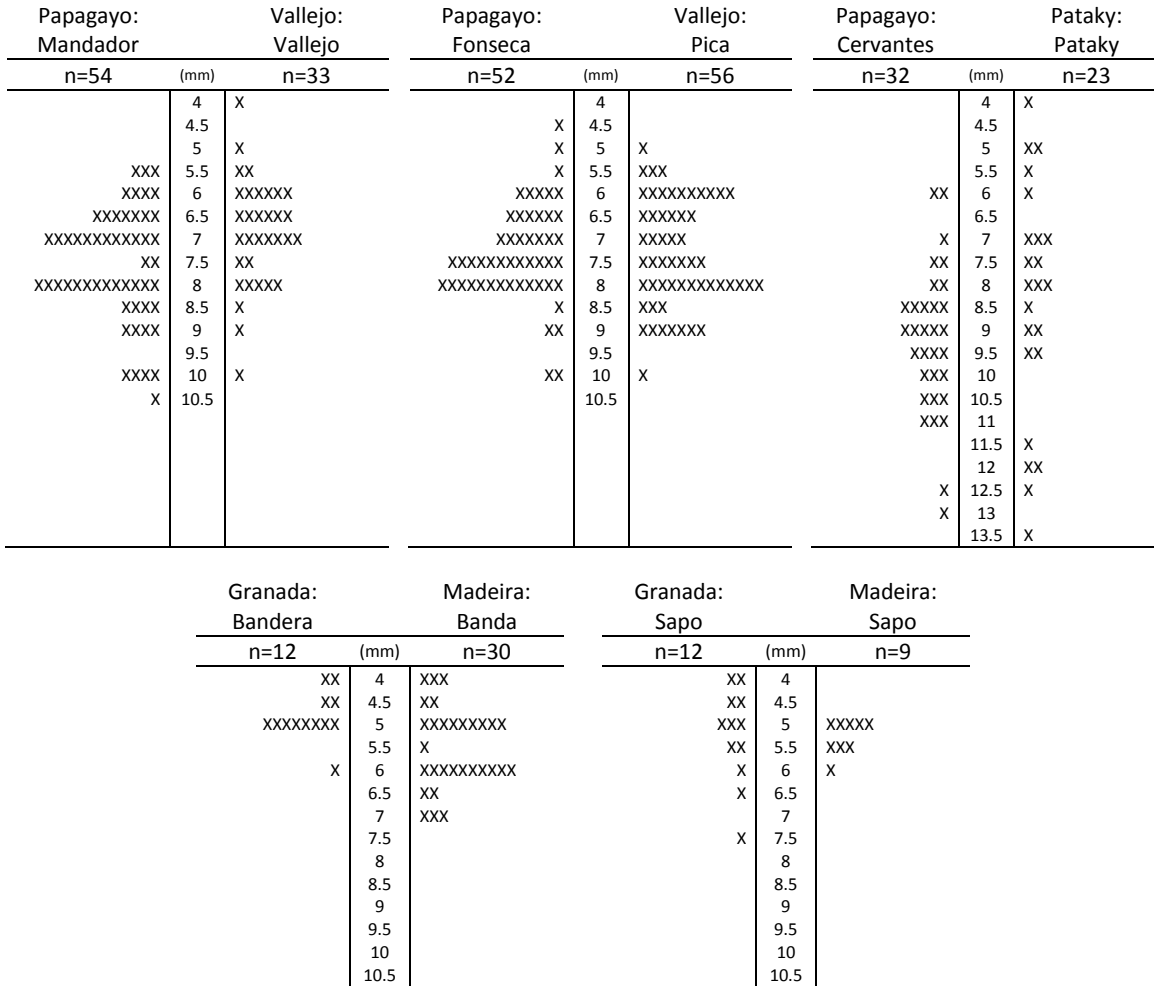


Figure 3. Stem-and-leaf plot comparison of wall thicknesses in analogous ceramic varieties based on rim sherds from tripod composite silhouette bowls

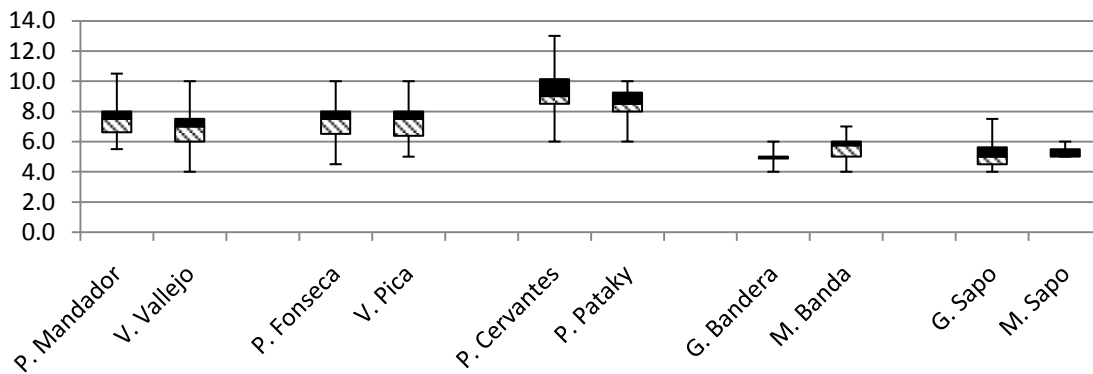


Figure 4. Wall thicknesses (mm) of analogous ceramic varieties based on rim sherds from tripod composite silhouette bowls (not winsorised)

