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Source: *Oceanic Linguistics*, Jun., 1997, Vol. 36, No. 1 (Jun., 1997), pp. 102-134

Published by: University of Hawai'i Press

Stable URL: https://www.jstor.org/stable/3623072

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RECONSTRUCTIONS IN KALINGA-ITNEG[1]

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Itneg and Kalinga form a subgroup of the Central Cordilleran language family of northern Luzon, Philippines. Lexical, semantic, and phonological innovations in the dialects of Itneg and Kalinga are examined to reconstruct the internal relationships of this language group. Itneg contains two identifiable dialects, Binongan (eastern) and Inlaod (western). Kalinga dialects are grouped into Masadiit (in Abra), Northern Kalinga, and South-Central Kalinga. These relationships provide clues to the earlier population movements and culture contacts of the Proto-Kalinga-Itneg-speaking peoples.

1. **INTRODUCTION.** Kalinga and Itneg form a subgroup of the Central Cordilleran language family coordinate with the Nuclear Central Cordilleran languages: Bontok-Kankanaey, Balangaw, and Ifugaw. Together with the Nuclear Central Cordilleran languages they constitute the North Central Cordilleran branch, which, with Isinai, makes up the totality of Central Cordilleran languages (Reid 1974). These relationships are diagrammed in Figure 1.

Itneg differs substantially from Kalinga in its phonology, morphology, and lexicon, and there is some regional variation within Itneg and within Kalinga along these same parameters. These differences have their origins in the history

FIGURE 1. INTERNAL RELATIONS OF THE CENTRAL CORDILLERAN SUBGROUP (REID 1974:512)
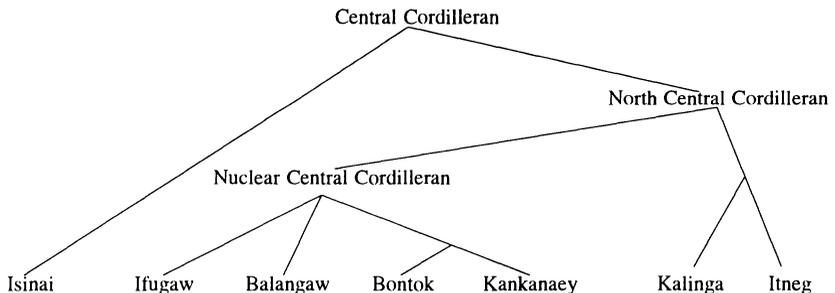
of the Abra and Kalinga provinces, and, of course, they are reflective of the varying migrations that peopled the area, and of the history of contact among identifiable groups prior to and after settlement in their current locations.

The linguistic situation in the province of Abra reflects a rich tapestry of settlement and interaction. Today, the people of Abra use the term "Tinguian" (or "Tinggian") to refer to all inhabitants who speak a language other than Iloko (Ilocano). In the northern reaches, the dominant language is Adasen, closely related to Isnag and, therefore, belonging to the Northern Cordilleran family of languages. In the very southern municipalities, a variety of Northern Kankanaey called Ma-eng is spoken. The remaining Tinguian languages are Itneg and Kalinga. While in the past there was a history of hostility among some communities (Cole 1945:161–162), there was certainly some communication, which, naturally, is all the more frequent and pervasive today. The result of this is the expected diffusion of knowledge and speech, and the concomitant difficulty in gleaning borrowed lexemes from indigenous ones. Undoubtedly many of the reconstructed forms below are not in fact inherited from an ancestral language but instead the result of more recent diffusion.

The Itneg were predominantly a coastal people, with some inland settlements at the coming of the Spaniards (Cole 1922, Keesing 1982). Because of missionary and government pressures, the bulk of the population moved inland, into the heart of Abra, during the sixteenth and seventeenth centuries. Owing to their proximity to the Ilocano population from earliest times to the present, the language of the Itneg demonstrates more Iloko influence than any of the other CC languages. Two dialects of Itneg are commonly recognized: Binongan, spoken in Lacub and Baay-Licuan, and Inlaod, spoken in Danglas, Lagangilang, San Juan, Langiden, San Quentin, Peñarrubia, and parts of Manabo and Villaviciosa.

The origins of the Kalinga-speaking population are less apparent and certainly more complex. Early investigators of Kalinga culture noted that the modern population was composed of peoples who had settled in the area from a number of different places. For example, Barton (1949:16–17) observes that "with the exception of possibly one or two very small areas, the tribe speaks one language—though the intonation and pronunciation vary greatly from town to town. . . . Despite their comparative linguistic unity, the Kalingas differ greatly in physical type according to region. Doubtless this is partly due to the fact that the habitat was settled by diverse types, but I think there has been a good deal of local differentiation since the immigration."

Nevertheless, there was, undoubtedly, a core group of early Kalinga speakers who entered the area and established the language in the region. Keesing (1982) favored the argument that the Kalinga entered the area from the north, following the Cagayan River to where the Chico empties into it, and subsequently continuing the southward migration to the reaches of the upper Chico and to the current border with Mountain Province. Some Kalinga-speaking peoples of Abra arrived at their present location by moving westward up the Saltan to Balbalasang, then

over the ridge to their present sites. A migration from there back to the east and north accounts for some other populations, such as that of Ammacian in Quirino. Oral tradition and some linguistic evidence argue for migrations from Bontoc northward into present-day Tinglayan and Pasil (Reid 1992, Himes 1994). Other movements took Kalinga-speaking peoples southward to Madukayong in Natonin and Dalipoy in Paracilis (Scott 1969).

