A comparison of reconstructed Austronesian, Old Chinese and Austro-Thai

Lee C. Hogan
Austin, Texas

Sagart 1993 is a valuable addition to the study of linguistic relationships in Asia.¹ He has compared Blust’s and Dempwolff’s reconstructions of Austronesian and Li Fang-kuei’s reconstruction of Old Chinese (OC) to establish what he feels is a genetic relationship between these reconstructed languages.

The reconstructions of Blust (1980, 1983-84, 1985, 1988, and 1989) involve the following phonemes at the Proto-Austronesian (PAN) level, or "Level One" (ca. 5000 BC) [Blust 1980:13]:

Blust's PAN consonants²

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>D/A</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Post-velar</th>
<th>Laryngeal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stops</strong></td>
<td>p</td>
<td>t</td>
<td>T</td>
<td>j[gj]</td>
<td>k</td>
<td>q</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td>D</td>
<td>g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Affricates</strong></td>
<td>C</td>
<td></td>
<td></td>
<td>c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fricatives</strong></td>
<td>s</td>
<td>S</td>
<td></td>
<td>(s)</td>
<td></td>
<td></td>
<td>h</td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nasals</strong></td>
<td>m</td>
<td>n</td>
<td>N</td>
<td>ŋ</td>
<td>ng</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Liquids</strong></td>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>r (R)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semi-vowels</strong></td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>y</td>
<td></td>
</tr>
</tbody>
</table>

(The voiceless stops and affricates are unaspirated. The phoneme *s may have been a voiceless palatal sibilant; *L was probably a voiceless alveolar lateral; *r was an alveolar tap; and *R was probably an alveolar or uvular trill [Blust 1990b:233-34].)

Blust's PAN vowels³

i        u        iw        uy

e        a        ay        aw

(The symbol e is an orthographic substitute for schwa.)
The phonemes of Proto-Malayo-Polynesian (PMP: all Austronesian languages except the Formosan languages Atayalic, Tsouic, and Paiwanic), "Level Two" (ca. 4000 B.C.) [Blust 1980:13] are essentially the same except that C, S, and N are lost: C merged with t, S may have shifted to some glottal spirant, at least word-finally, and the distinction between n and l is lost [Blust 1990b:237]. The PMP phonemes are reconstructed for Proto-Western Malayo-Polonesian (PWMP: languages of the Philippines and western Indonesia), "Level Three" (ca. 2000 B.C.). Following Blust [1980:11], these relationships can be represented as:

\[
\text{PAN (Level One)} \\
\text{[5000 B.C.]} \\
\uparrow \\
\text{Formosan} \quad \text{PMP (Level Two)} \\
\text{[4000 B.C]} \\
\uparrow \\
\text{PWMP (Level Three)} \quad \text{Central-Eastern MP} \\
\text{[2000 B.C.]} \\
\]

Dempwolff's reconstructions (as modified by Dyen 1971) involve the following system of phonemes (Wolff 1988:139):

\[
\text{Dyen's modification of Dempwolff's consonants}^4
\]

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Alveolar</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Post-velar</th>
<th>Laryngeal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p</td>
<td>t</td>
<td>T</td>
<td>k</td>
<td>q</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td>D</td>
<td>g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricates</td>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>s</td>
<td></td>
<td>S</td>
<td>h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>z</td>
<td></td>
<td>Z</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>ŋ</td>
<td>ng</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquids</td>
<td>l</td>
<td>r</td>
<td></td>
<td></td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semivowels</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td>y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\text{Dyen's modification of Dempwolff's vowels}
\]

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
</tr>
<tr>
<td>e</td>
</tr>
<tr>
<td>u</td>
</tr>
<tr>
<td>a</td>
</tr>
</tbody>
</table>
Benedict (1975:135) postulates the following genetic relationship between Kadai and Austronesian and Miao-Yao:

![Austral-Thai Diagram]

The system of phonemes reconstructed for Austral-Thai by Benedict (1975:155, 178) is:

### Austral-Thai consonants

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Dental</th>
<th>Palatal</th>
<th>Velar</th>
<th>Post-velar</th>
<th>Laryngeal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stops</strong></td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>q</td>
<td>G</td>
<td>[?]</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td>g</td>
<td>Gq</td>
<td>Ng</td>
<td>NG</td>
</tr>
<tr>
<td></td>
<td>mp</td>
<td>nt</td>
<td>ngk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mb</td>
<td>nd</td>
<td>ngg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Affricates</strong></td>
<td></td>
<td>ts</td>
<td>c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dz</td>
<td>j</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>nts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ndz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fricatives</strong></td>
<td>s</td>
<td>[s]</td>
<td>[x]</td>
<td>h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>z</td>
<td>[z]</td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ns</td>
<td>[n̪s̪]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>nz</td>
<td>[n̪t]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nasals</strong></td>
<td>m</td>
<td>n</td>
<td>n̪</td>
<td>ng</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td><strong>Liquids</strong></td>
<td>l</td>
<td>r</td>
<td>ɾ</td>
<td>[RI]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semi-vowels</strong></td>
<td>w</td>
<td>ɨ</td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(The nasal/oral units, mp, etc. are a "special type of cluster." Doubtful reconstructions are in brackets [ ].)

### Austral-Thai vowels

<table>
<thead>
<tr>
<th></th>
<th>u</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In addition to the radically different systems of phonemes for PAN and Austro-Thai, Benedict (1975:174-5) also reconstructs initial and medial consonant clusters while Blust and Dempwolf allow only medial clusters:

**Austro-Thai consonant clusters**

<table>
<thead>
<tr>
<th>Labials:</th>
<th>r</th>
<th>-l</th>
<th>-Ʉ</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>pr</td>
<td>pl</td>
<td>pɄ</td>
</tr>
<tr>
<td>b</td>
<td>br</td>
<td>bl</td>
<td></td>
</tr>
<tr>
<td>m</td>
<td>tr</td>
<td>tl</td>
<td>tɄ</td>
</tr>
<tr>
<td>Dentals:</td>
<td>tl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>dr</td>
<td>dl</td>
<td></td>
</tr>
<tr>
<td>Velars:</td>
<td>k</td>
<td>kr</td>
<td>kl</td>
</tr>
<tr>
<td>g</td>
<td>gr</td>
<td>gl</td>
<td></td>
</tr>
<tr>
<td>x</td>
<td>[xl]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-velars:</td>
<td>q</td>
<td>qr</td>
<td>qɄ</td>
</tr>
</tbody>
</table>

For Old Chinese (ca. 800-500 B.C.), Sagart (1993:3-4) uses the system of Li (1971, 1976):

**Old Chinese consonants (Li 1975:1143-4)**

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Alveolar</th>
<th>Velar</th>
<th>Labio-velar</th>
<th>Laryngeal</th>
<th>Labio-laryngeal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>kw</td>
<td>?</td>
<td>?w</td>
</tr>
<tr>
<td></td>
<td>ph</td>
<td>th</td>
<td>kh</td>
<td>kwh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>d</td>
<td>g</td>
<td></td>
<td>gw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricates</td>
<td>ts</td>
<td>tsh</td>
<td>dz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>s</td>
<td></td>
<td>h</td>
<td>hw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>ng</td>
<td>ngw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquids</td>
<td>l</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semivowels</td>
<td>j</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Old Chinese vowels (Li 1975:1143-4)**

\[ \text{i, u, iə, ua, e, a, ia} \]
Old Chinese tones

Tone A  (level)  unmarked here
Tone B  (rising)  -x
Tone C  (departing)  -h
Tone D  (entering)  unmarked here (MC finals -p, -t, -k)

In the list of lexical comparisons the entries in Figure 1 are typical: (5) refers to the numerical sequence of the "semantic reconstruction" (Benedict 1975 is used when possible); "anger, angry-1" is the "semantic reconstruction"; the semantic reconstruction and its sequence number are in boldface; the abbreviation "(B)" refers to Blust’s reconstructions (Blust 1970); "(1)" "(2)" "(3)" refer to the PAN, PMP and PWMP levels of Blust’s reconstructions (Blust 1980, 1983-84, 1985, 1989); "ROOT" refers to PAN roots in Blust 1988, "D" to Dempwolff’s reconstructions (wherein a sound in parentheses () is optional and one in brackets [] is ambiguous), and "Be" to Benedict’s reconstructions (Benedict 1975). On the right the sequence "nagh" refers to a reconstruction based on Li 1971, 1975 (when Yakhontov differs, this follows in parentheses); the abbreviation "K94a" refers to the numbering in Karlsgren 1964 (note that "K0" means "not in Karlsgren", and that an asterisk next to the Karlsgren reference means "not in the relevant GSR series"); and "Chi Yün," etc. refer to the source for the particular entry.

Figure 1: Sample comparisons

(5) anger, angry-1
(2) ganas / gana 'raw energy'
(Old Javanese: 'wild, furious, savage')

:: 怒
nagh (K94a') 'anger, angry'
(Shih Ching) 5

(6) anger, angry-2
(D) bengis 'angry'

:: 怒
ng-j-agh (K0) 'angry'(Chi Yün)
ng-j-agh id. (Kuang Yün, Chi Yün)

:: 怒
ng-j-adh 'angry boar, its hair bristling' (K516a) (Shuo Wen)