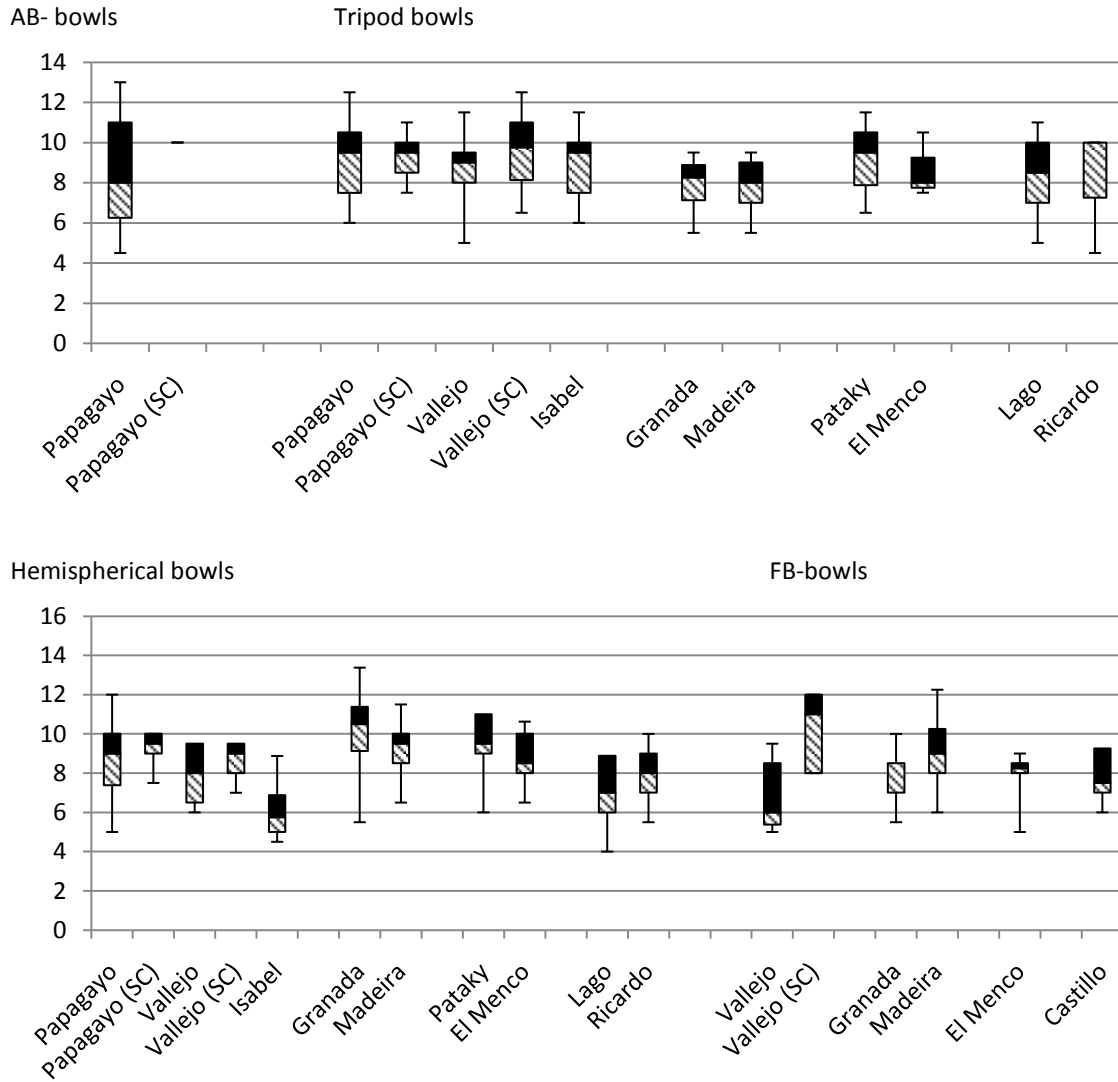


Figure 5. Orifice radii (cm) for serving-ceremonial vessel bowls with unrestricted orifices, based on rim sherds (winsorised batches)

