

To: Unicode Technical Committee

From: Carlos Pallán (via Debbie Anderson, SEI, UC Berkeley)

Subject: Final List of Characters and Quadrats for Mayan Codices

Date: 24 April 2019

Attached are the finalized list of characters and quadrat types found in the Mayan Codices. These update what was contained in [L2/18-038](#) "Preliminary Proposal for Encoding Mayan Hieroglyphic Text" and reflect progress since the above mentioned proposal and the [slide presentation](#) at UTC #154 meeting (Jan. 22-25, 2018).

Together, the two lists are instrumental in ongoing work towards implementing the first font for Mayan hieroglyphs (by Pallán in collaboration with Andrew Glass, Microsoft), the assignment of preliminary code points for each font character under the Unicode Intl. standard, as well as for developing a state-of-the-art virtual keyboard for Mayan that allows real-time text input of signs (e.g. glyphs) non-linearly, into realistic configurations (e.g. "quadrats"), including vertical and horizontal joins and various types of ligatures (e.g. infixation, conflation, superimposition).

List of Characters, summary (p. 3)

Table summarizing all codical signs with catalog codes and preliminary Unicode code points. Compiled by Pallán from the extant Mayan codices from Yucatan, preserved at libraries in Dresden, Madrid and Paris. Below each of the vectorial renderings for signs and variants, the rows indicate:

1. placeholder numeric IDs (for project-internal reference only);
2. Knorozov-catalog codes (where available);
3. New catalog codes (e.g. J03);
4. Preliminary code-points (e.g. U+15582).

List of Characters *in extenso* (pp. 4-14)

The List of Characters includes distinct signs and their variants, compiled by Pallán from the extant Mayan codices from Yucatan, preserved at libraries in Dresden, Madrid and Paris.

The headings are as follows (from left to right):

Id: provides a unique numeric ID for each sign

ID_PhotoCatalog: provides a "placeholder" distinct code for each sign, prior to assignment of definitive Unicode code points

NcodeX Knorozov font: shows vectorial renderings of signs elaborated by Pallán, based in the glyph-catalog by Yuriy Knorozov (1963)

NcodeX Picture: displays raster images for each sign on the different glyph-catalogs that have been cross-referenced (showing currently renditions from the Macri and Vail 2009 glyph-catalog, but this can be changed interactively on the NcodeX Project Database)

MATCH_ID Count: shows the frequency rate (e.g. number of instances) by which each of the signs occurs within the codices (helpful to assess relative importance of signs to elaborate taxonomies, etc.)

CONTEXT: pictures of typical instances from the actual codices showing how signs appear in context (instances can be selected interactively on the Dataabase)

UNICODE_Code_Points: shows *preliminary* code points being assigned

NcodeX_designation: shows catalog codes being assigned by semantic and visual categories (based on Gardiner's list for Egyptian hieroglyphs).

NcodeX Phonetic_value1 (3 columns): displays the three more widely used reading values for signs. LOGORAPHS (signs with meaning) appear in uppercase, syllables (purely phonetic, do not convey meaning) shown in lowercase

TRANSLATION (3 columns): shows the corresponding meaning for each of the logographs being listed, on the column matching that where the corresponding logograph is listed on the previous field.

VARIANT: lists how many variants for each of the distinct signs have been classified thus far (blank or "a" values denote that there is only a single variant for that particular sign)

List of Quadrats (p. 15)

The List of Quadrats shows all possible configurations of individual signs within glyph-blocks (glyph-clusters). The quadrats on the left (shown in blue) were following the previous quadrat model (with small numbering indicating the internal reading order of signs). They also show their former classes (i.e. 2.01) together with their newly reassigned codes (i.e. B02).