(70) father
(B) embaq
(D) sambaq 'respect'
Be: a/ba; (m)b(a/l/mba); (m)bapa

:: 父
b-j-agx 'father' (Shih Ching)
The following are abbreviations for the Austronesian languages and groupings:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Language or Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKL</td>
<td>Aklanon (WMP)</td>
</tr>
<tr>
<td>AMIS</td>
<td>Amis (PW)</td>
</tr>
<tr>
<td>BAL</td>
<td>Ballinese (WMP)</td>
</tr>
<tr>
<td>BIL</td>
<td>Bilaan (WMP)</td>
</tr>
<tr>
<td>BGS</td>
<td>Buginese (WMP)</td>
</tr>
<tr>
<td>BON</td>
<td>Bontok (WMP)</td>
</tr>
<tr>
<td>BM</td>
<td>Bolaang Mongondow (WMP)</td>
</tr>
<tr>
<td>BUS</td>
<td>Busang (WMP)</td>
</tr>
<tr>
<td>CEB</td>
<td>Cebuano (WMP)</td>
</tr>
<tr>
<td>CHM</td>
<td>Chamorro (WMP)</td>
</tr>
<tr>
<td>Embaloh</td>
<td>(WMP)</td>
</tr>
<tr>
<td>FI</td>
<td>Fijian (OC)</td>
</tr>
<tr>
<td>FU</td>
<td>Futuna (OC)</td>
</tr>
<tr>
<td>HLG</td>
<td>Hilligyanon (WMP)</td>
</tr>
<tr>
<td>HO</td>
<td>Hova (WMP)</td>
</tr>
<tr>
<td>IB</td>
<td>Iban (WMP)</td>
</tr>
<tr>
<td>ILK</td>
<td>Ilokano (WMP)</td>
</tr>
<tr>
<td>ISG</td>
<td>Ise'neg (WMP)</td>
</tr>
<tr>
<td>JA</td>
<td>Javanese (WMP)</td>
</tr>
<tr>
<td>KAY</td>
<td>Kayan (WMP)</td>
</tr>
<tr>
<td>KB</td>
<td>Karo Batak (WMP)</td>
</tr>
<tr>
<td>KIP</td>
<td>Kiput (WMP)</td>
</tr>
<tr>
<td>KMB</td>
<td>Kambera (CMP)</td>
</tr>
<tr>
<td>CMP</td>
<td>Central Malayo-Polynesian</td>
</tr>
<tr>
<td>OC</td>
<td>Oceanic</td>
</tr>
<tr>
<td>LgA</td>
<td>Long Anap (WMP)</td>
</tr>
<tr>
<td>MAK</td>
<td>Makasarese (WMP)</td>
</tr>
<tr>
<td>MAL</td>
<td>Malay (WMP)</td>
</tr>
<tr>
<td>Mandar</td>
<td>(WMP)</td>
</tr>
<tr>
<td>MAR</td>
<td>Maranao (WMP)</td>
</tr>
<tr>
<td>Matu</td>
<td>(WMP)</td>
</tr>
<tr>
<td>MGG</td>
<td>Manggarai (CMP)</td>
</tr>
<tr>
<td>NgD</td>
<td>Ngaju Dayak (WMP)</td>
</tr>
<tr>
<td>NIAS</td>
<td>Nias (WMP)</td>
</tr>
<tr>
<td>PAI</td>
<td>Paiwan (PW)</td>
</tr>
<tr>
<td>PUY</td>
<td>Puyuma (PW)</td>
</tr>
<tr>
<td>OJ</td>
<td>Old Javanese (WMP)</td>
</tr>
<tr>
<td>ROTI</td>
<td>Roti (CMP)</td>
</tr>
<tr>
<td>SA'A</td>
<td>Sa'a (OC)</td>
</tr>
<tr>
<td>SAN</td>
<td>Sangir (WMP)</td>
</tr>
<tr>
<td>SAS</td>
<td>Saak (WMP)</td>
</tr>
<tr>
<td>SM</td>
<td>Samoan (OC)</td>
</tr>
<tr>
<td>SML</td>
<td>Samal (WMP)</td>
</tr>
<tr>
<td>SND</td>
<td>Sundanese (WMP)</td>
</tr>
<tr>
<td>TAE</td>
<td>Taq' (WMP)</td>
</tr>
<tr>
<td>TAG</td>
<td>Tagalog (WMP)</td>
</tr>
<tr>
<td>TB</td>
<td>Toba Batak (WMP)</td>
</tr>
<tr>
<td>TO</td>
<td>Tonga (OC)</td>
</tr>
<tr>
<td>WBM</td>
<td>West Bukidnon Manobo (WMP)</td>
</tr>
<tr>
<td>PW</td>
<td>Paiwanic (Formosa)</td>
</tr>
<tr>
<td>WMP</td>
<td>Western Malayo-Polynesian</td>
</tr>
</tbody>
</table>

-------------

abate, to
ref: satiate, to

(1) able
(D) uliq 'able, able to'
(MAL. 'using, by means of')
:: 以
   rágx (l-j-) 'take, use, employ; using, by means of' (Shih Ching)
ref: cause

above
ref: climb, ascend, mount, ride, lift, above/up

accompany
ref: carry (by several persons), accompany
(2) active
(3) ku(n)zit 'busy, diligent'
(ILK: 'diligent, active, energetic, assiduous, restless, unsettled, unquiet')

(3) adult, grown-up
(D) guDang

(4) agree, consent
(D) zinak 'tame'
(D) zinak 'agreeable'

(5) anger, angry-1
(2) ganas / gana 'raw energy'
(OJ: 'wild, furious, savage')

(5) anger, angry-2
(D) bengls 'angry'

anxious
ref: active

(7) arrow, shoot
(D) panaq 'weapon for shooting, bow, arrow'

Be: pan[aq]; pa/pa[aq]
ref: bamboo
ref: bow, spear, arrow

::疾
dz-j-it (K494ac) 'urgent, active, energetic' (Shih Ching)
'hurried' (Lun Yu)
'anxious' (Kuan Tzu)

::長
d-rj-angx (K721a) 'grown-up, elder, senior' (Shih Ching);
'to grow tall' (Meng Tzu)
id. (K722a) 'old man'

::諾
nak (K777f) 'agree, say yes, consent' (Shih Ching)
n-j-ak (K777a) 'to agree, conform to, accord with' (Shih Ching)
'compliant' (Shu Ching, in reference to wild animals)

::怒
nagh (K94a) 'anger, angry'
(Shih Ching)

::怒
ng-j-aqh (K0) 'angry' (Chi YuN)
ng-j-aqh (K516a) id. (Kuana YuN, Chi YuN)6

::暴
ng-j-edh 'angry boar, its hair bristling' (Shuo Wen)

::弩
nagx (K94z) 'crossbow' (Chou L4)
nagx (K94d) 'a kind of stone used for arrowheads' (Shu Ching)
ascend
ref: climb, ascend, mount, ride, lift, above/up

(8) back, behind
(D) balakang 'back' (body part)
Be: (qa/./ka/)[1]kuz
:: 鉢
kang (K697a) 'spine (= ridge) of a mountain' (Shih Ching)
k-j-ang (K711*) 'ox with a long spine' (Shuo Wen)

(9) bad
(D) zaqat
:: 餐
?at (K313y) 'bad, rotten, of food'
(Lün Yü)
(Kuang Yün)

(10) balance
(D) Riwang 'to lose balance'
:: 衡
gw-r-ang (K748h) 'steelyard, balance' (Shu Ching)

(11) bare
(D) laklak 'bare' (NgD 'leafless, of trees having shed their leaves')
:: 植
thak (hlak) (K790r) 'withered and fallen leaves' (Shih Ching)
NOTE: voicelessness of initial may result from the PAN *-kl-cluster or an OC prefix

(12) basis, trunk (of tree, body), buttocks, heel
(2) tiked 'heel'
Be: [(m)po]sol
ref: root
:: 跟
kün (K416*) 'heel' (Chi Chiu Pien)
NOTE: Unexplained Tone A instead of B.

(13) basket, sack
(D) raga 'wide-mesh basket'
Be: k[al]rong
:: 蓼
g-j-ag (K803*) 'round basket used in feeding silkworms' (Li Chü);
'a kind of basket' (Kuang Yün)
k-j-ag (K76j) 'round basket'
NOTE: unexplained voiceless initial k-j-ag (K803j) id.

beak
ref: beat, drive in, pound, strike

bean
ref: husks, chaff of wheat
beast of prey
ref: tiger, cat

(14) beat, drive in, flutter, wing

(D) pukpuk 'to hit with a tool'
ROOT: -puk 'throb, thud, clap, break'
Be: [ka][m]pak/[ka][m]pak, pak/pak, plk/plk, (m)puk/(m)puk
ROOT: -pak 'to slap, clap'

ref: beat, drive in, pound, strike
ref: beat, hit, strike, hammer
ref: beat, strike, pound, wing

(15) beat, drive in, pound, strike

(D) pa(n)tuk 'to peck' (JA 'beak')
Be: [kɔ][n]tək, [kɔ][n]tək, [kɔ]tug, [pə][n]tuk, [m/a]tuk

(3) pa(n)Tuk 'sound of knocking'
(MAR 'axe, hatchet'; SAS 'woodpecker sp.')
ROOT: -Tuk 'knock, pound, beat'

ref: beat, drive in, flutter, wing
ref: beat, hit, strike, hammer
ref: beat, strike, pound, wing
ref: cut, chop

bed
ref: mat

bell
ref: sound, ringing sound
bellow
ref: howl, bellow

(16) belly, intestines, mind, soul
(1) nemnem 'think'
Be: *(m)/(n)a[w[a

::恁
n-j-sì (K667q) 'think' (late Chou inscription; Hou Han Shu)
NOTE: alternate readings in Tones B & C.

(17) bend/bent, arched, bow, n.
(D) Deku 'curved'
ROOT: -ku 'bent, curved'
(2) leku? 'bend, fold, folding part of the body'
Be: [(n)d]a(n)kong

::句
kug (K108a) 'curved' (Shih Ching)
'hook, hooked' (Li Chū)
kug (K108c) 'hook' (Shih Ching).
crooked' (Kuo Ts'e)
k-j-ug (K108q) 'crooked spine'
(Chuang Tzu)

ref: bend/bent, arched, crooked

(18) bend/bent, arched, crooked
(2) pekuq 'bend, curve'
ROOT: -ku(q) 'bend, curve'
Be: [l]ngkung, (m)b/[l]ngkung,
[l]ngkuk, (m)b/[l]ngkuk, b/ungkuk,
uguk

::棋
k-j-ugx (K121e) 'low sacrificial table with curved legs' (Li Chū, Kuang Yün)
k-j-ugx (K108*) 'curved feathers'
(Kuang Yün)
k-j-ugx (K108*) 'fruit [tree] with curved branches' (Kuang Yün)
kh-j-uk (K1213a) 'bend, bent'
(Shih Ching), 'crooked, unjust'
(Tso Chuan)
k-j-ungx (K1182e) 'hold round with both hands' (Tso Chuan);
'encircle, span with both hands'
(Meng Tzu); 'an arch' (Mathews)

ref: bend/bent, arched, bow, n.

bind
ref: hair, topknot
ref: knot, tie

bird
ref: cry
ref: laugh
(19) bite, gnaw, cut off
(D) kaRat 'to gnaw, bit'
(Doublet: keRet)
Be: (jkaYap(/Yap); qaYap(/Yap);
(jkəYap(/Yap)
ref: gnaw, chew, bit, grind teeth

(20) bland
(D) lamlam 'weak-tasting, tasteless'

(21) blow, wind
ROOT: -put 'puff'
Be: *[ts]ə(m)putl/(m)putl;
*[s]ə(m)butl/(m)butl

(22) blunt, dull
(D) pu(n)dul 'blunt'

(2) tulul 'blunt, dull'

(23) body, flesh
(D) daging 'flesh' (TB 'body')
Be: [da]Ging
ref: flesh, meat, animal, deer
ref: flesh, meat, animal, deer, bird, pulp
ref: flesh, meat, deer, body-1
ref: flesh, meat, deer, body-2

(24) boil, carbuncle
(3) pi(R)sa?