Papagayo: Mandador		Vallejo: Vallejo		Papagayo: Fonseca		Vallejo: Pica		Papagayo: Cervantes		Pataky: Pataky	
n=52		(cm) n=30		n=47		(cm) n=49		n=29		(cm) n=22	
	3.0						3.0				3.0
	3.5						3.5				3.5
	4.0					X	4.0	XX			4.0
	4.5					X	4.5				4.5
XX	5.0	X				X	5.0	X			5.0
X	5.5						5.5				5.5
	6.0	X				XXXX	6.0	X			6.0
XX	6.5	X				X	6.5	X			6.5
XXXX	7	X				XXXX	7	XX	XXX	7	XX
X	7.5					XXXXX	7.5	X	X	7.5	X
XXX	8.0	XXXX				XXX	8.0	XX	XXX	8.0	X
XXXXX	8.5	X				XXX	8.5	XXXXX	XXX	8.5	X
XXXX	9.0	XXXXXXXXXX				XX	9.0	XXXX	XXX	9.0	X
XXXXXXXXXXXX	9.5					XXXXX	9.5	XXXXXXXXXXXX	XXXXX	9.5	XXXX
XXXXX	10	XXXXXXXXXXXX				XXX	10	XXXX	X	10	XX
XXX	10.5					XXXXX	10.5	XXXX	XX	10.5	XXX
XXX	11.0	X				XX	11.0	XXX	XX	11.0	X
XXXX	11.5					XXX	11.5	XX	XX	11.5	XXX
	12.0					X	12.0	XX	X	12.0	X
XXX	12.5						12.5		XX	12.5	
	13.0					XX	13.0	X		13.0	
	13.5						13.5			13.5	
	14.0					X	14.0	X	X	14.0	
	14.5						14.5			14.5	
	15.0						15.0			15.0	

Granada: Bandera		Madeira: Banda		Granada: Sapo		Madeira: Sapo	
n=10		(cm) n=29		n=8		(cm) n=9	
	3.0						3.0
	3.5						3.5
	4.0						4.0
	4.5		XX				4.5
X	5.0	X					5.0
X	5.5	XX					5.5
	6.0	X					6.0
	6.5	XX				XX	6.5
	7	X				X	7
	7.5	XX				X	7.5
X	8.0	XX				XX	8.0
XX	8.5	XXXXXXXXXX				XX	8.5
X	9.0	XXX					9.0
XX	9.5	X				X	9.5
	10	XX					10
	10.5						10.5
	11.0						11.0
	11.5	X	X				11.5
	12.0						12.0
	12.5						12.5
	13.0						13.0
	13.5						13.5
	14.0						14.0
	14.5						14.5
	15.0						15.0

Figure 6. Stem-and-leaf plot comparison of orifice radii in analogous ceramic varieties based on rim sherds from tripod composite silhouette bowls

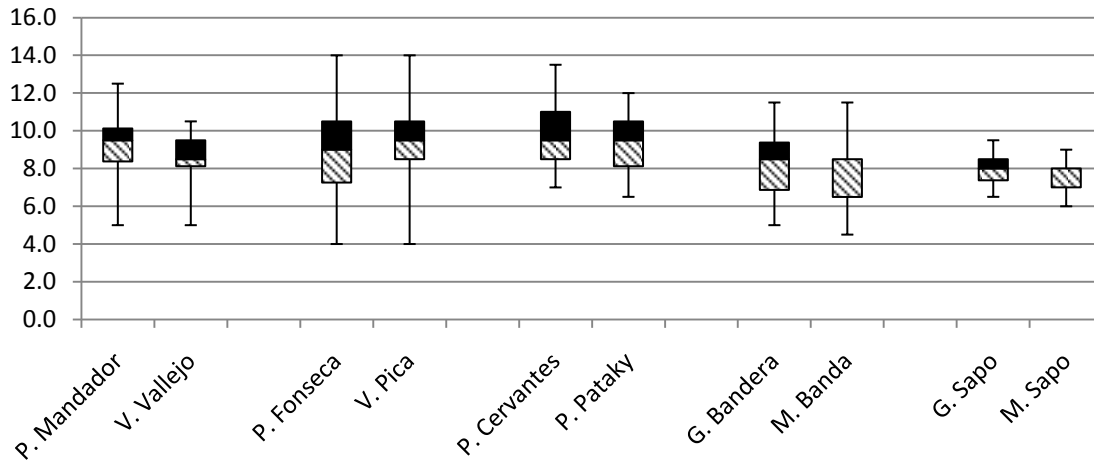


Figure 7. Orifice radii (cm) of analogous ceramic varieties based on rim sherds from tripod composite silhouette bowls (not winsorised)

