A 250-item list of Old Chinese vocabulary in the Baxter-Sagart reconstruction¹

Laurent SAGART, CNRS (emeritus), Paris, and MA Kun, Sun Yat-sen University, Guangzhou

Cahiers de Linguistique Asie Orientale 2020, 49: 92-105

Abstract

A 250-concept list was established for the purposes of a lexically-based study of Sino-Tibetan phylogeny (Sagart et al. 2019). This paper supplies the Old Chinese version of the list, in the Old Chinese reconstruction of Baxter and Sagart 2014. Chinese words attested in pre-Han times were selected based on their meaning as given in major lexica such as the *Hànyǔ Dà Zìdiǎn*. At times more than one OC item was found to match a concept in the list without it being clear which of the terms was the oldest. In such cases all the candidates were retained. As a result, the Old Chinese version of the list contains 301 words.

Keywords

Old Chinese – lexicon – word-lists – basic vocabulary

Résumé

Une liste de 250 concepts a été établie dans le cadre d'un projet sur la phylogénie sino-tibétaine (Sagart et al. 2019). Cet article présente la liste pour le chinois archaïque, dans la reconstruction de Baxter et Sagart (2014). Elle contient des mots attestés avant l'époque Han, choisis en fonction de leur sens dans les ouvrages lexicographiques de référence tels le *Hànyǔ Dà Zìdiǎn*. Lorsque plusieurs mots chinois correspondaient à l'un des concepts de la liste sans que puisse être établie d'antériorité chronologique entre eux, on a retenu les différents candidats. La liste contient en tout 301 mots.

As part of the preparatory work for a computer-based project on Sino-Tibetan phylogeny (Sagart et al. 2019), a 250-concept vocabulary list was established collaboratively by Johann-Mattis List, Guillaume Jacques and Laurent Sagart, members of the project. Selection of concepts aimed at balancing basicness, semantic coverage, and availability of items in the extant Sino-Tibetan documentation. Most of the items qualify as basic vocabulary, but old and culturally important notions like #141 'needle', #165 'rope', #182 'sickle', verbs like #152 'to plant', were retained. Similarly, terms for animal and plant domesticates like #151 'pig', #7 'Tibetan barley' and #160 'rice plant' were selected because of the potential importance of domestications in population expansions, and of those in the formation of language families (Bellwood 1985; Renfrew 1987). It would have been desirable to include the names of foxtail and broomcorn millet, two early East Asian domesticated cereals widely grown by Sino-Tibetan peoples, but the corresponding terms are only known from a small number of languages. At a later stage in the project, largely to enhance mutual coverage, the list was reduced to 180 items. A database marking cognates for these items in fifty Sino-Tibetan languages can be found at <http://dighl.github.io/sinotibetan>.

The Old Chinese (OC) version of the 250 list was compiled with reference to the main Chinese lexica such as the 2010

---

¹Ma Kun's research was funded by the French government Séjours Scientifiques de Haut Niveau (SSHN) project 871429L _FDR.

edition of the Hànyǔ Dà Zìdiǎn 漢語大字典 [Hànyǔ Dà Zìdiǎn Biānjí Wěiyuánhui 2010] or Jiǎgǔwén zì biān 甲骨文字編 [Lǐ Zōngkūn 2012]. Since the primary use of the OC list was to serve in our study of Sino-Tibetan (ST) phylogeny, and considering that the OC period ends with the beginning of the Han dynasty in 206 BCE, we aimed to identify the oldest pre-Han Chinese term for each meaning. A word was selected as representative of one of the concepts in our list when it occurred in that meaning in pre-Han texts or palaeography. In one case (‘egg’), an unwritten vulgar word without any pre-Han occurrences was included without any kind of written evidence, on the basis of its presence in three southern Chinese dialects at least (fn.2), with regular correspondences. The word, reconstructable as *tʰu[r], was selected alongside the better-known form 卵 *k.rʰor? > *lwanX* > luǎn ‘egg’, because it matches the ‘Tibeto-Burman’ (TB) word (reconstructed as *twiy ‘egg’ by Benedict 1972; compare 水 *s.tur? > sywɨjX > shuǐ ‘water; river’; PTB (Benedict) *twiy ‘water’). The lack of a Chinese character to write *tʰu[r] is thought to be due to the fact that the word also designates the testicles.