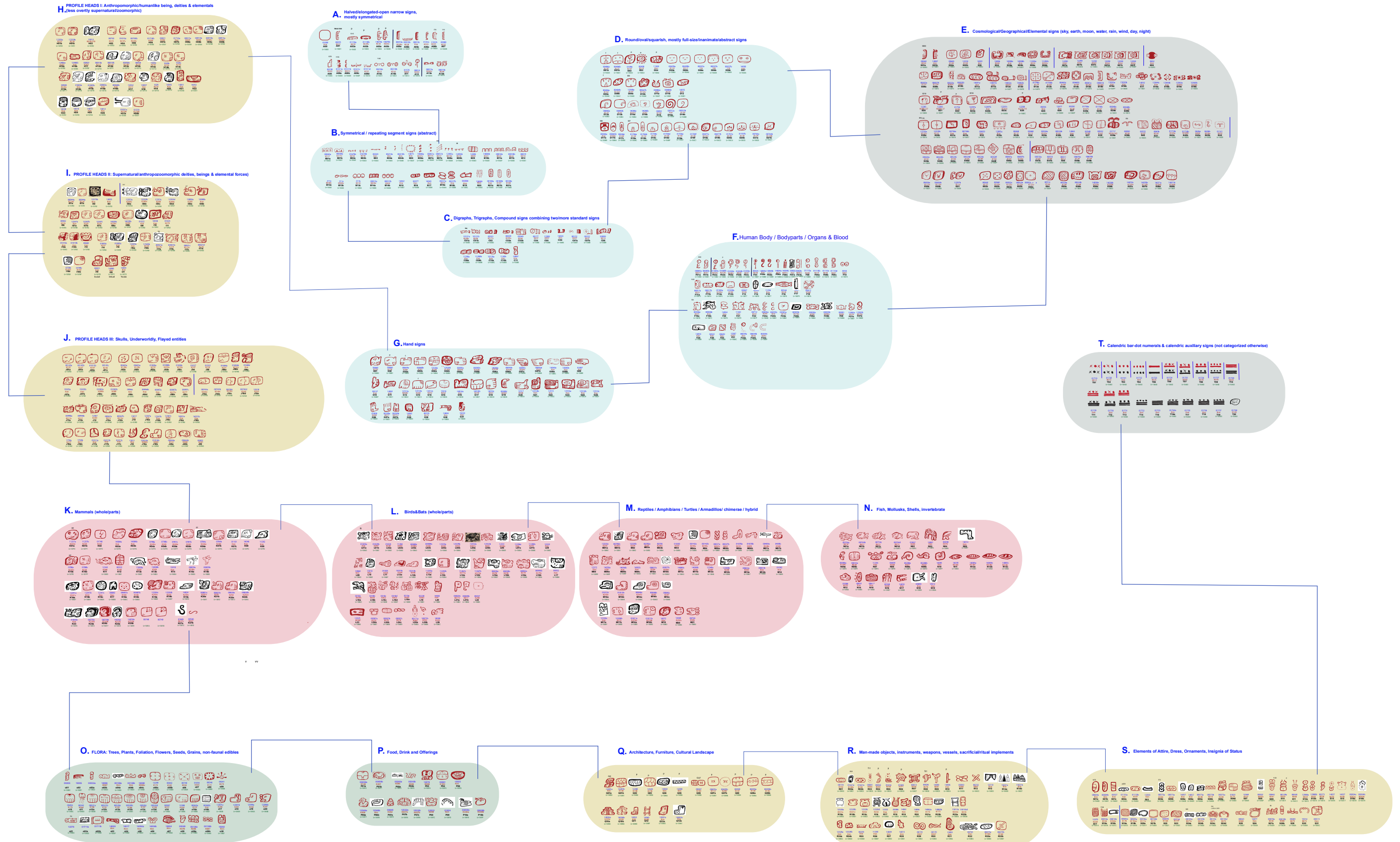
The quadrats on the right are the new, simplified types. No internal reading order of signs is shown, given that many configurations (i.e. sign clusters) could be used to accommodate different orderings of the signs inside the block (e.g. in quadrat B08, the upper-top sign could be either Sign 1 or Sign 2 of the reading sequence). This results in a greater number of possible sign permutations that can be described using less classes and types.



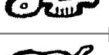
SEI

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GLYPHARY OF MAYAN CODICAL SIGNS: Updated with NcodeX Project's own Vectorial Renderings, Code Designations in "Gardiner Style" and UNICODE code points by Carlos Pallan Gayol (ver. May. 7, 2019)

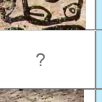
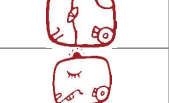
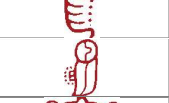
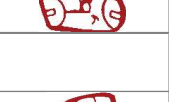