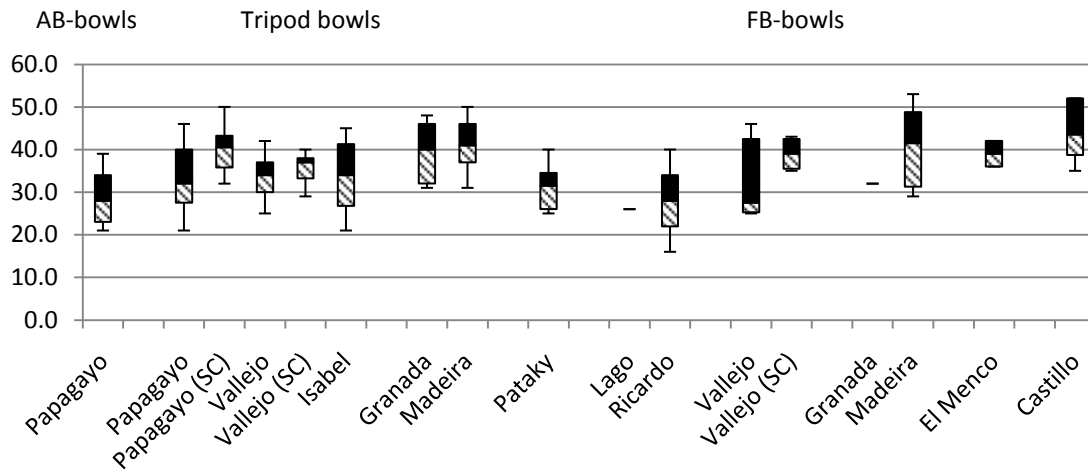


Figure 8. Wall heights (mm) of composite silhouette bowls, based on rim sherds (winsorised batches)