In a number of cases it was not obvious which of the Chinese forms was the oldest: in such cases we retained several competing forms for the same concept. Thus we give six forms for #76 ‘good’; five for #26 ‘cold’; four for #158 ‘red’; three for #73 ‘full’, #90 ‘high/tall’, #99 ‘to hunt’, #188 ‘small’, etc. At the same time a satisfactory OC form for a few notions could not be found: #7 ‘Tibetan barley’, #105 ‘to knead’, #144 ‘the nit’, #181 ‘shy’, #230 ‘we [first person plural inclusive]’, #248 ‘you [second person plural]’. Plural personal pronouns did not exist in OC. A word for ‘Tibetan barley’ could not be found because although barleys were known in China in OC times, Tibetan barley shows an adaptation to highland environments and this particular kind of barley was not named by the Chinese. It is possible that ‘nit’ was a compound such as ‘louse egg’; but if so, we are uncertain what the word for ‘egg’ in it may have been.

We list the Old Chinese equivalent of the 250 concepts according to the alphabetical order of concepts. OC forms are in the Baxter and Sagart (2014) system. All the words except for 杖 ‘the stick’, 冷 ‘cold’ and 窄 ‘narrow’, were reconstructed as part of the Version 1.1 release of September 2014 (<http://ocbaxtersagart.lsa.umich.edu/>). Reconstructions for the remaining three words are provided below. The character 窄 ‘narrow’ is late; the word *[ts]ʰrak ‘narrow’ was occasionally written by means of the homophonous character 柞 ‘oak’ in OC times.

the stick	杖 *m-[t]raŋ? > drjangX > zhàng
cold	冷 *[r]ʰeŋ? > lengX > lěng
narrow	窄 *[ts]ʰrak > tsraek > zhǎi ‘narrow’

Due to the existence of competing forms for single concepts and to the lack of Chinese equivalents for certain notions, the total number of OC reconstructed forms in our list is 301. A Chinese character is available for all but one: corresponding to the notion ‘egg’, we have added a second form next to 卵 *k.rʰor?, as already mentioned: that form reconstructs as OC *tʰu[r] and in the modern dialects where it occurs² is homophonous with 春 *tʰun > *tsyhwin* > chūn ‘springtime’. This is an unwritten vulgar form which refers both to eggs and testicles. We believe this is the original word for ‘egg’, and that it was displaced by the standard term 卵 *k.rʰor?, a polite form probably somehow related to 果 *[k]ʰo[r]? ‘fruit; result’.

Because the notions in this list were not selected specifically for Chinese, at times the closest OC equivalent for a notion is a word whose main meaning is not strictly identical with that notion. For instance #32 ‘the daughter’ is given as 女

² Cantonese *tʰæn* 1 ‘egg’ < *tʰu[r] (cp. *tʰæn* 1 ‘spring’); Hakka (Meixian, Lufeng) *tʰun* 1 ‘eggs of birds, reptiles; roe of fish’ (cp. *tʰun* 1 ‘spring’); Yizhang 宜章 patois *sei* 1 ‘egg’ (cp. *sei* 1 ‘spring’); and other locations in Guangzhou, Jiangxi and Guangxi.

*nraʔ, but that word more generally means ‘woman, female’, although it is at times specifically used as ‘daughter’.