::酸
dam (l-) (K617*) 'weak-tasting, tasteless, of wine or vinegar'
(Chi Yun);
thamh (hl-) 'insipid' (Chi Yun)

::嘈喨
am-dam (?am-l-) 'tasteless'

::淡
NOTE: common word for 'tasteless, insipid' is damx (K617a), with unexplained Tone B.

::螯
p-j-ət (K500a) 'gust of wind'
Shih Ching)

::钝
dən̄h (K427l) 'dull, blunt' (Kuo Yü)
tən̄h (K427j) 'worn, dull, spoiled (edge)' (Tso Chuan)

::形
ging (K808d) 'body' (Li Chü)

::痣
tsh-j-ag (K46p) 'carbuncle' (Shuo Wen) (K: 'ulcer')
bow
ref: weapon for shooting etc.

(25) brave
(2) gagar 'brave, plucky'
ref: difficulty
ref: material, raw
ref: to support
ref: to resist

breadth of fingers
ref: palm of the hand, sole of the foot

(26) break, crack, split
(3) sepak 'break, snap off at a joint' (TAE 'cut off at the the leg of upper end of the femur'
NOTE: not in Blust (1988:135)
under root -pak 'break, crack, split', but the semantics seem to justify it: ILK leppak 'separate at the joints (bones, roasted chickens, palm spines)'
ref: to split
ref: to hack

(27) break, smash, split
(3) sagasag 'break, crack'
(TAG 'broken lengthwise (said of canes, wood, tubes, etc.) without being entirely so') also (O-387)
sas[ae]g 'wattle'
Be: trak; [(m)bə]trak

(28) break wind
(3) ke(m)pes 'deflate'
(doublet: ke(m)pis)
ROOT: -pes 'empty, deflated'
(KMB 'flatus; break wind')
ref: blow, wind
ref: fart

:: 悍
ghanh (K139h) 'violent' (Hsun Tzu)
cruel, ruthless, violent, fierce
(Mathews)

:: 膨
phak (K771l) 'to dismember< cut off the four members' (Tso Chuan),
'meat cut into pieces' (Shuo Wen, written as 髑)

NOTE: unexplained aspirated initial

:: 將
ts-j-angx (K727*) 'to split bamboo and remove the nodes'
(Kuang Yün)

:: 屁
ph-j-idh (K566*) 'break wind'
(Yü Pien, Chi Yün)
(29) breathe, spirit, ghost
(2) puang (= puwang) 'title of respect' (KB) 'title given by the Batak (...) to the Malay sultans'; TAE 'Sir, lord; (...); also used for those of heavenly origin, the nobility (...); God'; MAK 'royal/ princely father or mother (...)'
Be: tsumbang(/t)
ref: spirit

(30) bright
(2) nilaw 'bright light'
Root: -law 'dazzling light'
ref: shine

(31) burn, to
(3) sirab
ref: flame

(32) burn, blaze
(2) esak 'cooked, ripe'
Be: g[a]l[a]k
ref: cook (with steam), roast, singe

(33) burst open, to
(D) tela (JA: 'to split, burst')

ref: active

(34) call (of birds/animals), cackle, crow, v/n., fowl, bird
(2) kuk 'sound of sob, croak, etc.'

Be: gu(k)/guk, ku[k]/kuk, ku[ŋ]/kuq, ng[ŋ]a[k]/ng[ŋ]ak, ka[k]/kak

NOTE: Unexplained aspirated initial
NOTE: seal character has 'dog' and two 'mouths,' suggesting meanings such as 'howl' or 'bark'

ref: call out, call
ref: cry (of animals), bark, thunder
ref: dove, pigeon-1
ref: dove, pigeon-2

(35) cane, staff
ROOT: -kud 'cane, staff, walking stick'

:: 棍 kwôngh 'stick' (K417*) 'stick'
   (Yuan text only)

(36) carry (by several persons), accompany
(D) usung 'carry (several bearers)' :: 送 sungh (K1179a) 'to escort'
   (Ho. 'accompany')
   Be: 0]tsong

(Shih Ching)

(37) cause
(D) daliq 'cause, motive'

:: 以 râq (L-j-) (K976a) 'cause'
   (Shih Ching, cf. Tz'u Chuan)

ref: able

chaff
ref: husks, chaff of wheat

(38) chew (soft/prepared foods)
(D) se(m)paq 'to chew, chew up'
Be: [ma/]maq; (q/)ma/m[aq]; (q/)məm[aq]

:: 吻 p-j-agx (K102*) 'to chew'
   (Kuang Yün)

NOTE: Chi Yun reads p-j-agx and phj-agx.

:: 吻 bagh (K102t) 'to have food in the mouth'
   NOTE: intransitive voicing and secondary tone C.

ref: to taste

chop
ref: hack
ref: cut, chop

clap
ref: beat, drive in, flutter, wing
clear (of water)
ningning

(40) cleared area
na[Ct]aD 'cleared area around house'
See (B) bi(n)[CtT]aD

(41) climb, ascend, mount, ride, lift, above/up
angkat 'to lift, lift up';
Be: [t]sa[k]a; [n]tsa[k]a/i;
[t]sa[Nqa/i; [a]ngka/t; [a]qa/t;
[a]qa/t; [a][N]qa/n; [t]u(ng)ka/i;
[t]u[k]a/t

42) cloth
kapas 'cotton, thread'

coal
ref: cook (with steam), roast, singe

(43) come
ari 'come! let's go'
Be: ( )mal[y]l

concave
ref: pierced, hollow, hole, cave

condiment, salt
ref: salt
(44) confusion
(3) sigaw 'disturbance, confusion'  

contain, container
ref: seize, hold, close (fist), handful, bite

(45) cook (with steam), roast, singe
(1) tuquR 'evaporate, dry up'  
(WBM 'roast something'; KB 'expose to heat')
Be: (q/)(n)drag(/(n)drang).
(t)tr[u]ng
ref: burn, blaze

(46) cord, string, rope
(D) se(n)tagi 'band' (MAL 'a cord': NgD 'necklace')
Be: (m)p[r,l]a[i][s]

(47) cover, turn upside down, lid, hat
ROOT: -keb¹ 'cover'
Be: kub/kub; k/½/ub/kub;
[(n)ta(ŋ)kub; [ta] (ng)kup;
[talk/1/ub: kəb/kəb);
/k/½/əb(kəb); [talkəp;
[tal]ng]k/1/əp
ROOT: -keb² 'face downward'

kərmx (K1015*) 'cover' (Kuang Yün)
kh-j-əmx (K651*) 'walk quickly with head bent down' (Chi Yün)
gəmx (K651n') 'nod the head' (Tso Chuan)
NOTE: intransitive voicing.
kh-j-əmx (K652j) 'push down (sc. the chin of puppet)' (Lieh Tzu)
(48) crab
(2) qali-mangaw 'mangrove crab'  ::螯  ngagw (K1130k) 'type of crab' (Kuang Yûn), 'crab with large claws' (Chi Yun), 'crab's claws' (Hsûn Tzu)

crack, to
ref: to break, to crack, to split
ref: to split
ref: to hack

(49) cram
ROOT: -sek 'cram, crowd'  ::塡  sâk (K908a) 'stop up, block' (Shih Ching); 'fill' (Meng Tzu)

(50) cross-beam
(3) atang  ::檔  tangh (K725*) 'a wooden cross-piece' (Chi Yun); 'a cross-piece, such as the round of a ladder, the rail of a chair' (Mathews); 'a horizontal piece of wood used as support or separation' (Cheng Tzu Tung)

(51) cry (of animals), bark, thunder
(2) uang (=uwang) 'howl, bellow'  ::鳴  gwang (K708n) 'to resound (as weeping or bells)' (Shih Ching) 'to cry, as a child' (Shuo Wen)

(D) TungTung 'alarm instrument, dull sound' (MAL, 'wooden alarm-bell')  ::鐘  t-j-ung (K1188xz) 'bell' (Shih Ching)

ROOT: -Tung
ref: dove, pigeon-1
ref: dove, pigeon-2
ref: sound, resound, thunder, drum

(52) cry out, call
(2) Ruak (= Ruwak) 'deep cry, bird with deep cry'
(MGG 'shout from afar, call with a loud voice')
Be: yiyak  ::嘰, 詠  gw-r-ak (K784*) 'loud shout' (Shih Chi, Chi Yun)

NOTE: gw-j-angw (K764g) 'to sing, of birds' (Li Chi)
curl
ref: bend/bent, arched, crooked

curve
ref: bend/bent, arched, crooked

(53) cut, chop
(1) saksak 'hack, chop into pieces'
Be: tak[/tak], t[ə]k/t[ə]k
ref: beat, drive in, pound, strike

(54) dark, fog/mist, gloomy, shade/shady, black, night
(D) i(n)tem 'black'; (3) l(n)tem 'deep black, shiny black'
Be: (ma/|[i]lɔm/|lɔm)

(D) DeDem 'dark'
ROOT: -Dem 'dark; overcast'
(D) lemlem 'dark'
ROOT: -lem 'dark'

(D) DeDem 'dark'
ROOT: -Dem 'dark; overcast'

(55) dark, night, evening, black, red, purple
(B) [dD][i]Rem 'darkness of hue'
(MAR 'blacken')
Be: [l][kam; [l]k/ʃ/əm; (ŋ)ŋkəm;
(ŋ)ngl]/ʃ/əm

day
ref: light, shine, moon, sun, dawn, morning
(56) deep
(D) Dalem 'deep'
Be: (q/)(n)za(l)\(\)m

::深

::潭
d-\(\)m (l-) (K646b) 'deep, abyss'
(Ch’u Tz’u)
d-\(\)j-\(\)m (l-\(\)j-) 'deep' (Chuang Tzu)
sth-\(\)j-\(\)m (hl-j) (K666ad) 'deep'
(Sihth Ching)

desire
ref: impetuous

(57) difficult
(D) su(ng)ka[r] 'difficulty, trouble, fatigue' [Mühe]
Be: pa(n)yaq(l/pa(n)yaq)