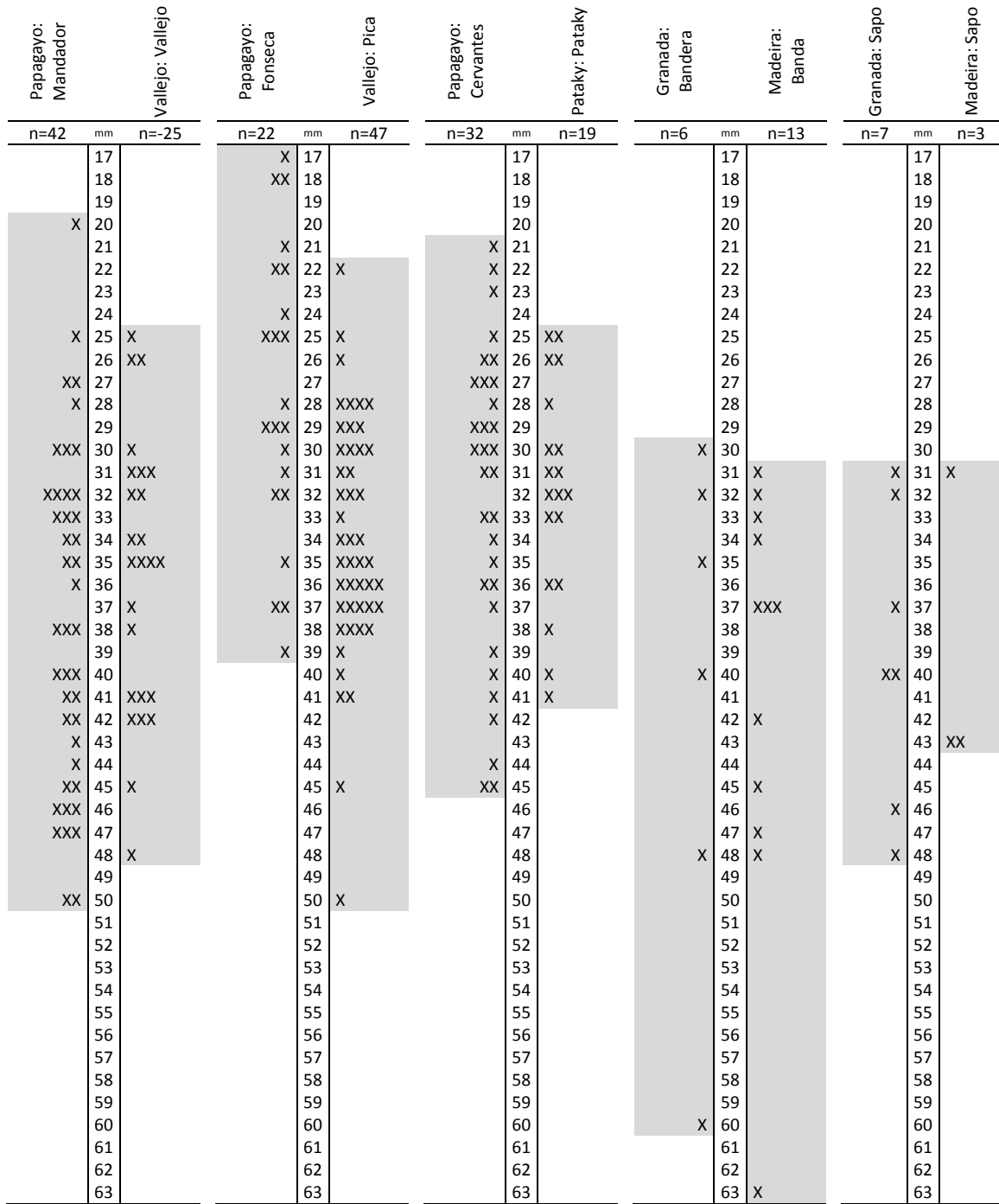


Figure 9. Stem-and-leaf plot comparison of wall heights in analogous ceramic varieties based on rim sherds from tripod composite silhouette bowls

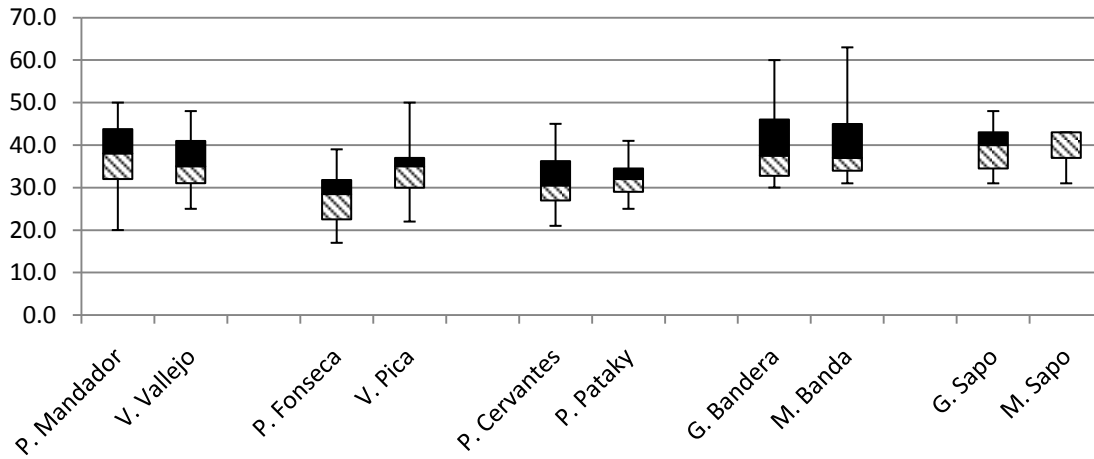


Figure 10. Wall heights (mm) of analogous ceramic varieties based on rim sherds from tripod composite silhouette bowls (not winsorised)