	Gloss		OC (Baxter and Sagart, v. 1.1.)	Notes
1	above	上	*daŋʔ-s	
2	all	咸	*[g]ʰr[ə]m	
2	all	凡	*[b]rom	
2	all	皆	*kʰrij	
3	the ant	蚋	*qʰs(r)oʔ	
3	the ant	蟻	*m-qʰ(r)ajʔ	
4	the armpit	腋	*[g](r)Ak	
5	bad	惡	*ʔʰak	
6	the bamboo	竹	*truk	
7	the barley (tibetan or highland)			
8	to be alive	生	*sreŋ	Also ‘to be born’/‘to give birth’, the primary meaning
9	the belly	腹	*p(r)uk	
10	below, under	下	*gʰraʔ	
11	big	大	*lʰa[t]-s	
12	the bird	鳥	*tʰiwʔ	
13	to bite	噬	*[d]e[t]-s	
14	black	黑	*ŋʰək	
14	black	緇	*[ts]rə	
15	the blood	血	*ŋʰik	
16	to blow (of wind)	吹	*tʰo[r]	
17	the body hair (hair or fur)	毛	*C.mʰaw	
18	the bone	骨	*kʰut	
19	the branch	枝	*ke	
20	the breast (female)	乳	*noʔ	Also ‘milk’
21	to burn [intransitive]	燃	*C.na[n]	See #96 ‘hot’
22	to buy	買	*mʰrajʔ	
23	to chew	嚙	*[dz]ewk-s	
24	the child (young human)	兒	*ŋe	
25	the cloud	雲	*[g]wə[n]	
26	cold (of temperature)	冷	*[r]ʰeŋʔ	
26	cold (of temperature)	寒	*Cə.[g]ʰa[n]	
26	cold (of temperature)	涼	*C.raŋ	
26	cold (of temperature)	滄	*[tsʰ]ʰaŋ	
26	cold (of temperature)	清	*[tsʰ]eŋ-s	
27	to come	來	*mə.rʰək	MC reflects a variant form *mə.rʰə May have to be amended to *t<r>eŋ in view of the probable word-family relationship to 正 below.
28	correct (right)	貞	*treŋ	
28	correct (right)	正	*teŋ-s	
29	to count	數	*s-roʔ	
30	to weep	泣	*k-ɾəp	
31	dark	暗	*qʰum-s	
32	the daughter	女	*nraʔ	More generally ‘woman, female’ (# 242)
33	the dew	露	*p.rʰak-s	
34	to die	死	*sijʔ	
35	to dig	搯	*[g]ʰut	
35	to dig	掘	*[g]ot, *[g]ut	
36	dirty	汙	*qʰwʰra	
37	the dog	犬	*[k]ʰwhs[e][n]ʔ	

38	the dream	夢	*C.məŋ-s	
39	to drink	飲	*q(r)[u]m?	
40	dry	乾	*[k]ʰar	
41	the dust	塵	*[d]rə[n]	
42	the ear	耳	*C.nə?	
43	early	早	*Nə.tsʰu?	
44	the earth (soil)	土	*tʰə?	
45	the earthworm	蟪	*[g](r)ə[r]?	
46	to eat	食	*mə-lək	
47	the egg	(no char.)	*tʰu[r]	see fn. 1.
47	the egg	卵	*k.rʰor?	
48	eight	八	*pʰret	
49	the eye	目	*C.m(r)[u]k	
50	far	遠	*C.ɣʷan?	
51	the father	父	*[N-p](r)a?	
52	the feather	羽	*[g]ʷ(r)a?	
53	to fight	鬥	*tʰok-s	
54	the fire	火	*[qʰ]ʰəj?	The initial could be *ŋ-
55	firewood	薪	*[s]i[n]	
56	the fish	魚	*[r.ŋ]a	
57	five	五	*C.ŋʰa?	
58	the flea	蚤	*tsʰu?	
59	to float	泛	*pʰ(r)[o]m-s	
59	to float	浮	*m.b(r)u	
59	to float	游	*[N-]ru	
60	to flow	流	*ru	
61	the flower	華	*N-qʰʰra	
62	to fly (move through air)	飛	*Cə.pə[r]	
63	the fog	霧	*kə.m(r)[o]k-s	
64	the foot	足	*[ts]ok	
64	the foot	脚	*[k]ak	
65	the forest	林	*[r]əm	
66	to forget	忘	*maŋ	Cognate with 亡 *maŋ ‘flee; disappear; die’.
67	four	四	*s.li[j]-s	
68	the fox	狐	*[g]ʷa	
69	the frog	鼃	*qʰʰre	Onomatopoeia
70	the front (front side)	前	*[dz]ʰen	
71	the frost	霜	*[s]raŋ	
72	the fruit	實	*mə.li[t]	
73	full	充	*tʰuŋ	
73	full	滿	*mʰ[o][n]?	
73	full	盈	*leŋ (< *liŋ?)	
74	to give	畀	*pi[t]-s	
75	the goat	羊	*Gaŋ	
76	good	好	*qʰʰu?	
76	good	嘉	*kʰ<r>aj	
76	good	臧	*[ts]ʰaŋ	
76	good	良	*[r]aŋ	
76	good	佳	*[k]ʰre	
76	good	善	*[g]e[n]?	
77	the grass	薦	*Cə.tsʰə[r]-s	
77	the grass	草	*[tsʰ]ʰu?	
78	green	綠	*pə.rok	
78	green	蒼	*[tsʰ]ʰaŋ	
79	the hail	霰	*sʰ[e]r-s	
79	the hail	雹	*C.[b]ʰruk	
80	the hair (of the head)	髮	*pot	
81	the hand	手	*ŋu?	
82	hard	堅	*kʰi[ŋ]	
82	hard	剛	*kʰaŋ	
83	he or she [third person singular]	其	*gə	Also plural