id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I_...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
2	10			378		U+15506, U+15507, U+15508	A05a, A05b, A05c	ka						a, b, c
221	13			18		U+15554, U+15555	B14a, B14b	je	AKAN?			grass?/		a,b
119	14			6		U+15514	A12	ma						a
316	15			2		U+15515, U+15516	A13a, A13b	he?	xe?					a, b, c
11	16			113		U+15A1A, U+15A1B	S16a, S16b	tu						a, b, c
3	17			123		U+15673, U+15674	F11a, F11b	CHAK			red	great		
4	18			6		U+1554F, U+15550	B11a, B11b	tzi?	ji?					6
205	19			11		U+15551	B12	che						
5	20			24		U+15A12	S10	si						
163	21			54		U+15703, U+15764	H03, I07b	??	PIKIT?	IK'-K'UH?		he who blows?	wind god	a, b
6	22			197		U+15A0F	S07	KOKA:J?	ITZAM?	ITZ?	bird deity			
154	23			42		U+155F3, U+155F4	E10a, E10b	ju	HUL?			to arrive?		
144	24			95		U+15667	F04	UH?	KAB'?		moon lady?	earth lady?		1
166	26			33		U+159C8	R08	CH'AK			to chop			
126	27			55		U+15898, U+15899	M05a, M05b	OCH	TZA:B?		enter	rattle(s)		
317	28			4		U+15685, U+15686	F25a, F25b	SIY?/SIYAN?	SIH?	AJ?	birth?	to be born	"he/she of"?	
160	29			40		U+15863, U+15864	L21a, L21b	a	AJ			"he/she of" AGN)		
523	31			1		U+15905	N14	ju?	JUL?					2
7	32			35		U+15906	N15	wi						
345	34			4		U+15A18	S15a, S15b	SIP?	o?					
254	35			9		U+15680, U+15681	F22a, F22b	CHUM						
177	37			24		U+155A7, U+155A8, U+155A9	D06a, D06b, D06c	e						
225	38			12		U+158F6	N04	tz'u						
8	39			33		U+1568B, U+1568C, U+1568D	F29a, F29b, F29c	K'UH						1
191	40			35		U+15540, U+15541	B01a, B01b	to						1
230	41			16		U+159C3	R03	ta						1
9	42			146		U+15A10	S08	SAK			white	pure		
265	43			10		U+15A26	S23a	HU:N	JOY		headband	to enclose/bind		
10	44			73		U+15A05, U+15A06	S05a, S05b	yu						
158	46			39		U+15670	F09b	l:K'			black			
12	47			54		U+15677	F12	ko						
168	48			33		U+15612, U+15613	E29a, E29b	TO:K'			flint			
13	49			89		U+15944	O27	yo						
14	50			46		U+15621, U+15622	E39a, E39b	K'A:K'	k'a?		fire			
194	51			19		U+15549, U+1554A	B07a, B07b	HA:L?			rain			1
15	52			44		U+1563C, U+1563D, U+1563E	E53a, E53b, E53c	K'AN			yellow	precious	ripe	
318	53			4		U+159C4	R04	ta						2
16	54			5		U+15672	F10	CH'OK			youth			
1	55			602		U+15501	A01	u						
121	61			27		U+155FD, U+155FE	E15a, E15b	EK'						1
200	80			21		U+1550B	A07	u						
18	82			30		U+1566C, U+1566D	F07a, F07b	AJ	a	u?	he/she of (AGN)			
19	85			261		U+15660, U+15661	F01a, F01b	a?	AJ?			he/she of (AGN)		1
20	86			190		U+158F8	N06a	YAX	yi		green/blue	new		
110	87			7		U+158F9	N06b	yi						
21	90			117		U+155B2, U+155B3	D13a, D13b	mu						
326	91			2		U+15687	F26	??						
222	92			12		U+155B6	D15	b'u						