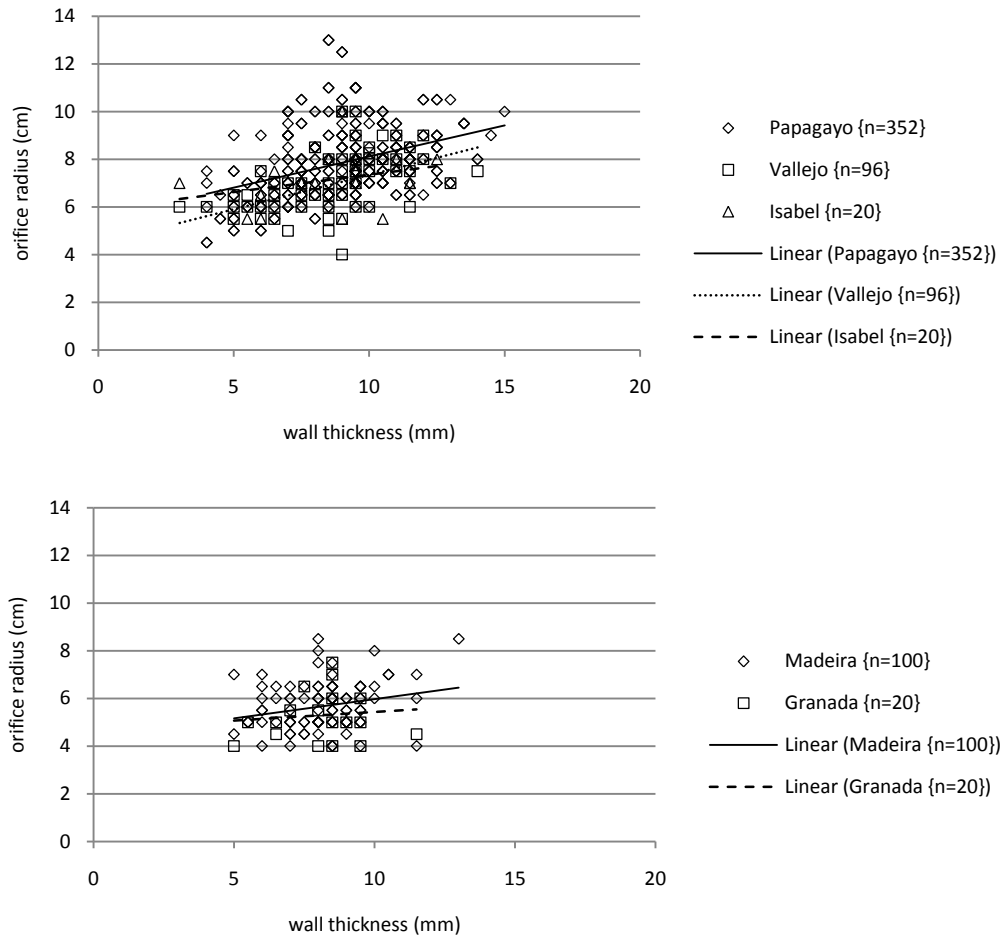


Figure 11. Comparison of orifice radii vs. wall thicknesses in composite silhouette bowls, based on Ni-Ri-44 rim sherds

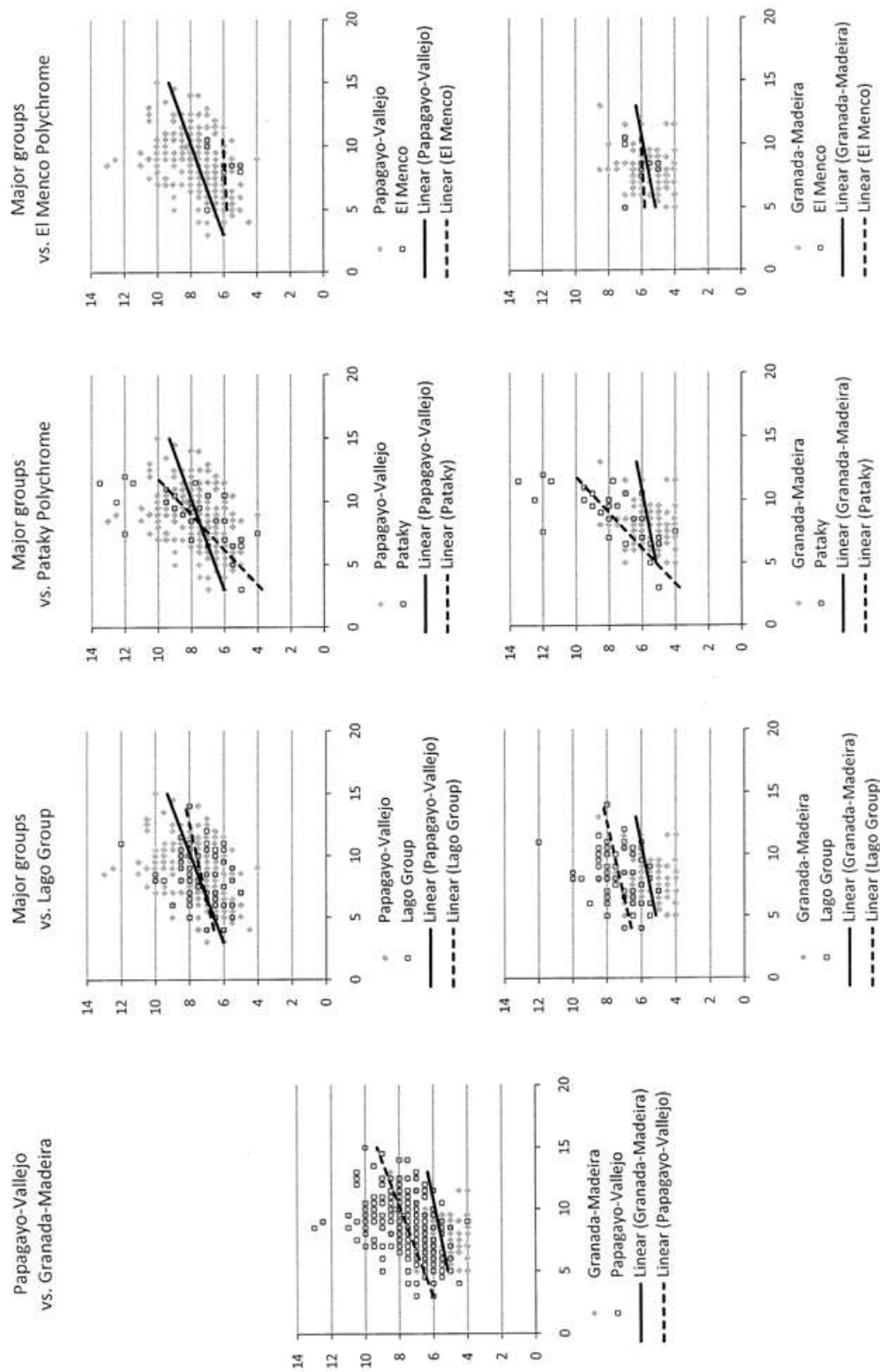


Figure 12. Comparison of ceramic groups and transitional types based on orifice radius vs. wall thickness data from composite silhouette bowls, based on Ni-Ri-44 rim sherds