83	he or she [third person singular]	之	*tə	Object pronoun. Also plural
84	the head	首	*ɭu?	The main word in this meaning
84	the head	元	*[ŋ]o[r]	
85	to hear	聞	*mu[n]	
86	the heart	心	*səm	Also ‘this’
87	heavy	重	*N-t<r>oŋ?	
88	here	此	*[tsʰ]e(j)?	
89	to hide (conceal)	匿	*nr[ə]k	
89	to hide (conceal)	隱	*[ʔ](r)ə[n]?	Related to 喬 below.
90	high / tall	卓	*tʰrawk	
90	high / tall	高	*Cə.[k]ʰaw	
90	high / tall	喬	*[N-k](r)aw	
91	to hold	執	*[t]ip	
91	to hold	持	*[d]rə	
92	the hoof	蹄=蹠	*tʰek	
93	horizontal	橫	*C.gʷraŋ	
94	the horn (keratinized skin)	角	*C.[k]ʰrok	A loan from a more westerly ST language, see Sagart et. al. 2019.
95	the horse	馬	*mʰra?	
96	hot	熱	*C.nat	
97	the house	屋	*qʰok	Related to 獸 *s.tʰu(?) -s ‘(wild) animal’
98	hundred	百	*pʰrak	
99	to hunt	狩	*s.tuʔ-s	
99	to hunt	獵	*r[a]p	Cognate with 田 *lʰiŋ ‘field’
99	to hunt	畋	*lʰiŋ	
100	the husband	夫	*p(r)a	Also ‘adult man’, the original meaning
101	I [first person singular]	吾	*ŋʰa	Related to 入 *n[u]p ‘enter’
102	the ice	冰	*p.rəŋ	
103	inside	內	*nʰ[u]p-s	
104	to kill	殺	*s<r>at	
105	to knead			
106	the knee	膝	*s-tsik	
107	knife	刀	*C.tʰaw	
108	to know (something)	知	*tre	
109	the lake	湖	*[g]ʰa	
110	late	晚	*m[o][r]?	
111	to laugh	笑	*[s-l]aw-s	
112	the leaf	葉	*l[a]p	
113	to learn	學	*m-kʰruk	m-volitional of 覺 *kʰruk ‘be aware’
114	left	左	*tsʰa[j]?	Also ‘to assist’, the primary meaning
115	to lick	舐	*Cə.le?	
116	to lie down	臥	*[ŋ]ʰ[o]j-s	
117	light (of weight)	輕	*[kʰ]eŋ	
118	the lip (the lips)	脣	*sə.dur	
119	the liver	肝	*s.kʰa[r]	
120	long	長	*Cə-[N]-tran	
121	the louse	蝨	*srik	
122	the lung	肺	*pʰo[t]-s	
123	the man (male human)	男	*nʰ[ə]m	Etymologically from 取 *tsʰoʔ ‘take’
124	many	多	*[t.l]ʰaj	
125	to marry (a man marries a woman)	娶	*[ts]ʰoʔ-s	
126	the meat	肉	*k.nuk	
127	middle	央	*ʔaŋ	
127	middle	中	*truŋ	
128	the moon	月	*[ŋ]ʰat	
129	morning	晨	*[d]ər	
130	the mosquito	蚊	*C.mə[r]	
131	the mother	母	*mə?	
132	the mountain	山	*s-ŋrar	