::察
::察
::察
::察
::察
::察
::察
k-j-anx/k-j-lanx (K143f) 'difficulty' (Yi Ching);
k-j-anx/k-j-lanx (K143e) 'speak with difficulty' (Ch’u Tz’u)
k-j-anx (K249h) 'weary, difficulty walking' (Chou Li)
k-j-anx/k-j-lanx (K249b) 'stutter'
k-j-anx (K139*) 'stutter' (Kuang Yün)
NOTE: variant readings according to Chi Yun

ref: brave
ref: material, raw
ref: to oppose
ref: to resist
ref: support
diligent
ref: active

(58) disclose, let appear
(D) tara 'come to light'

::露

::露
lagh (r-) (K766t) (Tso Chuang)

(59) dog
(2) u(ng)kuq 'dog (= puppy ?)
Be: [wa]k]\(\)w(a)

::狗

::狗
kugx (K108d) 'dog' (Tso Chuan)
NOTE: word originally meant 'puppy' (Wang Li 1982:182)

ref: bend/bent, arched, crooked
double
ref: pair, twin, two

(60) **dove, pigeon**
(1) tuRtuR 'resonant sound'
(PAL, PUY 'dove, pigeon'; MAL 'coo of the dove')
Blust points out onomatopoeic parallel in Lat. turtur 'dove.'
Be: (m)pəw[nay]
ref: call (of birds/animals), cackle, crow, v/n., fowl, bird
ref: cry (of animals), bark, thunder
ref: cry out, call

::隹 t-j-əd (K575a) 'a kind of dove'
(Shih Ching)
NOTE: graph is drawing.

(61) **drink, distilled**
(D) arak 'distilled drink'

::麴 lak (r-) (K766p) 'a kind of acid soy made of rice or millet'
(Li Chi)

Ref: Karlsgren 1926:138-139.

(62) **drip, leak**
(2) titik
(MAL: 'drop, liquid particle')
ROOT: -cik 'fly out, splatter, splash'

::滴 tik (K877*) 'drop of water'
(Southern dynasties text example)

dry
ref: cook (with steam), roast, singe

(63) **ear pendant, earring**
(3) tinngaʔ 'ear pendants'

::瓚 g-j-ag (K803*) 'earrings' Shan Hai Ching); 'earrings worn by Jung and Yi tribesmen' (Chi Yun)
g-j-ag (K95*) 'earrings' (Kuang Yun)

(64) **earth, field, mud**
(2) bu(R)taq 'mud, earth'
ROOT: -taq 'mud, earth; ground'
Be: (q)(m)pəalaq

::土 thagx (K62a) 'soil, earth, land'
(65) eat, food
(D) ka
Be: [pa]ngal

::饌

gag (K49l) 'to eat at another person's expense' (Shuo Wen)
(intransitive voicing of the initial);
'meal had at another person's expense = rice gruel, congee'
(Erh Ya). The original voiceless initial is found in a variant list by
Chi Yun: kagh (K49*) 'rice gruel, congee'

(66) emphatic particle
(2) lagi 'emphatic particle'
(MAL more; yet more; still';
IB 'presently, later on'; TAG 'always'; CEB emphatic particle)

::其

g-j-øg (K952a) 'will probably'
(Shih Ching)
Yang Shu-ta (Tz'u Chuan:161):
adverb marking future tense;
marker of rhetorical questions;
imperative marker

(67) energetic
(3) sikaD 'energetic, active'
(TAG 'energy, force, potency')

::健

k-j-anh (K249g) 'strong'
(Yi Ching)
NOTE: word-base was originally
in tone B in OC as proved by 力
(K139*) 'strength' (Chi Yun)

(68) expose, unveil
(3) bu[ng]kas < -kas2

::揭

kh-j-adh (K313n) 'to lift up one's clothes' (Shih Ching)
expose to heat
ref: cook (with steam), roast, singe

(69) fall into ruin
(3) rebas
(3) tu(m)bas (Bolaang Mogondow 'waste')
::败
b-r-adh (K320f) 'to ruin, ruined'
(Shih Ching)
PERHAPS:
::败
b-j-ladh (K341a) 'worn out'
(Shih Ching), to damage, ruin
(Tso Chuan)
::败
b-j-ladh (K341e) id. 'to ruin'
(Kuo Tse) 'become spoiled, ruined'
NOTE: /ia/ diphthong would be irregular.

(70) father
(B) embaq
(D) sambaq 'respect'
Be: a/ba; (m)b/a(/mba); (m)bapa
::父
b-j-agx (K102a) 'father' (Shih Ching)

(71) fear
ROOT: -ter 'shiver, tremble'
Be: [ma]/[ng]ku; ku/at;
[lk/1/u/a; m/1 /ku/t; m/taku;
(n)t/1/a[ku]; (m/)[ta(ng)]ku/t;
m/ki; [ngki/a
::振
t-j-ianh (K455p) 'shake
(intransitive)', (Shih Ching):
'scared' (Kuo Tse)
t-j-iân (K455s) 'shake, fear'
(Shih Ching)

(72) feel (for), touch
(2) zemak 'feel, grope'
Be: glam[aql]
::模
mak (K802*) 'to feel with the
hand' (San Kuo Chih); 'to feel for
or after, to grope' (Mathews)

(73) fibre, beard
(D) rambu 'fiber, fringe'
(NgD. 'thread');
(2) kabu 'the kapok tree'
Be: (qa/)[m]b[u]1 ut
ref: fibre, bear, curly (hair)
ref: hair, topknot
ref: hair (body), beard
ref: hair (body), eyebrow
ref: hair (body), feather
::紡
b-j-ug (K136*) 'a kind of cloth;
coarse thread' (Shuo Wen)
(74) flame
ref: to burn
ref: flame
(2) kilab 'flash, sparkle'
[CEB 'glitter, flash intermittently'; MAL 'flashing, flaming up'; MGG 'radiance of lightning']
::炎 ramx/h (l-j-) (K617*) 'sparks' (Shuo Wen)
::發 ramx/h (l-j-) (K617c) 'to flame up' (Shih Ching), 'flames' (Chi Yun)
::閃 hr-j-amx (?) (NOT in GSR) 'to appear intermittently' (Li Chü)
ref: to burn

(75) flat, flat surface, sole, foot, thigh
(2) Da(m)paD 'flat, level'
Root -paD 'flat, level'
Be: [d]apal
::坪 phanx (K181*) 'flat' (Kuang Yün)
::板 p-r-anx (K262j) 'plank, board, plaque' (Shih Ching)
::版 p-r-anx (K262k) id.
::銭 p-r-anx (K262l) id.
ref: level, flat
ref: palm of the hand, sole of the foot

flower
ref: bare

(76) foot, leg
(D) kaki 'foot'
Be: **[ko][koq; [qo][qoq
::躑 k-j-øg (K952*) 'footsteps' (Chi Yün)
::基 g-j-øg id. (Kuang Yün)
::基 k-j-øg (K952g) 'base, foundation' (Shih Ching)

(77) force, to use force
(D) gagaq
(TB, NgD: 'to oppose, resist')
(D) sanggag 'to defend oneself'
::戶 gagx (K53a) 'to stop, check' (Tso Chuan)
::拒 g-j-agx (K95i) 'to oppose, ward off' (Lun Yü)

(78) fruit, testicle, oyster
(D) tiRem 'oyster'
Be: (n)tiRem; tiRem
::蠔 gɔm (K643*) 'oyster' (Erh Ya)
(79) gather, group
ROOT: -bun 'heap, pile, cover; covered with earth; collect, assemble'
Be: [t][l][m]pun; [t]mbu[n]

(80) gather(ed), crowd
(2) pudun 'gather; wind thread, etc. into a ball' (MAR 'gather into one place, lump together'; KIP 'gather'; NIAS 'collection, gathering')
Be: pu[ŋ]ung

(81) glutinous, sticky
(3) puluC 'a plant: *Urena lobata' (MAL 'generic term for various mucilaginous plants'; KAY 'rubber tree'; MGG 'a mucilaginous plant: *Urena lobata')
Be: [da][m][µ][t]; mбу[t]

gnaw, chew, bite, grind teeth
ref: bit, gnaw, cut off

go
ref: move back and forth, swing (arms), wag (tail), walk, run, go, swim, fly, row, paddle, fan

grandfather
ref: father

grasp
ref: seize, hold, close (fist), handful, bite

grass
ref: rice (plant)
ref: thatch (-grass), grass
(83) **grief**

(3) pungaw 'lonely, forlorn'
Perhaps also: (D) lingaw 'quiet'
ref: impetuous

:: 傷
ngagw (K1130*) 'grief, worry'
(Chi Yun)

(84) **gums**

(1) gusi(?) 'gums'
(D) gus[i]

:: 鰓
ság (K973*) 'the gills of a fish'
(Wen Hsuan, Chin dynasty); 'jaw-
bone of a fish' (Kuang Yü)
ság (K973*) 'the lower jaw' (Shao
Ming Tai Tzu Chi, Liang dynasty;
Kuang Yü)

**hack**
ref: cut, chop

(85) **handle, stick, stem**

(D) [t] angkay 'handle, stalk'
Be: [ts]a(n)gka; [tsa]nga;

:: 襁
k-r-id (K599*) 'stalks of corn,
hemp, etc.' (Shih Chi)
NOTE: unexplained loss of aspiration.

ref: thigh

(86) **harm, hurt**

(B) suRa[Ct] 'wound'

:: 害
gat (K313d) 'to injure' (Shu
Ching loan used for K314a)
gadh (K314a) 'to hurt; be hurt
(Shih Ching)

(87) **hard, heart (hard part), grain, stone**

(D) makas
Be: [ma]/ka; [ma]/ka/ts;
ref: oppose

:: 固
kagh (K49f) 'strong, firm'
(Shu Ching)

(2) te(n)ger 'unyielding,
obstinate, inflexible, stubborn'

:: 係
gônx (K416d) 'disobedient,
refractory' (Kuo Yü)

(88) **heap**

(D) kimpal 'heap, pile'

:: 堆
phan (K195) 'mound' (Meng Tzu,
Kuang Ya, Chi Yun)