id	ID_PhotoC...	NcodeX_Knosrov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
182	95			32		U+156B6, U+156B7	G05a, G05b	K'AL			to tie	to set		
536	99			10		U+15589	C07	WINIKHA:B#?			k'atun cycle			
129	101			3		U+15582	C02a	??	NUM?			continuous?	thorny?/spiny?	3
413	123			0	?			ICHIL?	o??	WAL?	feather?		within time of	
26	129			143		U+15A11	S09	ti						
27	133			48		U+15A22, U+15A23, U+15A24, U+15A25	S22a, S22b, S22c, S22d	ITZAM?	XIW?	PAWAJ?	sorcerer?	lagarto/lizard		1
28	136			28		U+15945, U+15946	O28a, O28b	HINA:J?						
29	145			288		U+15790, U+15791, U+15792	J01a, J01b, J01c	CHAM						
477	152			2		U+15587, U+15588	C06a, C06b	PAT?						3
615	157			0	?	U+156BF	G10	NAL?						
106	159			94		U+15924, U+15925	O04a, O04b	TE'						1
291	170			6		U+159E2	R29	SUM?	TAL?		rope			
231	171			11		U+1586A, U+1586B	L25a, L25b	o						
31	174			376		U+159C0	R01	ki						
621	177			1		U+1558F	C02b	??	NUM?			continuous?	thorny?/spiny?	1
32	188			28		U+1555C, U+1555D, U+1555E	B20a, B20b, B20c	xa						
33	190			297		U+1550C	A08	ni						
34	205			342		U+15920	O01	wa						
434	210			3		U+1555F	B13c	cha?						1
401	211			2		U+15552	B13a	cha?	la?					
102	214			44		U+15553	B13b	no						
36	218			171		U+15511, U+15512	A10a, A10b	la						
484	227			20		U+15558, U+15559	B17a, B17b	nu						1
578	232			3		U+159E3	R30							
117	235			8		U+159DE	R25	o?	HUL?					1
37	240			167		U+15972, U+15973	P02a, P02b	TI'						1
223	241			12		U+1592B	O28	mi	MIH			nothing		
292	242			9		U+1592D	O10	HA:L?	I:K'?		rain			2
38	247			288		U+15996	Q06	AJAW	AJ?		lord/king	he/she of		
442	256			8		U+1560D	E25	pi						
40	260			271		U+155E0	E01a	ja	UH?			moon		
156	265			41		U+15A2A	S25	hi	SIHO:M					1
293	273			9		U+15A15	S12	pi?	OCH?	ti?				
319	288			3		U+158FC, U+158FD	N09a, N09b	JU:B'?	he?	mi	conch			3
493	299			2		U+156D1, U+156D2	G27a, G27b	ke	ho?					
242	300			4		U+156C9	G19	k'o						
188	306			24		U+1567B, U+1567C	F18a, F18b	XIB'?	A:T?	PAT?	man	man'/penis	back	1
278	318			1				k'i?	k'a?					
466	323			14				ji?						2
128	349			11				?	nu?-NUM?			continuous?	thorny?/spiny?	2
279	350			8				B'AJ?	BAT?		to hammer	axe?/stone?		
425	352			10				??	ch'a?	cha?				
582	356			1				??						
118	365			64				sa						6
627	377			2				YAT?	YA:T?	ta?	to bath?			
366	381			4				PA'?			split	cleft		
346	383			1				b'e	b'i					
481	386			3				B'UL?	ta?		jar?			

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
246	409			9				LOK			to emerge	to exit		
100	454			265		15562		HA'		(IMIX)	water	rain		1
215	456			16				IK'			wind			
42	457			22				AK'AB'			night	darkness		
43	459			305		15560		WA:J	O:L		tamale	heart		1
44	461			54				tzi						
347	463			2				CHAM?	KIMI?	WA:Y?	death?		nagual/coessence?	
531	465			35				EK'	E:K'		star			2
45	468			24				PET	(Muluk)		round	encircle		
266	477			9				u						
46	484			163		15565		WINIK			person	man		
406	486			11				se	tze?			OutModDeciph		4
255	487			8				HIX			jaguar			
48	489			219		155A2		KAB'	CHAB'?		earth	supervise		
49	496			187		15564		NIK?	SA:K?	YATIK?	flower?	seed?		
588	498			0				xo						
214	499			30				na						
50	510			154		15566		HA:B'	A:B'?		year	time		
566	511			1				PA:X	PA:XIL		drum	split?		
327	513			3				K'AN-JAL						
104	514			134				ta	AT					
217	520			18				ma						3
51	521			98		155A4		b'a						3
52	522			30				tzu	JOP?					1
232	524			88				CHAN	KA:N		sky	heaven		
281	532			5				tz'i						
486	533			9				sa?	to?					
53	534			12				su						
282	536			7				ta						1
328	541			52				lu						1
589	544			1										
329	546			2				WA:Y?			sorcerer			
54	548			91		15567		TZ'AK			count	order		
295	552			13				WO:L?						
268	556			7				mo-to			harvest?			
162	557			29				mo						
349	559			5				B'EN?			reed?			
135	560			58				b'i	B'IH					
56	567			42				WA'	se	tze	to stand up			1
198	568			25				jo						
88	573			7				tz'a						1
305	576			4				no						
57	585			68				pa						1
201	587			28				k'u						
235	593			11				TZ'AM?			throne?			
58	597			123		15640		le						
60	604			472		15520		LE:M?	YU:J?	KAYWAK?				
256	612			2				??						