a. rim motif: rm-15



b. rim motif: rm-26R



c. rim motif rm-02 providing content for the DB in motif set ms-01d-1



d. motif set: "RR-band"



e. motif set: VB-02



f. motif set: ms-00a-3



g. motif set: ms-07 (feathered headdress)



h. motif set: ms-08 ("two-headed dragon")

Figure 13. Examples of rim motifs and motif sets



Rows 1 & 2: Papagayo: Mandador ms-08a “profile” motif set. Row 3: Vallejo: Vallejo ms-08d “elongated profile” motif set. Rows 4 & 5: Papagayo: Mandador ms-08b “head-on” motif set. Complete vessels: Mi Museo collection. All sherds are from Ni-Ri-44.

Figure 14. Submodes of the ms-08 “two-headed dragon” motif set, linking Papagayo: Mandador and Vallejo: Vallejo.



Row 1: Papagayo: Fonseca ms-12a (left), ms-12b (right). Row 2, left to right: Papagayo: Fonseca ms-12a, ms-12b, ms-12x (indeterminate basal configuration, 2 sherds). Row 3: Papagayo: Fonseca ms-12c. Rows 4 & 5: Vallejo: Pica ms-12d. Complete vessels: Mi Museo collection, Museo de Rivas, and Seguierra collection. Rim sherds: Ni-Ri-44.

Figure 15. Submodes of the ms-12 “red-orange walls” motif set, linking Papagayo: Fonseca and Vallejo: Pica.



Rows 1 and 2: Pataky: Pataky “black mask” ms-07a motif set. Rows 3-5: Papagayo: Cervantes “red mask” ms-07b motif set. Rows 6 and 7: El Menco: Quixote “spotted mask” ms-07c motif set. Complete vessels: Mi Museo collection, Miller collection, Nicaragua National Museum. Rim sherds: Ni-Ri-44.

Figure 16. Submodes of the ms-07 “feathered headdress” motif set, linking Pataky: Pataky, Papagayo: Cervantes, and El Menco: Quixote.



SP-04a (Pataky: Pataky)



SP-04b (Papagayo: Cervantes)



SP-04c (Vallejo, variety indeterminate)

All examples are from Ni-Ri-44.

Figure 17. Variants of the SP-04 human face support mode, associated with Pataky: Pataky, Papagayo: Cervantes, and Vallejo: Variety Indeterminate.



Figure 18. Granada: Bandera (top three rows) and Madeira: Banda (bottom two rows)



Figure 19. Granada: Sapo (top row) and Madeira: Sapo (bottom row)