133	the mouse or rat	鼠	*[l]a?
134	the mouth	口	*k ^h (r)o?
135	the mud	泥	*C.n ^s [ə]
136	the nail (fingernail or claw)	叉	*[ts] ^s <r>u?
137	the name	名	*C.meŋ
138	narrow	柞=窄	*[ts] ^s rak
138	narrow	狹	*N-k ^s <r>ep
139	near	邇	*n[ə][r]?
139	near	近	*N-kər?
140	the neck	脰	*kə.d ^s ok-s
140	the neck	領	*[r]eŋ?
141	the needle (for sewing)	箴	*t.[k]əm
142	new	新	*s.ts ^h i[n]
143	nine	九	*[k]u?
144	the nit		
145	noon	午	*[m].q ^h a?
146	the nose	鼻	*m-bi[t]-s
147	old (of person)	老	*C.r ^s u?
148	one	一	*ʔi[t]
149	the otter	獺	*ʔ ^s at, *[m-ʔ] ^s at
150	outside	外	*[ŋ] ^w a[t]-s
151	the pig	豕	*[a]ʔ
152	to plant (vegetals, rice)	栽	*[ts] ^s ə
152	to plant (vegetals, rice)	種	*(mə-)toŋʔ-s
153	to play	玩	*[ŋ] ^s o[n]-s
154	to pull	拽	*l[a]t
155	to push	推	*t ^h uʔ
156	the rain	雨	*C.ɣ ^w (r)a?
157	the rainbow	虹	*m-k ^s oŋ, *k ^s roŋ-s
158	red	朱	*to
158	red	經	*t-k ^h reŋ
158	red	彤	*N-r ^s u[m]
158	red	赤	*[t-q ^h](r)Ak
159	to reside (live)	宅	*m-t ^s <r>ak
160	the rice plant	稻	*[l] ^s u?
161	right	右	*[ɣ] ^w ə?
162	the river	水	*s.tur?
163	the road	路	*Cə.r ^s ak-s
164	the root	根	*[k] ^s ə[r]
165	the rope	繩	*Cə-m.rəŋ
166	round	圓=圜	*ɣ ^w <r>en
167	to run	走	*[ts] ^s o?
167	to run	奔	*p ^s ur
168	the salt	鹺	*N-[ts] ^s aj
168	the salt	鹽	*[gr][o]m
169	salty	鹹	*Cə.[g] ^s r[o]m
170	the sand	沙	*s ^s raj
171	to scratch	搔	*s-[ts] ^s u
172	the sea	海	*ŋ ^s ə?
173	to see	見	*[k] ^s en-s
174	the seed	種	*k.toŋ?
175	seven	七	*[ts ^h]i[t]
176	sharp	利	*C.ri[t]-s
177	the sheep	羊	*gaŋ
178	to shoot (an arrow)	射	*Cə.lAk-s
179	short	短	*t ^s or?
180	the shoulder	肩	*[k] ^s e[n]

Cognate with 挾 *m-k^sep ‘clasp’, 桱 *C.k^s<r>ep ‘chopsticks’, etc.

A cyclical sign in the Shang oracular inscriptions, acquiring the meaning ‘noon’ in late Zhou.

Also ‘water’, see # 229

Possibly *s.ŋi[t]

181	shy			
182	the sickle	鎌	*[r]em	
183	to sing	歌	*[k]ʰaj	
184	six	六	*k.ruk	
185	the skin	膚	*pra	
185	the skin	皮	*m-[p](r)aj	
186	the sky	天	*[ʃ]i[n]	
187	to sleep	寐	*mi[t]-s	
187	to sleep	寢	*[tsʰ]imʔ	
188	small	微	*məj	
188	small	細	*[s]ʰe(k)-s	
188	small	小	*[s]ewʔ	
189	to smell (perceive odor)	嗅	*qʰu(?) -s	
190	the smoke	煙	*[q]ʰi[n]	
191	smooth	滑	*Nə-gʰrut	
192	the snake	蛇	*Cə.lAj	
193	the snow	雪	*[s]ot	
194	soft	柔	*nu	
195	the son	子	*tsəʔ	More generally ‘son (or daughter) of’. Cognate with 字 *mə-dzə(?) -s ‘breed’
196	the sparrow	雀	*[ts]ewk	
197	the spider	蜘蛛	*tre-tro	
198	to spit	唾	*tʰoj-s	
199	to stand	立	*k.rəp	
200	the star	星	*s-tsʰeŋ	Related to 清 *tsʰeŋ ‘clear (adj.)’
201	to steal	盜	*[d]ʰaw(k)-s	
202	the stick	杖	*m-[t]raŋʔ	
203	the stone (a piece of)	石	*dAk	
204	straight	直	*N-t<r>ək	
205	the sun	日	*C.nik	
206	the tail	尾	*[m]əjʔ	
207	ten	十	*t.[g]əp	
208	that	彼	*pajʔ	
209	there	彼	*pajʔ	
210	thick	厚	*Cə.[g]ʰ(r)oʔ	
211	the thigh	股	*kʷaʔ	
212	thin (object)	扁	*pʰe[r]ʔ	
213	to think (reflect)	思	*[s]ə	
213	to think (reflect)	想	*[s]aŋʔ	
214	this	此	*[tsʰ]e(j)ʔ	
215	thou [second person singular]	爾	*nʰ[ə][r]ʔ	
215	thou [second person singular]	汝	*naʔ	
216	three	三	*s.rum	
217	to throw	投	*[d]ʰo	
218	the thunder	雷	*C.rʰuj	
219	the tiger	虎	*qʰraʔ	
220	today	今	*[k]r[ə]m	More generally ‘now’
221	tomorrow	明	*mraŋ	Also ‘bright, clear’, the primary meaning
222	the tongue	舌	*mə.lat	
223	the tooth (front)	齒	*t-[k]ʰə(ŋ)ʔ or *t.ŋəʔ	
224	the tree	木	*C.mʰok	
225	twenty	二十	*ni[j]-s t.[g]əp	‘two-ten’
225	twenty	廿	*n[ə]p	(fused variant of the preceding)
226	two	二	*ni[j]-s	
227	to vomit	嘔	*qʰ(r)oʔ	
228	to walk	行	*Cə.[g]ʰraŋ	Also ‘to go’
229	the water	水	*s.turʔ	Also ‘river’, see # 162
230	we [first person plural inclusive]			
231	wet	濕	*[qʰ]ip	