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
257	613			6				PAKAL			shield			
258	617			3				K'AN-A:K?			yellow turtle			
243	626			11				MUY	MUYAL		cloud	cloudy		
247	642			10				NIK	NIKTE'					
64	644			133		15620		mu	MU:K?		augury			
296	648			5				HU:J?-WA:J			iguana?-tamale			
595	649			6				JUL?-lu?						
306	659			5				SUHUY?			whirpool?			
65	665			227		155C0		cha						
137	666			73				k'a						
66	669			192		155C1		chi						
236	675			7				TAL			(num.class)			
183	679			29				i						
202	682			20				CHUWA:J?			scorpion?			1
148	685			35				UH?/UW?	WINA:K		moon	twenty		
68	695			31				po						
591	712			1				??						
585	725			5				TZAK			to conjure			
161	726			2				pa						2
412	736			9				CH'E:N?	NAL?		cave?	place?		
283	739			7				MA:N?			Chikchan			
350	740			1				YATIK?			flower?			
618	743			1										
330	744			2				??						
424	745			26				u	UH?			moon?		
207	748			28				O:N?	O:KIN?		familiar	relative	lineage	
69	749			0	?			O:N?	OK'IN?		relative of			
386	750			1				CHAM?						1
297	754			7				KAY	ka		fish			
431	779			6				MA:X?			spider monkey?			
70	784			21				B'A:H	b'a					
132	787			7				TZIKIN?	ch'o					2
153	788			46				pe?	TU:L?	CHI:T?		rabbit?		
351	794			1				TI'?			mouth?			
72	795			2				CHAN	KA:N		snake	serpent		1
73	798			23				ch'o	si?					
248	801			11				??						
320	828			2				?						
307	830			4				xu?	SU:TZ?			bat		1
598	832			1										
352	833			4				AHI:N			alligator			3
270	837			7				??						
590	838			5										
476	839			3				CHIJ	chi?		deer			
428	840			4				?	KAY?			fish		
331	846			1				ho??	IB'A:CH??		armadillo?			1
635	852			1										
224	855			12				MA:N?						

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
416	880			2				b'a?	PI:T?					
399	897			4				pu	PUH?			reed?		1
472	913			25				B'ALU:N	B'A:LAM?		nine	jaguar?		
178	915			7				(JU:N)AJAW	AJAW		(one) lord	king		
244	919			10				KAB'?-AJAW	CHAB'?-AJAW?		earth lord?			
108	921			94				AJAN?	NAL?		MAIZE GOD			3
105	928			10				ITZAM?			sorcerer?	alligator?		1
74	944			10		155		K'UH			god	holy		2
298	956			5				A:KAN			Howl			1
75	958			0				(IX)-UH	UH	ja	(lady) moon			
109	959			39				UH?-IXIK	KAB'?-IXIK		moon? lady	earth? lady		
394	960			6				IXIK?	(IX)CHEL?		(Lady) Rainbow?	(Lady) Rainbow/Horizon		
284	982			7				CHA:K			rain god			
602	989			3				PIK?	PIH?		b'aktun	b#aktun cycle		
597	995			7				?						
261	997			7				A:KAN	XIB'?		Howl? (God A')			1
143	998			46				SIH?	PA'?	KAN??				1
521	1000			1233				(ERODED)						
353	1003			2				A:KAN?			Howl			
97	1008			155				CHAM?	B'A:K?	JO:L?	death?	skull>	skull?	
237	1010			14				xi						
124	1012			57				KISIN?						1
384	1015			11				CHAM?						2
271	1019			8				(I:K)CHUWA:J?			(Black) Scorpion?			
309	1020			4				??	TZ'UL?			foreigner?		2
397	1022			3				KOKA:J?			eagle?			
332	1024			2				??	SIB'IKTE'?			Pax God?		
333	1027			2				WAK			six			
354	1029			1				XIW?-TU:N						1
245	1031			10				AJ?		PUL?	he/she of (AGN)			
76	1059			21				UH?	u					1
39	1062			76				YAJ?			woe?			
526	1069			3				a	AJ			(AGN)		
272	1074			8				SIP??			owner?			
115	1079			1										
356	1083			1				??	CHAN?	KA:N?				
260	1086			6				MA:K?	KO:K?		enclosure			
408	1092			1				AHl:N?			alligator?			
116	1096			162				la						
409	1101			34				b'a?	B'A:H?					3
357	1110			26				u						1
78	1130			315		15523		na						
25	1133			366		15521		li	LE:M?			resplendent		1
310	1161			4				??						
334	1500			6				te						
98	1511			175		15503		ya						
122	1570			60				ma						
226	1616			13				ch'a	CH'A:J			droplets/incense		