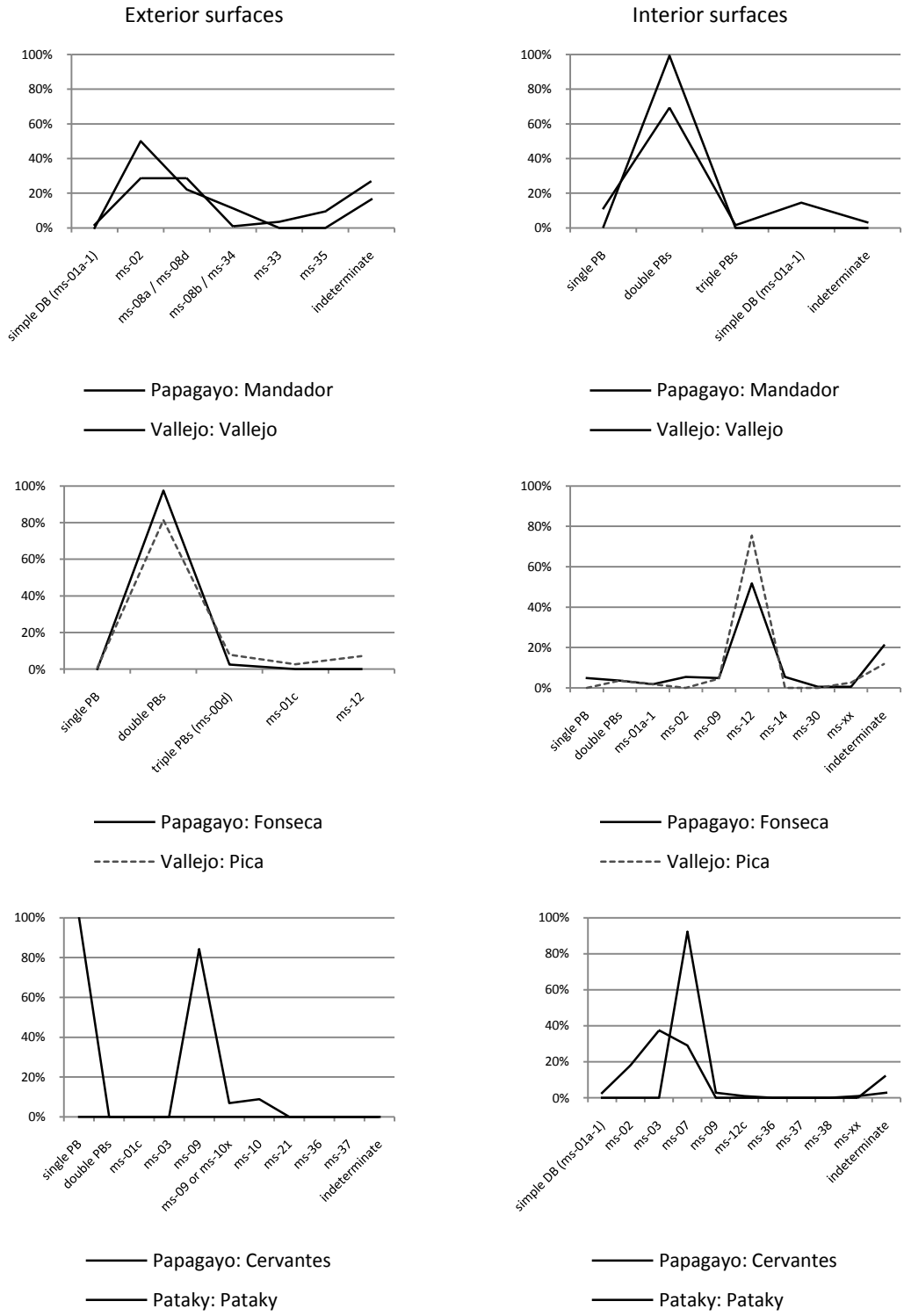
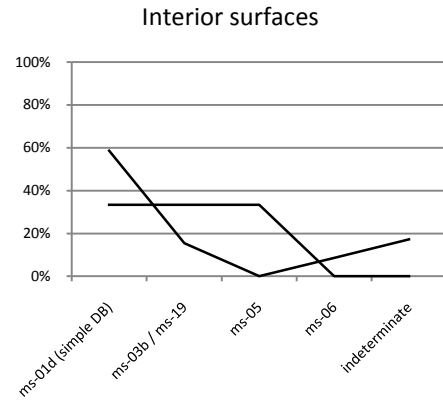
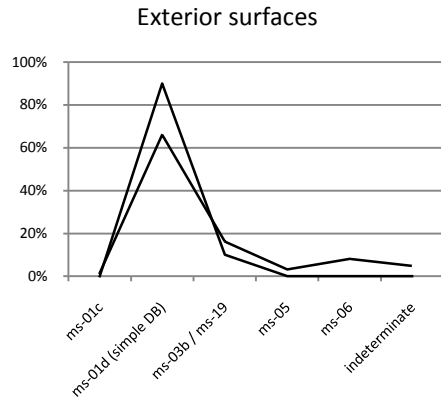
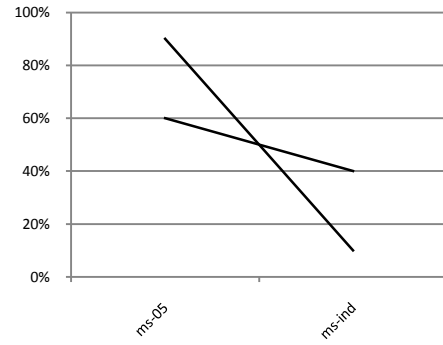
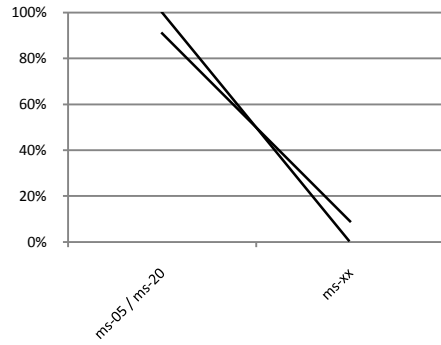


Figure 20. Frequencies of motif sets appearing on Ni-Ri-44 rim sherds from bowls in analogous type-varieties



— Granada: Bandera
— Madeira: Banda

— Granada: Bandera
— Madeira: Banda



— Granada: Sapo
— Madeira: Sapo

— Granada: Sapo
— Madeira: Sapo

Figure 20 (continued). Frequencies of motif sets appearing on Ni-Ri-44 rim sherds from bowls in analogous type-varieties