**heel**
ref: basis, trunk (of tree, body), buttocks, heel
(89) high, tall
ROOT: -kaw
Be: s[u]jang
:: 高
kagw (K1129a) 'high' (Shih Ching); k-j-agw (K1138i) 'high, lift the head' (Chuang Tzu)

hold, take hold of
ref: seize, hold, close (fist), handful, bite

(90) hold (in hand, mouth), squeeze, handful, fist, mouthful, control
(2) gem 'hold in the fist'
(MAR 'hold in the mouth')
ROOT: -gem 'grasp in the fist'
Be: kam/kam; kam/gam; kəm/kəm;
gəm/gəm; k[u]m/k[u]m
(D) kemkem 'enclose, contain'
ROOT: -kem 'enclose, cover: grasp'
:: 含
gəm (K6511) 'hold in the mouth' (Tso Chuan)
gəm 'envelop, contain' (Shih Ching)
khəm 'to contain' (Fang Yen: Yang and Yueh dialects); 'niche for the effigy of a god' (T'ang text only)

(91) hold firmly
(3) pegeng 'hold firmly, concentrate' (SAS 'stick to, tenacious')
:: 恆
gəng (K881d) 'constant' (Shih Ching); 'tenacious' (Lun Yü)

hollow
ref: pierced, hollow, hole, cave

(92) hop on one leg
(3) kingking 'hop on one leg'
:: 驚
kh-j-ing/khingh (K831p) 'hop on one leg' (Tso Chüan)

horse-hoof imprint
ref: palm of the hand, sole of the foot

(93) house, hut
(D) Rumaq
Be: b[a]rong
:: 禽
m-j-agx (K103i) 'big house' (Kuan Tzu)

howl, bellow
ref: cry (of animals), bark, thunder

hurried
ref: active
(94) hurry
(D) [rl]kat
(F1 'to jump, run')
::駆
kat (K313*) 'to go fast, of a horse' (Shuo Wen, Kuang Yün, Chi Yün)
::駒
k-j-at (K313*,313l) 'running'
::退
kh-j-lat (K313*) 'fast, of a carriage' (Chi Yün)
NOTE: unexplained aspiration and diphthong
::鹡
kh-j-lat (K313*) 'fast' (Chi Yün)
NOTE: unexplained aspiration and diphthong

(95) husk, chaff
qempa 'husks'
Be: xə(m)[pə]
::糜
ph-j-ag (K101*) 'husks, chaff of wheat' (Shuo Wen, Chi Yun)
NOTE: the character is written with the GSR 102 phonetic in Shuo Wen.
::補
phag (K102*) 'large bean'

ref: skin

(96) impetuous
(1) lamlam
(OJ 'carried away by desire (longing): being a prey to one's emotions; feeling uncertain; acting according to one's own desire/whim')
ref: bland

injure, to
ref: harm, hurt

insipid
ref: bland

(97) join, unite, complete, pair, even (-numbered)
(D) Ra(n)gkit 'tie together, raft'
ROOT: -kit 'join along the length'
Be: [r]a(n)kap, [r]a(n)ggap, [za]kəp,
[la]ngkəp, gəp, g/l/əp, g/½/əp
::結
kit (K393p) 'tie, knot'
(Shih Ching)
(98) joint
(D) kukut 'joint'
ROOT: -kut 'hunched over, bent'
:: 骨
kwat (K486a) 'bone' (Tso Chuan)
:: 屈
khwat (K496k) 'bent' (Yi Ching)

jump, to
ref: hurry

(99) knife hilt, bolo hilt
sangga 'knife hilt, bolo hilt'
ILK: 'collar or flange'
supporting the base of a knife or bolo and used to prevent it from entering deeper in the blade
[ID: sangga 'to block, ward off, parry, deflect']
:: 胡
gag (K49a) 'dewlap of oxen' (Shih); 'part of a dagger-axe' (Chou Li; Chi Yun says: 'where the blade enters the shaft')

(100) knot, tie
(D) Rapus 'to tie'
Be: [iʃ][a](N)qop[r,l][o]
ref: bind
ref: bind, tie, knot, squeeze
ref: hair, topknot
:: 彩
p-j-ugh (K136*) 'to tie a knot; a knot [in one's hair]' (Shuo Wen)

(101) labial circle
(3) simuj 'labial circle'
:: 吻
m-j-ønx (K503o) 'corner of the lips' (Chou Li)

(102) ladder, staircase, steps
(D) tangga 'ladder, staircase, steps'
:: 樓
g-j-ag (K803*) 'stairs' (Chi Yun)

(103) laugh
ROOT: -kak 'cackle, laugh loudly'
Be: (n)tlaw[a]; tla/tlaw[a]; tla/tla; (ka/)tla
:: 嘘
kak (K766*) 'the call of a pheasant' (Chi Yun)
g-j-ak (K803*) 'to laugh loudly' (Han Shu)
NOTE: intransitive voicing of initial
leafless
ref: bare

leak
ref: drip, leak

(104) level, flat
(2) pa(n)tar 'level, flat'
ref: flat, flat surface, sole, thigh

(105) lick, tongue
(D) dilap 'to lick'
(doublet of dilat)

(D) dilat 'to lick'
ref: to eat

lift
ref: climb, ascend, mount, ride, lift, above/up

lift, raise
ref: throw

(106) light, shine, moon, sun, dawn, morning
(D) singaR 'light'
(F1 'sun', SA'A 'day'; TO, FU 'dawn')

Be: ts[l]nga[a]l'y

(107) lightning
(B) [C'T]ek[a]l'p 'deafening noise'

(2) dilep 'flash, sparkle, shine'
Be: ūl[dzl]ap; m/ūl[dzl]ap;
m/ūl[a]dzl]ap; b/ūl[a]dzl]ap

:: 畿 thanx (K149d) 'level' (Yi Ch'ing)

:: 略 thap (hl-) (K633*) 'to sip, suck'

:: 略 thap (hl-) (K633*) 'to eat, of dogs' (Chi Yün)

:: 畿 thap (hl-) (K678f) 'idem'

:: 舌 d-([1]) (K288a) 'the tongue'

:: 畿 hng-j-ar (K2*) 'sunlight' (Ch'in Lu Shih Lung Chi)

:: 畿 kap/khap (K642v) 'sound of knocking or beating' (Ch'u Tz'u) 'thunder-like sound of drumming'

:: 畿 r̩p (l-[1]) (K690f) 'gleaming'

(Shih Ch'ing)
lonely
ref: grief

look, look at
ref: see

loosen, undo, untie
ref: to expose

loosening of the outer skin
ref: skin

lose balance
ref: balance

(108) mat
(d) kazang
(D) [r]anzang 'plaitwork'
(JA, MAL 'bed')
ref: spread (out), fly, mat

dz-rj-ang (K727r) 'couch, bed'
(Shih Ching)

(109) material, raw
(D) bakal
(HO trunk, body')

kanh (K140d) 'stem' (Tso Chuan);
'body, substance' (Yi Ching)
'trunk of a tree or of the body'
(Mathews)

ref: brave
ref: difficulty
ref: oppose
ref: resist
ref: support

milky products, fermented
ref: drink, distilled

mixed
ref: confusion

moon
ref: bright
(110) mother, aunt, female
(B) Inang 'mother'
Be: [t/ʃ]na(ŋa)

娘
n-rj-ang (K730*) 'mother'

娘
n-rj-ang (K735*) id. (Yueh Fu Shih Chi, Tai Ping Kuang Chi)

ref: female

(111) mould(y), decay(ed), (worm-eaten), dust
(D) Lapuk 'mould, moulder, become mouldy'
Be: [q/ʃ]buk(ŋa)/buk, [q/ʃ]bok(ŋa)/bob

麪
puk (K1211*) 'white mould on wine or vinegar' (Northern Wei: Chi Min Yao Shu)
NOTE: pronunciation after Chi Yun. Other sources read phuk.

mount
ref: climb, ascend, mount, ride, lift, above/up

(112) move back and forth, swing (arms), wag (tail), walk, run, go, swim, fly, row, paddle, fan
(2) lampaq 'walk, go'
Doublet of (2) lampang 'go'
Doublet of (3) lamba?, with reflexes in Embaloh and Mandar

(2) lampang 'go'
Doublet of lampaq 'go'
Be: [q]a(m)bay; [k]a(m)bay;
[k]e[ŋ]i/apay; [k]a[ŋ]i/apay;
[k]i/pay; [k]i/pay(/pay)

歩
bagh (K73a) 'walk' (Tso Chuan)
NOTE: intransitive voicing and secondary Tone C

放
p-j-angh (K7401) [cause to go=] 'banish' (Shu Ching); 'expel'
(Li Chi; 'loosen, let go'
(Meng Tzu)
NOTE: unexplained unaspirated initial; REF: Schuessler (1985) for causative function of secondary Tone C

kh-j-at/kh-j-lat (K313m) 'go away' (Lü Shih Ch'u Ch'iü)
kh-j-lat (K313p) loan for (K313m) 'go away' (Shih Ching)
NOTE: unexplained initial aspirate.

ref: open, gape/stand open, force open/apart, oppose, separate, bay, river
ref: wide, broad (surface), plain, space

mud, earth
ref: earth, field, mud
(113) narrow, close, bag, basket
(3) kupt 'close, shut'
ROOT: -pit 'press, squeeze
together, narrow'
Be: [tsu]m-pit

noise
ref: lightning

(114) open, gape/stand open, force open/apart, oppose, separate, bay, river
(3) qangab 'open, of the mouth'
:: 嚥
ng-j-amx/ng-rj-amx (K613*) 'to come with open mouth to the
surface of the water, of fish' (Huat Nan Tzu, Shuo Wen)
kh-j-amh (K624a) 'to yawn' (Li Chi)
NOTE: Hakka khEm3 'to cough'
reflects Tone B.
ph-j-ang (K740q) 'to oppose'
(Tso Chuan); 'obstacle' (Han Yu T'ang dynasty)

(D) ungbk 'to open'
(intransitive); root -kab 'open,
uncover' (HLG 'open one's mouth')
(D) empang 'obstruction'
(SM 'wall')

Be: [(m)b]angaq; [b]/[m]/ang[aq];
[(m)ba]ngaq/[n]gaq; [(m)b]akaq;
[ba]gaq/[n]gaq; [ba]ngaq/[n]gaq;
[ba]kang/[-kang]
ref: side
ref: wide, broad (surface), plain, space