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
81	1621			76				ta						
82	1678			89				ji						1
227	1684			10				UH?			moon	breath		1
228	1685			7				ne?						3
192	1706			27				lo	CHI:T			father		
488	1707			7				?	t'e?	mi?				
358	1711			13				NAL?	WINK?	TZOL?	maize/place	person	to count?	2
211	1714			3				PIK?			skirt			
335	1716			3				CHWEN?			monkey scribe			
238	1717			15				K'A:K'						2
583	1718			1				??						
139	1719			60				JU:N	HU:N		one			
185	1720			25				CHA'	KA'		two			
83	1721			169		15602		HUX	OX					
84	1722			79				CHAN	KAN		snake	sky/four		
180	1723			30				HO'	ho?		five			
85	1724			59				WAK			six			
86	1725			46				HUK			seven			
146	1726			46				WAXAK			eight			
138	1727			57				B'OLO:N	B'ALU:N		nine	many		
157	1728			47				LAJU:N			ten			
208	1729			22				B'ULUK	B'ULUCH		eleven			
165	1730			34				LAJCHA'	KALAJU:N		twelve	twelve		
134	1731			54				HUXLAJU:N	OXLAJU:N					
218	1732			14				CHANLAJU:N	KANLAJU:N		fourteen			
239	1733			11				HO'LAJU:N			fifteen			
209	1734			18				WAKLAJU:N			sixteen			
250	1735			9				HUKLAJU:N	WUKLAJU:N		seventeen			
299	1736			6				WAXAKLAJU:N			eighteen			
219	1737			14				B'OLONLAJU:N	B'ALU:NLAJU:N		nineteen			
445	1741			2				AK'AB'	Ak'b'al? (Day 3)		night	darkness		
361	1746			2				LAMAT?	EK'		(DAY 8, "LAMAT")	star		3
453	1748			1				O:K			(DAY 10, "OK")			
455	1750			2				E:B'?			(DAY 12, "EB")			
362	1754			1				KIB'?			(DAY 16, "KIB'")			
461	1756			0				TO:K'?	ETZ'NA:B'?		flint	(DAY 18, "ETZ'NAB")		
463	1758			21				AJAW			(DAY 20, "AJAW")			
483	1760			3				mi	MIH			zero		1
262	1805			7				CHEL?	(IX)-CHEL?		Rainbow	Horizon		
499	1807			4				TAL?	K'AB'?		to touch?	hand?		
285	1808			4				ke						
336	1809			3				?						1
337	1811			5				K'AN-a			yellow-V			
587	1813			1				IB'A:CH?			armadillo			
364	1814			1				LAJU:N?						
365	1816			1				?						
632	1824			1										
594	1825			4				??						

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
253	1826			2				u	MUWA:N?			hawk?		
367	1827			1				KAY?	KANKAY?		fish	eel		
368	1828			1				??						
251	1829			6				KUY			owl			
89	1831			12				tz'a						3
370	1833			0	?			HU:J-WA:J						
369	1878			2				CHAN?	ti-CHAN		snake?	in the sky?		
372	2230			1				MU:T?-TZAM?			Bird Itzamna			
300	5050			3				JEL?	??					
532	10112			1				na?	LAJU:N?					
323	10117			1				chi-K'IN			west			
312	10120			3				TZ'AK-hi			it was counted/ordered?			
127	10121			44				??	NUM?			continuous?	thorny?/spiny?	1
125	11256			55				NOHOL	NOH		south	big		
71	11257			49				O:K	YO:K	TZ'I'	pillar	foot	dog*	1
502	11258			40										
339	11259			3				O:M?						
340	11261			3				LO:T?			twins	hunchback		
596	11267			12				xu?	SU:TZ?					
252	11284			6				KUY	MUWA:N		owl	hawk		
41	11290	NOT LISTED AS SUCH		24				TZ'AK			count	order		1
629	11292			1				b'e?						
314	11293			0	?			SU:TZ?	xu		bat			2
622	11294			1				B'A:K?						
263	11295			8				TZ'ONO:T?	WAY		cenote	hole		
586	11296			2				MO'	mo					
614	11300			1										
264	12275			366				K'UH			god			
91	12276			92				NAL?	WINIK?		maize? / place?	person?		1
107	12278			99				WI'			sustenance	food		
422	12280			3				PO:P?			mat?			1
554	12281			43				OTO:T	POP?		house	mat?		
159	12282			40				LOB'?			evil?	harm?	damage?	
342	12285			1				HINA:J?	tzi?		sporut?			
92	12286			137				b'a						
130	12289			7				sa?	wu?	hu?				
190	12290			29				NA:M?			to hide			
374	12292			0	?			UH-NA:M?			moon-eclipse			
286	12294			0	?			K'IN-NA:M						2
93	12297			229		15563		ku	TU:N		stone			1
537	12298			4				pi						2
55	12299			308		15561		K'IN						
155	12301			36				chu						2
173	12304			34				chu						1
59	12308			80				me						1
94	12310			79		155A3		CH'E:N?			cave?			
101	12312			101				YAN?	AN?					
95	12314			6				CH'AM	YAL?/AL?	TAY?	take	cast? son of?		1