232	what	何	*[g]ʰaj	
232	what	胡	*[g]ʰa	Perhaps a reduced form of the preceding
233	the wheat	麥	*m-rʰək	
234	where	愛	*ɕʷa[n]	
235	white	白	*bʰrak	Also ‘clear’, the original meaning
236	who	誰	*[d]uj	
237	the wife	婦	*mə.bəʔ	
237	the wife	妻	*[tsʰ]ʰəj	
238	the wind	風	*prəm	
239	the wing	翅	*s-kʰe-s	
240	to wipe	拭	*ʃək	
241	the wolf	狼	*[r]ʰaŋ	
242	the woman	女	*nraʔ	See # 32 ‘daughter’
243	the wood (material)	材	*[dz]ʰə	
244	to sow (broadcast, scatter seeds)	播	*pʰar-s	
245	the year	年	*C.nʰi[ŋ]	Also ‘harvest’, the primary meaning
246	yellow	黃	*N-kʷaŋ	Cognate with 光 *kʷaŋ ‘light, brightness’
247	yesterday	昨	*[dz]ʰak	
248	you [second person plural]			
249	young	幼	*[ʔ](r)iw-s	
250	the shit	屎	*[qʰ]ijʔ	

References

- Baxter, William H. and Laurent Sagart. 2014. *Old Chinese: a new reconstruction*. New York: Oxford University Press.
- Benedict, Paul K. 1972. *Sino-Tibetan: a Conspectus*. Cambridge: University Printing House.
- Bellwood, Peter. 1985. *Prehistory of the Indo-Malaysian Archipelago*. North Ryde: Academic.
- Hànyǔ Dà Zìdiǎn Biānjí Wěiyuánhùi 漢語大字典編輯委員會 [Hànyǔ Dà Zìdiǎn Editorial committee]. 2010. *Hànyǔ Dà Zìdiǎn* 漢語大字典 [Great character dictionary of the Chinese language], 2nd edition in nine volumes. Wǔhàn 武漢: Húběi Chángjiāng publishing group, Chóngwén Shūjú publishing group; Sìchuān Císhū Chūbǎnshè 湖北長江出版社集團; Chóngwén Shūjú publishing group; Sìchuān Císhū Chūbǎnshè 湖北長江出版社集團; 崇文書局四川出版社集團; 四川辭書出版社.
- Lǐ Zōngkūn 李宗焜. 2012. *Jiǎgǔ Wénzìbiān* 甲骨文字編 [Collection of oracle-bone inscriptions]. 北京: Běijīng: Zhōnghuá Shūjú 中華書局.
- Renfrew, Colin. 1987. *Archaeology and Language*. London: Jonathan Cape.
- Sagart, Laurent, Guillaume Jacques, Yunfan Lai, Robin J. Ryder, Valentin Thouzeau, Simon J. Greenhill, Johann-Mattis List. 2019. Dated language phylogenies shed light on the ancestry of Sino-Tibetan. *Proceedings of the National Academy of Sciences* May 2019, 116 (21) 10317-10322; DOI: 10.1073/pnas.1817972116.