(115) open expanse of land or water
(3) bawang
(LgA 'lake'; BUSANG 'swamp,
pond, lake'; BM 'spaciousness of
view') Root: -wang 'wide open
space'
:: 潽
:: 潆

gwang (K707e) 'lake, pool'
(Tso Chuan), 'great, vast'
(Hsun Tzu), 'expanse of water'
(Mathews)
gwang (K708f) 'stagnant water'
(Ta Tai Li Chi)

ref: land
ref: water
ref: cleared area

(116) oppose
(D) bangkal 'to oppose'
(D) sangkal 'to deny,
contradict'
(117) pain
(D) ngilu 'rheumatic pain, shooting pain' (TB 'toothache'; JA 'headache')

(118) pair, twin, two
(3) banDung 'pair of boats joined by a connecting platform' (Ml. 'twin, in duplicate'; OJ 'together, at the same time')
Be: [pa]ts[a]ng

(119) palm/sole, slap, hand, five
ROOT: -pik 'tap, light slap'
(CEB: hagpik 'slap someone fairly hard on the shoulder')
Be: [ta](m)pag, [ta](m)pa/p[ag], p/½/ag/½/agl, mp/½/a/mp/½/a[ag], [l]p/r/a/p/r/agl, [ta](m)pak, [ta]pa/pak

(120) palm of the hand, sole of the foot
(3) Da(m)pa

ref: brave
ref: difficulty
ref: material, raw
ref: open, gape/stand open, force open/apart, oppose, separate, bay, river
ref: to resist
ref: support
ref: wide, broad (surface), plain, space

kan (K139a) 'shield' (Shih Ching) 'knock against, violate' (Tso Chuan)
NOTE: lack of aspiration is unexplained

rug (l-j-) (K125j) 'sickness, suffering' (Shih Ching)
NOTE: word has alternate reading with tone B

d-rj-ung (K118a) 'double' (Shih Ching); 'twice' (Tso Chuan)

bik (K853j) 'beat the breast' (Shih Ching)
NOTE: intransitive voicing

phag (K102*) 'imprint of horse's hoof' (Kuang Yün)
p-j-ag (K101f) 'breadth of four fingers' (Li Chü)
(121) **pass, past, done (past tense)**

(D) lalu ‘to pass, pass by’

(HO ‘to pass, pass over, surpass’)

Be: ︩l|k[uiu]wa

path
ref: road

peck, peck up
ref: beat, drive in, pound, strike

**pigeon**
ref: dove, pigeon 1
ref: dove, pigeon 2

(122) **pierced, hollow, hole cave**

(D) le(ng)kung ‘concave’

(MAL ‘hollow, of the eyes’)

Doublet: li(ng)kung

ROOT: -kung ‘bend, curve’

Be: ︩l[p[a]̇l]ong, b[p[a]̇l]ong

khung (K1172h) ‘hollow, empty’
(Shih Ching)

(123) **plant**

(D) lenga (TAG, TB, MAL, NgD: ‘sesame’; JA ‘oil’)

ngag (K58*) ‘Perilla ocimoides (an oleaginous plant)’

*NOTE: Kuo Pu commentary on Fan Yen: word belongs to Chiangtung dialect.*

(124) **pleasure**

(D) dula

rag (l-j-) (K82*) ‘pleased’
(Chi Yur);

ragh (l-j-) ‘pleased’ (Shu Ching)

(125) **pluck**

(D) puTik ‘to pluck (pick, gather, as fruit/flowers)’;

(1) peCik ‘snap, as fingers or slingshot’ (MAL ‘plucking at, picking (flowers), ...’;

BAL ‘pick fruit or flower ...’)

ROOT: -Cik ‘spring up, flicking motion’

ref: pierce, pick, poke (with stick), embroider, sew
press
ref: squeeze

(126) pulverize
(D) buDbuD 'pulverize'
:: 均
b-j-onx (K471*) 'dust' (Shuo Wen)

(3) buj buj 'pour, sprinkle'
(revision of (D) above)
:: 粉
p-j-onx (K471d) 'flour' (Li Chi)
NOTE: unexplained voiceless initial

quiet
ref: grieve

(127) radicle, rootlet
(D) tunas
:: 茎
n-j-agh (K94r) 'interlaced roots' (Yi Li)
NOTE: Chi Yun reads n-j-agh

(128) rain, drizzle (fine rain), mist, snow, clouds, dusk, dark, sky
(D) Ra(m)bun 'atmospheric turbulence' (MAL 'sleet')
(doublet e(m)bun)
:: 雾
b-j-on (K471j) 'mixed (sleet and snow)' (Shih Ching)

(D) e(m)bun 'atmospheric
(TB 'cloud', JA 'cloud, dew',
MAL 'dew, mist')
(doublet Ra(m)bun)
Be: γ(α)(m)bon; [γ(α)m]pon
:: 氛
b-j-on (K471n) 'clody vapours' (Tso Chuan)
'dew, frost' (Li Chi)

raise, to
ref: climb, ascend, mount, ride, lift, above/up

(129) red, dark-colored, reddened, shame(d)
(D) malu 'ashamed'
Be: iyə, (q)/l/iyan, (q)/m/iyan, iyə(?), m(a)/iyan(?),
[i]yan(?)/i, m(al)iyan(?)/i
:: 婪
thug (hl-) (K125v) 'cause to be ashamed =] to slight, despise'
(Tso Chuan)

(130) red, reddish
(2) siRa (dsj. of siRaq, dbl. of
(D) iRaq, q.v.):
:: 革
g-r-ag (K33k) 'red clouds' (Ch'u Tzu);
ref. TAG kulay:
:: 驄
id. (K33*) 'red morning sun'
(Kuang Yün)
RAq 'red'

(131) regulate
(D) qatur 'regulate'
:id. (K331) 'horse of mixed red and white color' *(Shu Ching)*
gagx (K53*) 'red markings' *(Chi Yün). NOTE: the principal meaning of this character is 'clear' *(Shuo Wen)* or 'varicolored' *(Fang Yen).*

(132) resist, to
(D) galgal (JA 'to thwart')
:: 扲
:: 干 (K139qr) 'to ward off' *(Li Chi); 'protect, guard' *(Shu Ching)*

ref: brave
ref: difficulty
ref: material, raw
ref: to oppose

resist
ref: father

restless
ref: active

(133) rice (plant)
(D) zelay 'grass species'
: 稀
(MAL 'barley'; NgD 'name of a grain-bearing plant')
:: 菏 did (l-) (K591g) 'a kind of panic grass' *(Chuang Tzu)*
id (l-) (K551k) id.

ref: grass

(134) rice, sugarcane, bamboo, tree
(D) imay 'rice'
:: 米 midx (K598a) 'rice' *(Tso Chūan)*
Be: [q/]imay, [c]umay

NOTE: Tone B unexplained.

ride
ref: climb, ascend, mount, ride, lift, above/up

rip, to
ref: to sever
(135) road
(D) zalan 'path'

::延 ran (1-j-) (K203a) 'path leading into a grave' (Chuang Tzu)
::延 id. (K203e) 'make bricks' (Wen Hsuan, Hou Han Shu, Chi Yun)
::延 id. (K203a) 'to extend' (Shih Ching), 'to travel far' (Shuo Wen)

root
ref: basis, trunk (of tree, body), buttocks, heel

rootlet
ref: radicle, rootlet

rotten
ref: spoiled

ruin, to
ref: to fall into ruin

(136) sad, stunned, quiet
(B) dungu 'stupid'
(3) angu angu 'silly, senile'
(1) langu 'vertigo', ma-langu 'dizzy, drunk' (SAN 'mentally dull')
Be: لاعب ng-j-ug (K124g) 'ignorant, stupid' (Shih Ching)

ref: stupid

(137) salt
(D) siraq
Be: (qa/)[k,][1][r][a][h]; [l][1][a][h]
::胲 lagy (r-) (K71a) 'salt, salty' (Yi Ching, Tso Chuan)

(138) satiate
(2) puqas 'to abate, of strong feelings' (IB, MAL, MGG 'satiated')

::饋 ?-j-agh (K1242h) 'to satiate' (Shih Ching)

savory
ref: to taste
scab
ref: scratch, scrape, dig, strike (line)

scar
ref: scratch, scrape, dig, strike (line)

(139) scratch, scrape, dig, claw, nail
(3) kutkut 'dig'
Be: {ng}kus(/kus); kuts/kuts;
(ng)kut(/kut);
(N)qu[t,ts]/[qu[t,ts]]; kọs(/kọs);
(kus)/qos: {ng}kọ[t,ts]/[kọ[t,ts]]:
kits(/kits); [kas]/ka[s];
kats(/kats)

(140) scratch, scrape, dig, strike (line)
(2) biras (dsj. birat) 'scar'
(2) kiras 'scar'
Be: {ng}g[a]ru[t,ts]; g[a]rits;
ka[rits]; g[a]ru[d]; k[a]rud

(141) screen
(B) [Ct]ebing 'screen'

(142) see
(D) qi(N)Tay 'to look, look at'
Be: [kl][n]tra, [kl][tra]/l,
[kl][tra/n, [hl][n]tra/l

ref: look, look at

(143) seize, hold, close (mouth), bite
(D) tangkap 'take hold of, grasp, contain'
(Doublet: tanggap)
Be: [t]aNgap; [t]a(N)Gap

khap (K642t) 'a wine container'
(Tso Chuan)
separate
ref: split, separate

(144) sever, rip, to /cut through, to
ROOT: -tas
:: 制
 t-j-adh (K335a) 'to cut out (clothes)' (Shih Ching),
 t-j-adh (K335b) 'to cut out, to cut out (parts of a victim for
 sacrifice)' Li Chi;
 t-j-adh (K335b) 'to cut out, to fashion (a garment)' (Tso Chuan)

(145) sew, plait, weave
(2) anêm 'plait, braid'
BIL, SML 'weave a mat';
MAL 'interweaving';
BGS, ROTI 'plait, braid, twine,'
weave (baskets, but not cloth)
Be: (m)plaql[s];
(m)pla/ql[aqls];
pl/m/[aqls]
:: 絲
 n-j-ûm/n-ûm (K667l) 'to weave' (Tso Chuan)

(146) shake, clean up by shaking
(D) paspas 'shake, clean up by
shaking'
:: 澪
 phadh (K521d) 'to shake in the
wind (as a pennon)' (Shih Ching);
'to wash floss by shaking it in
water' (Chi Yun); 'to undulate, as
a fish swimming in water' (ibid.).
NOTE: Also read as phj-iaadh,
with irregular /ia/ diphthong.
if: 碩 'ruined'

shake
ref: fear

(147) shell (of tortoise)
(D) karak 'shell' (JA, MAL:
'metal cover')
Be: (jk)araq
:: 樓
 lagx (r-) (K71a) 'large shield'
(Li Chi)

shield
ref: to oppose
(148) shine, glitter, bright
(D) gilang 'to glitter' (TO, FU 'to shine')
Be: NGk1̚g; Nqi1̚g
:: 陽 rang (l-j-) (K720e) 'light, brightness; the sun' (Shīh Chīng)
:: 明 id. (K720h) 'sunshine, bright' (Shū Chīng)
shiver
ref: fear