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
274	12315			10				CH'AM?	TAY?					
497	12316			11				AL?	YAL?		child of?	to throw?		
498	12317			0	?			CH'AM	YAL?		to receive	to throw?		
212	12318			12				JOY			to encircle	to tie up		
415	12320			2				B'U:L?			jar?			1
637	12322			3										
324	12324			0	?			K'AL			to tie/fasten			
490	12325			4				k'i?	k'a?	K'A'?			to expire?	
199	12326			22				a	AJ			he/she of (AGN)		
375	12329			1				K'UCH	TA:HOL		vulture	vulture		
377	12331			2				K'UCH	TA:HOL		vulture	vulture		
603	12332			0	?									
382	12335			16				CHAN?	T'OLO:K?		serpent	basilisk		
220	12336			15				OCH?	E:M?		opposum?	raccoon?		
229	12341			12				KO:J?	B'OLAY?	B'A:LAM?	jaguar/puma	feline		
379	12343			4				TZUL?	PE:K'?		dog			
325	12346			6				K'U:TZ?	K'UTZ?	AK'A:CH?	turkey	guajolote		
611	12347			0	?	15540	O	KOKA:J?	ITZAM?		bird deity			
287	12348			9				ITZAM?-AHI:N?			God D-Alligator			
343	12349			5				K'INICH			resplendent			
288	12352			1				ITZAM?			sorcerer?/alligator?			
140	12353			48				K'AWI:L			lightning god	(God K)		
423	12356			3				IX-UH			Lady Moon			
625	12357			6				KELE:M?			youthful/strong			
149	12359			36				XIB'?			male			3
440	12360			1				sa	SAJ			fear		
275	12362			6				PAT			to form			1
593	12363			0	?									
417	12364			11				?						1
213	12367			27				tze	se					3
204	12368			20				tze	se					2
344	12369			2				tz'a-ta?						2
276	12370			7				tz'a-pa			to plant			
608	12372			1				K'UK#?-KA:N?			feathered?-serpent' ?			
610	12477			3				K'O:B'?			hearth			
419	12486			8				??	na?					
567	12495			5				HA:L?			rain			2
636	12499			1										
573	12503			3				na?	mu?					
429	12510			3				?	chi?					
631	12522			1				?						
193	12525			1				pa						
301	12526			4				na?	yi-chi?			its surface?/face?		
151	12529			3				OTO:T	POP?		house	mat?		
604	12532			6				HU:J-WA:J			iguana tamale			
468	12533			10				ma?	b'a	O:B?				
380	12892			1				tz'o?	tz'e?					
381	12893			1				tz'e??						

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
624	12894			1				TZUTZ			to complete	to finish (cycle)		
402	12895			1				KA:J?			town?			1
164	12988			27				??	pi?					1
174	12999			4				chu						3
175	13000			2				??						4
176	13001			1				MUK?	chu.ku?		tomb?	capture?		5
383	14000			1				??			??			
388	14001			2				NA:B'?			lake	pool		1
389	14002			2				NA:B'?			lake	pool		1
390	14003			1				??						
391	14004			6				??						
392	14005			1				IXIK?	LAM?		lady?	to diminish?	(Venus deity)	
393	14006			2				??	B'U:L?			jar?		
395	14007			1				ITZAM?	??		sorcerer?	lizard?		
400	14008			2				WAY?			hole?			
403	14010			1				??						
404	14011			2				??						
405	14012			1				tzi?	??					
410	14014			7				K'AB'A'			name			
418	14015			8				na?	ch'e?	he?				
420	14016			1				k'o?						2
421	14017			3				NAL?						
426	14018			4				??	IX-CHEL?			Lady Rainbow?	(Goddess O?)	
427	14019			3				?	ch'e?	b'a?				
432	14020			2				K'U:CH?	TA'HOL?		vulture	bird		
433	14021			1				B'A:K?	k'u?					
435	14022			2				?	hi?					
436	14023			1				?	CHAK?					
438	14024			3				O:CH?	E.M?		opposum?	raccoon?		
441	14025			2				??	NU:N?			mute?		
443	14026			1				??	CHE:N?			mound?		
465	14028			1				AJAW?			lord?			
467	14029			3				ITZAM?	ITZAM?-AHI:N?		Shaman?/Wizard?	Earth-Alligator?		
469	14030			2				jo?	jo?					
470	14031			5				?	CHWEN?	cha?	?	sage/artist?		
471	14032			1				LAM?	mi?		to diminish?			
473	14033			1				?	TLA:LOK??		?	rain god??		
474	14034			1				?	NA:H?		?	first?		2
478	14036			1				?						
479	14037			3				??	pi?					
480	14038			1				TA:N?	ta?					
482	14039			3				ta	TA:N?			center?		2
485	14040			2				TAL?			to touch?			
487	14041			1				tz'u?	u?					
489	14042			1				je?						2
491	14043			4				?						
492	14044			2				K'AB'?			hand?			
494	14045			1				PAS?			to open?			

id	ID_PhotoC...	NcodeX_Knosorov...	NcodeX_Pi...	MATCH_I...	CONTEXT...	UNICODE_Code_point	NcodeX_Designati...	NcodeX_Phonetic_value1			TRANSLATION			variant
495	14046			2				?						
500	14047			1				?						
501	14048			1				??						
503	14049			11				o?	HUL?			to arrive?		
505	14050			3				o?	KUM?					
506	14051			1				KISIN?						
507	14052			1				?	CHAK?					
508	14053			1				?						
509	14054			1				A:T?	A:CH?		penis?	penis?		
510	14055			1				te?		tze?				
511	14056			3				?						
512	14057			5				?	tz'a?					
513	14058			2				YOPA:T?			storm.god			
514	14059			0				?	ch'e?	NAL?				
515	14060			2				O:N?	YO:N?		relative?	familiar?		
516	14061			1				?	PA:X??					
518	14063			1				?			ladder?	stair		
519	14064			6				E:M?			to descend			2
522	14065			1				su?	TAL?					
524	14066			2				ti?			(PREP)			
530	14068			7				u	UH?	hu				3
533	14069			17				PO:P?						
534	14070			1				?						
535	14071			1				?						
538	14072			1				A:K?	ITZAM?-A:K?		turtle	elderly?-turtle?		
539	14073			2				LAJU:N			ten			
540	14074			5				PAT			to form/make			2
541	14075			2				no?	ji?					
542	14076			1				O:N?	OK'IN?		relative	familiar		
543	14077			10				?			(sustract)			4
544	14078			5				mi	MIH			nothing		2
545	14079			45				NA:H	na?		first/great			1
546	14080			7				IK'?	NA:H?	NAL?	wind	first?/great?	maize?/place?	3
547	14081			2				NAL?	TZOL?	OCH?	maize?/place?	to count?/order?	to enter?	2
548	14082			5				EL?	EL?-K'IN?		heat?	east		
549	14083			1				?						
550	14084			2				CHI:K	CHI:CH?		coati			
551	14085			3				so?						
568	14086			2				ji						2
552	14087			31				u?	ja?					
553	14088			1				??						
555	14089			1				AHI:N?			Alligator			
556	14090			3				to?	mu?					1
557	14091			6				UH?/UW?	WINA:K		moon	twenty		
559	14093			28		15521		li	LE:M?			resplendent		2
560	14094			42				u(h)-LAJ?	u-10?		wholly/completely			
562	14095			45				CH'A:B'			penance	sacrifice		
565	14096			3				NA:H?	CH'AK?					

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569	14097			1				ha?	CHAM?					
570	14098			15				TE'						2
571	14099			1				?						
574	15001			3				KUM?						
575	15002			1				A:N?						
576	15003			1				??	CHUM?	SUM?				
577	15004			1										
581	15005			2				wa?						
592	15006			1				WAY?	ja-ja?		pit?/hole?			
599	15007			0	?									
600	15008			1				CHIJ?	KEJ?		deer?	deer?		
606	15010			1				KOKA:J?						
607	15011			1				na?	?					
609	15012			10				NA:HAL	NA:H		north	first/great		
616	15013			1				to						1
617	15014			0	?			hi	SIHO:M					1
619	15015			0	?									
623	15016			0	?			?						
626	15017			1				?						
628	15018			0	?			CHIJ?			deer?			
630	15019			0	?									
633	15020			0	?									
634	15021			0	?			?						
638	15022			1				tzi?						
710	16011			0	?			ch'o						

Previous List of Quadrats (2017). Total count: 164