(149) shoulder-blade
(D) balikat
:: 散 khat (K1166p) 'shoulder-blade'
(Kuang Yūn, Chi Yūn)
NOTE: unexplained initial aspirate.
shout
ref: cry

(150) shy away, to (of animals)
(3) dura
(MAL 'anxiety, disquiet')
:: 慮 l-j-agh (r-j-) (K69r) 'be anxious about' (Lūn Yū)

(151) sibling (older), brother (older)
(D) kaka
(FI: tua-ka 'older brother';
SM: tua-a 'older sibling of the other sex.'
NOTE: tua = 'old' in FI, SM.
Be: /kaː; k/l/a(k/l/a);
(n)gka/(ng)ka; ma/ŋ/ka/ka
:: 姑 kag (K49g) 'father's sister'
(Shīh Chīng, cf. the SM meaning.)
NOTE: Modern Chinese 哥 kar (K1p) 'elder brother' (Po Chū-yī, ca. 820 AD) seems to be late loan from another dialect (noted by Benedict 1976:66)
sickness
ref: pain

(152) side
(3) bangbang 'embankment' (KAY 'steep riverbank, steep hillside')
ref: side, shore, bank
ref: wide, broad (surface), plain, space
:: 防 b-j-ang (K740z) 'embankment, dyke' (Shīh Chīng)
:: 防 b-j-ang (K740x) 'dyke' (Li Chī)
sing, to
ref: cry
sip, suck, drink
ref: suck

(153) skin
(3) lei(n)gkang 'loosening of the outer skin'
ref: husk of grain

:: 糠 khang (K746no) 'husk of grain'
   (Chuang Tzu)

slap, to
ref: to clap
ref: palm/sole, slap, hand, five

(154) slope
(B) la[N]Day 'gradual slope'
(KB 'slope at the foot of a mountain')

:: 陂 d-raj-id (K590*) 'slope on the side of a tumulus or mound' (Chin dialect, Kuang Yün after Tzu Tung)

(155) snake-1
(D) ulaR
Be: (q/)(n)šulaR]

:: 蛇 d-ja-r (l-j-) (K41) 'snake'
   (Shih Ching)
   NOTE: the character is also read as dar (l-) 'the looper caterpillar' (Chi Yün), rar (l-j-) venomous snake' (Kuan Chung dialect according to Chi Yün)
   :: 它 thar (hl-) (K4a) 'snake' (Shuo Wen) 'danger' [caused by a snake]? primary meaning of graph acc. to K)

(156) snake-2
(D) sawa 'giant snake'

:: 蛉 gw-r-ag (K44*) 'kind of large snake' (Tzu Lin, Kuang Yün)

(2) anipa 'large snake'
Be: (u)ngata

:: 巴 p-r-ag (K39a) 'kind of large snake that eats elephants and ejects the bones after three years.' (Shan Hai Ching, Wen Hsuan; the seal is drawing of a snake)
(157) snap, break off
(2) lelp 'snap, break off
(twigs, etc.)' (MGG 'break
with the fingers')

---

sole of the foot
ref: palm of the hand, sole of the foot

---

(158) sound, resound, thunder, drum
(3) rang 'harsh resonant sound'
(NgD 'clashing, clacking (as
when a cup breaks or two cups
strike together)')
Be: [gl̖n]dong
ref: cry (of animals), bark, thunder

---

(159) sound, ringing sound
(1) kingking 'ringing sound'
(ISG: 'a bell')
Doublet: (2) king 'ringing sound.'
ROOT: -king 'clear ringing sound.'

---

sovereign
ref: breathe
ref: spirit

---

(160) space
(D) Ruqang 'space, open space,
space between' [Zwischenraum]
Be: (q/)a]wang
(B) raw[a]k 'open space'
(early Chou inscription)
ref: wide

---

sparks, sparkle
ref: flame

---

(161) spin
(D) antiq

---

th-j-ág (K961) 'a certain
amount of spun hemp' (Kuang
Yün)
(162) split, to
ROOT: -Tak 'sound of splitting, cracking, knocking'
Be: (1) kr[il][l]ak
ref: to burst open
ref: to break, to crack, to split
ref: to hack

(163) split, separate
(3) pisik 'split, cleave'
Be: (m)b[a]l[aq]/(b[a]l[aq]
ref: break
ref: snap, break off

(164) spoiled
(2) bang(e)qes 'unpleasant smell'
[BON 'to have spoiled, as cooked rice, vegetables or cooked meat';
MGG 'beginning to smell badly, mawkish, foul (smell)'
ref: rotten

(165) spread (out)
(B) b(n)[Ct]laD
[ILK 'spread open, esp. tobacco leaves']
Be: (m)b[a]j

(166) sprout
(D) sulliq 'sucker' [D. Wurzel-
schßssling: a new shoot growing from the roots of a plant]

(3) seli 'young shoot'
(doublet: semi)
cf. (D) sliq 'sucker'
(167) squeeze
(D) tiNDes 'to press, squeeze'
:: 紧
d-rj-idh (K413*) 'tightly pressed together' (Han, Yang Hsiüng)

(168) squirt
ROOT: -cut 'squirt, squeeze out, slip out'
:: 出
th-j-āt (K496a) 'come out, go out; bring out' (Shih Ching)
:: 點
th-rj-ōt (K496f) 'expel' (Tso Chuan)

ref: spray
ref: squeeze

stairs
ref: ladder, staircase, steps

stalk
ref: handle, stick, stem
ref: thigh

(169) stake, pole, post
(2) te(n)dek/tenzeg 'upright, erect'
Be: [q][l]a[qa]; [q][l][a]q]
:: 植
d-rj-ōk (K919e) 'hold upright' (Shu Ching)
:: 值
d-rj-ōk/d-rj-ōgh (K919h) 'hold upright' (Shih Ching)

(170) stand, person (self)
(D) [t]uquD 'stand firm'
Be: *(q/)(n) ū[u]y[i]
:: 稳
?wōnx (K449*) 'stable, firm' (Shih Shuo Hsin Yü)

(171) stare, fix the eyes on
(3) mang mang
tengteng 'stare, look fixedly'
(doublet of (1) Neng,
:: 望
m-j-ang/h (K742m) 'look from afar, look towards' (Shi Jina)
:: 堅
m-j-ang/h (K743d) 'to face, regard, look to' (oracle bones)
:: 睛
d-rj-āng (K883*) 'look fixedly' (Kuang Yün)

NOTE: intransitive voicing.

steps
ref: ladder, staircase, steps
stiff, rigid; cramps
ref: stretch(ed), tight

(172) strangle
(B) cekig 'constriction around the neck' (MAL 'seizing the neck, throttling'
Doublet (B) ce(ng)kik
'constriction in the throat'
(IB 'attempt to cough out, choke')

・劉
・頸
・磐
・經

kingx (K831e) 'cut the throat'
(Tso Chüan)

k-j-ingz (K831n) 'front part of neck, throat' (Tso Chüan)

khing (K832e) 'cough, clear the throat'

king (K831c) 'strangle' (Lün Yü)

(173) stretch(ed), tight
Root: -kang 'stiff, rigid; cramps' (esp. (2) kangkang
'... rigor mortis'; MAL jengkang
'stark or stiff in death')
Be: (kə)(ng) krəŋ

・殲
・殲僵
・剛
・鋼

k-j-angh (K710e) 'rigor mortis'
(Kuang Yün) K710a gives diff.
meanings.

Mand. chiang1 'stiff in death;
numbed, stiff; dead' (Mathews)
reflect the Tone A prototype.

k-j-ang.

Perhaps also (K697b) kang
'hard, strong (=rigid)' (Shih Ching)
and (K697h) id. 'steel'
(Lieh Tzu)

ng-j-Ögh (K956*) 'aspect [of one
who is ] laughing ' (Chi Yün)

(174) strike against
pangka?

・揷

kh-j-ag (K78*) 'to strike'
(Kuang Yün)

(175) striped
(D) belang
Root -lang 'striped'
ref: color(ed), striped, variegated, mark

・碩

dangh (l-) (K720f) 'veined stone'
(Han text example only)

(176) submerge, bury
(3) leneb 'disappear under water'
ROOT: -nēb 'dive, sink, disappear
under water'
Be: ləb/əb; (q/)lub/lub

・念

hn-j-Ömx (K670f) 'disappear
under water, of frightened fish'
(Li Chi)
(177) suck
ROOT: -sep 'sip, suck'
sup/sup
ref: sip

:: 呛 ts<>p (K679*) 'to suck, lick'
(Han text only)

suffering
ref: pain

sun
ref: bright
ref: light, shine, moon, sun, dawn, morning

sunlight
ref: light, shine, moon, sun, dawn, morning

(178) support
(3) tu[ng]kad 'prop, support; staff'
Root -kad 'prop, support'

:: 柄 kanx (K140j) 'straw of grain'
(Tso Chuan)

:: 柄 kanx (K140*) 'the long, thin part in various utensils (writing brush, steelyard, etc.)' (Yuan Ts'u Hsuan); 'a staff, a handle, a pole' (Mathews)

:: 竿 kanh (K1e) 'shaft of an arrow'
(Chou La)

ref: brave
ref: difficulty
ref: material, raw
ref: to oppose
ref: to resist

tall
ref: high, tall

tame
ref: to agree, to consent

tap
ref: palm/sole, slap, hand, five
(179) **taste**
(2) namnam 'to taste, tasty'
(CHM 'chew, sound of chewing, eat') Root -nam 'savory, tasty'
ref: to chew
:: 咀
n-j-am (K622e) 'to chew'
(Hsun Tzu)

**tasteless**
ref: bland

(180) **that, there**
(2) inaq / ina / inan
'that, there (near listener)'
idi, ati 'there (distant from both)'
Be: na: (q/)na/n
:: 汝
n-j-aga (K94j) 'you [the listener]'
(Shu Ching)
:: 女
n-rj-aga (K94a) 'you' (Shih Ching)
early Chou inscriptions
:: 若
NOTE: n-j-ak (K777a) is a doublet of 汝 in meaning 'you'; it is also used as a demonstrative 'this' (Lun Yu)

(181) **that, they**
(2) idl 'that, there (third person deictic)
(ILK: 'formerly, in times past, at that time, then')
Ref: (3) ati 'there (distant)' below
Be: [i](n)tu
(3) ati 'there (distant)'
(BUSANG 'third person demonstrative')
REF: (2) idl 'that, there' above thread
ref: cloth
:: 篆
d-j-ag (K962a) 'then, now, this'
(Shih Ching)
:: 篳
k-j-ag (K??) 'him, her, it, them'
(Shih Ching)

(182) **thatch (-grass), grass**
(3) sedsed 'kind of grass or rush'
(WBM: 'a common matting sedge')
Be: (a)Nqa(n)tap;
( )Nga(n)tap]
(D) atep 'roof, roof covering'
:: 塸
tsianh (K477a) 'grass, fodder'
(Chuang Tzu); 'straw mat'
(Ch'u Tzu)
:: 塩
thep (K677*) 'roof of a tent'
(Kuang Yun)
NOTE: unexplained initial aspirate.
(183) throw, fling
(B) [Ct]alang 'throw into the air'; (D) balang 'throw with a sling'
Be: (m)b[al]ang

răng(l-j-) (K720) 'lift, raise' (Shu Ching); 'throw into the air =) to winnow' (Shu Ching)

(184) tickle, armpit
(B) [q]irek 'armpit'
Be: k[i]l[i]/k[i]l[i]; k[i]l[i]/k[i]l[i]; ke[l]/ke,l; q[e]/q[e]; q[e]/q[e]

lək (r-) (K928) 'ribs, side' (Shih Ching)

(185) tiger, cat
(D) qarimaw
(TB, NgD 'panther'; MAL 'tiger')
Be: s[a]rimaw

m-r-agw/m-j-agw (K1159c) 'a kind of tiger' (Shih Ching)

tongue
ref: lick

(186) tooth
(D) gigi 'tooth'
Be: [t]aGI/s/Gi

*g-j-ag (K952) 'to bite, gnaw' (Kuang Yün)

tremble
ref: fear

twice
ref: pair, twin, two/pair, two
two
ref: pair, twin, two/pair, two

unsettled
ref: active

urgent
ref: active

(187) vessel, jar, pan, basin
(D) b[u][l] 'jar (earthenware)'
Be: bang[a]; b/ŋ/a/ [ang[a] ]
NOTE: the signfic indicates earthenware pot.

vinegar
ref: drink, distilled

violate
ref: to oppose

violent
ref: brave

(188) vomit
(D) u(n)taq

:: 吐 thagx (K62d) 'to eject from the mouth' (Shih Ching);
   thagh 'to vomit' (Kuang Yün)

walk, go
ref: move back and forth, swing (arms), wag (tail), walk, run, go, swim, fly, row, paddle, fan

(189) wash
(3) biseq 'wet, wash'
Be: [m]b[a](n)tsag, b[a]ts[a]q, b[a](n)tsuk
ref: wet, damp

(190) water
(D) aluR 'waters'
ROOT: -luR 'flow'
Be: q/wah[a]R

:: 水 h-ɾj-ədx (hl-j-) (K576a) 'water'
   (Shih Ching); 'body of water'
   (Kuo Yü)
   Unexplained Tone B.
(191) wattle
(B) sas[ae]jg 'wattle, bamboo plaitwork' (MAL 'wattle, plaitwork of lath'; TAG 'walling of split bamboo')

ref: break, smash, split

weapon for shooting, bow, arrow
ref: arrow, shoot

(192) weed
(D) babaw 'to weed'

:: 稚
b-r-avg (K1170a) 'to weed' (Shih Ching);
:: 繼
b-j-avg/p-j-avg (K1170d)
(Tso Chuan)
(1st Tz'u Yuan, 2nd after Kuang Yün)

(193) wet, damp
basaq

:: 清
s-j-agx (K90f) 'wet with dew' (Kuang Yün); 'abundantly dripping' (Shih Ching)

(194) white, silver
(b) burak 'white'
Be: (m)pirak: (m)bu[r]ak

:: 睛
lak (K0) 'extremely white' (Kuang Yün, Shuo Wen glosses 'white birds');
:: 線
lak (K766*) 'white' (Yu Pian, Chi Yun; Kuang Yün glosses 大貌, probably scribal error for 大白貌 'very white aspect', possibly also: lak (K766s) 'white horse with black mane' (Shih Ching)
:: 马
NOTE: brak (K782a) 'white' (Shih Ching) is apparently derived from *burak through loss of first vowel
(195) wide, too wide
(3) ruqag 'wide, spacious' (KB 'spacious, wide, of an opening')
Be: (q/|lu|q|lay

ref: space

?angx/h (K718j) 'an earthenware jar with a large body and a small opening' (Chuang Tzu)
?angh (K718l) 'full, ample' (Meng Tzu)

(196) wide, broad (surface), plain, space
(D) bangbang 'broad, wide'
Be: (q/|bang|/q/|bang

ref: embankment
ref: obstruction
ref: side
ref: side, shore, bank

wing
ref: to clap

withered
ref: bare

worry
ref: grief

wound
ref: harm, hurt

yawn
ref: to open

yes
ref: to agree, to consent

you
ref: that, there

1 This is essentially a re-arrangement of Sagart 1993 to facilitate comparison with the Austro-Thai reconstructions in Benedict 1975 and the Sino-Tibetan reconstructions in Coblin 1983. Benedict's Austro-Thai semantics are followed as much as possible even when the phonological comparisons are weak.
PAN, etc., reconstructed systems of phonemes. More problematical here are the phonemes T, D, and N (ref. Wolff 1988).

Sagart 1983:54 admits that the shared basic vocabulary items in the 200-word Swadesh word list are minimal (only 17). Using the 100-word Swadesh list and Benedict's semantic reconstructions, the following, at least, seem to be shared:

(16) belly, intestines, mind, soul
(19) bite, gnaw, cut off
(54) dark, fog/mist, gloomy, shade/shady, black, night
(55) dark, night, evening, black, red, purple
(31) burn
(128) rain, drizzle (fine rain), mist, snow, clouds, dusk, dark, sky
(43) come
(59) dog
(65) eat, food
(64) earth, field, mud
(112) move back and forth, swing (arms), wag (tail), walk, run, go, swim, fly
(76) foot, leg
(106) light, shine, moon, sun, dawn, morning
(54) dark, fog/mist, gloomy, shade/shady, black, night
(55) dark, night, evening, black, red, purple
(128) rain, drizzle (fine rain), mist, snow, clouds, dusk, dark, sky
(55) dark, night, evening, black, red, purple
(129) red, dark-colored, reddish, shame(d)
(130) red, reddish
(142) see
(170) stand, person (self)
(106) light, shine, moon, sun, dawn, morning
(112) move back and forth, swing (arms), wag (tail), walk, run, go, swim, fly
(180) that, there 1
(181) that, they
(105) lick, tongue
(185) tooth
(118) pair, twain, two
(112) move back and forth, swing (arms), wag (tail), walk, run, go, swim, fly
(190) water 2
(194) white, silver

If the genetic relationship between PAN and OC is accepted, several problems remain, such as the proper relationship between PAN-OC and Austro-Thai and PAN and Sino-Tibetan.

2 Wolff 1988:138 has proposed an alternate system of consonants for PAN:

<table>
<thead>
<tr>
<th></th>
<th>labial</th>
<th>apical</th>
<th>palatal</th>
<th>velar</th>
<th>postvelar</th>
</tr>
</thead>
<tbody>
<tr>
<td>stop</td>
<td>p</td>
<td>t</td>
<td>c</td>
<td>k</td>
<td>q</td>
</tr>
<tr>
<td>(?spirant)</td>
<td>b</td>
<td>d</td>
<td>j</td>
<td>g</td>
<td>y</td>
</tr>
<tr>
<td>nasal</td>
<td>m</td>
<td>n</td>
<td>n̥</td>
<td>ng</td>
<td></td>
</tr>
<tr>
<td>lateral</td>
<td>l</td>
<td>l̥</td>
<td>s̥</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sibilant</td>
<td>w</td>
<td>s̥</td>
<td>y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1
Blust 1985:4 has admitted that there are reflexes that argue for the mid-vowels e' and o, but "consistent criteria for the reconstruction ... remain to be established." The diphthongs usually behave as VC sequences word internally (Blust 1990b:236).

4 Dempwolff (quoted in Dyen 1971:22-23) actually used the following consonant phonemes in his reconstructions:

**DEMPWOLFF'S CONSONANTS**

<table>
<thead>
<tr>
<th>labial</th>
<th>alveolar</th>
<th>retroflex</th>
<th>palatal</th>
<th>velar</th>
<th>laryngeal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p</td>
<td>t</td>
<td>t'</td>
<td>k'</td>
<td>k</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td>d'</td>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>Fricatives</td>
<td>s</td>
<td>s</td>
<td>y'</td>
<td>η</td>
<td>η</td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>n'</td>
<td>η</td>
<td>η</td>
</tr>
<tr>
<td>Liquids</td>
<td>l</td>
<td>r</td>
<td>j</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(The symbols t', d', and n' represent frontal palatal stops and k', g', and η' dorsal palatal stops.

Not only is the system of phonemes reconstructed by Dempwolff (1938) radically different from that of Blust and Wolff, but the reconstructions are not readily assigned to any specific level, such as PAN, PMP, etc. (This is also a problem with Blust 1970 [Blust 1980:10-11].) Dempwolff also did not include the Formosan languages in his reconstruction (Blust 1990b:272).

5 LTBA is deeply indebted to Professor Shiro Yabu of Osaka Foreign Languages University for taking precious time out of his visit to the STEDT project to insert the hundreds of Chinese characters in this article by hand.

6 The character 亀, is glossed 'endure; cruel' (Shih Ching) in GSR 456c, reconstructed as OC *ŋiŋ. The character given as GSR 516a is different ; it is glossed 'enraged boar' (Shuo Wen), and reconstructed as OC *ŋiŋ evidently, though it appears in no text. [Ed.]

7 The character given in GSR 651n' is 項, not 項.

8 Through a numbering error of the author, there is no # (82). [Ed.]

9 This character is glossed 'beat; fustigate' in GSR 976b'. [Ed.]
REFERENCES

(This bibliography is not an attempt to reproduce that of Sagart 1993, but only of those publications mentioned here.)