Those authors who have treated topics in Kalinga culture and language have generally posited a tripartite internal division. Dozier (1966), for example, has northern, southern, and eastern divisions, and Lawless (1977) proposes northern, southern, and western areas. These divisions are based on ecological factors and external influences rather than on inherent cultural and linguistic affinities. McFarland (1980) divides the Kalinga-speaking territory along more linguistically realistic lines: a northern area (Pinukpuk and Tabuk), a southern area (Lubuagan, Tinglayan, and Tanudan), a "Guinaang" area (essentially central: Pasil, Quirino, and Balbalan), and a southeastern Abra area (Malibcong, Daguioman, Bucloc, Boliney, Sal-lapadan, and Manabo). There are no solid phonological developments that offer themselves as evidence of indisputable internal subgrouping of Kalinga dialects, but there is some evidence of lexically based divisions.

Figure 2 is a map of the Abra and Kalinga areas indicating the location of the research sites used in this paper. Lexicostatistical figures and the sharing of

FIGURE 2. LOCATIONS OF ITNEG- AND KALINGA-SPEAKING COMMUNITIES
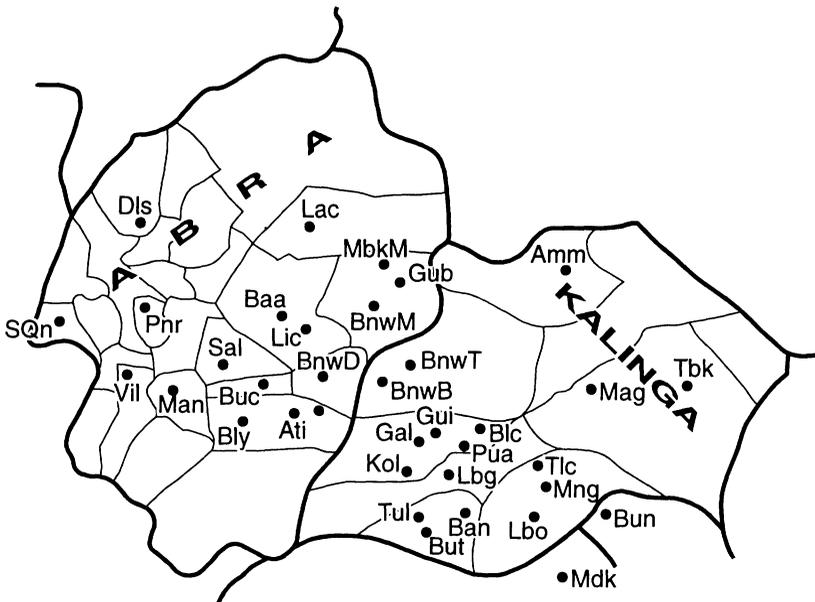
innovations suggest a relatively clear distinction among a central Abra group, a northern Kalinga group, and all other Kalinga dialects for which data are available. The northern group includes most of the Kalinga-speaking communities of eastern Abra and, in Kalinga, the municipalities of Balbalan, Quirino, Pinukpuk, and Tabuk.

Clearly, the dialects commonly called Masadiit, which are spoken in Manabo, Sal-lapadan, Bucloc, and Boliney, share features not shared with other dialects.[2] Within the Northern division, there appear to be two subgroups. There is a cluster of closely related dialects, here referred to as Northwestern Kalinga, spoken in Malibcong and Daguioman in Abra, and in Balbalan in Kalinga. These dialects are distinguished from the others both lexicostatistically and on the basis of shared innovations. They include the dialects called Ibanaw (in Malibcong, Daguioman, and Balbalan), Imabaka (in Malibcong and Balbalan), and Gubang (in the village of Buanao in Malibcong).[3] The dialects spoken in most of Quirino, Pinukpuk, and Tabuk form a Northeastern group, although the position of Ammacian is problematic in that it could be included in either of the two Northern subgroups. Its closest affiliation is with the Imabaka dialect of Malibcong, both lexicostatistically and innovationally, but on both measures its second closest affiliation is with Tabuk. Its close relationship to Northeastern Kalinga, however, is attributable in part to the assimilation of linguistic features from its neighbors.

There are less clear indices of affiliation among the remaining Kalinga dialects, but it appears that they fall within two general areas. The Central Kalinga region includes communities in several municipalities along or near the middle Chico: Lubuagan, Balenciagao, Guinaang, Galdang, Puapo, and—probably—Taloctoc. The balance constitute the Southern Kalinga cluster of communities. The Southwestern Kalinga area contains Kolayo, Balatoc in Pasil municipality, and Tulgao and Butbut in Tinglayan. Also, the communities of Amti and Danac in Boliney municipality in Abra, which were settled from the Balatoc area in Kalinga, belong to this group. The Southeastern area includes the upper Tanudan communities of Mangali and Lubo, as well as the outliers in Mountain Province: Madukayong and Bunut. Bangad appears to be located, both linguistically and geographically, between these other two Southern groups, while its position in the Chico River valley has facilitated contacts with the Central Kalinga communities as well. The divisions proposed here are not rigid, however, as Taloctoc appears to have strong affinities with the Southeastern group as well as the Central, and Lubuagan, in addition to Bangad, bridges the gap between the Central and Southern groups.

The picture that emerges, then, is one of clusters of related dialects, rather than of totally discrete branches of a family tree, with considerable mediation among the clusters posed by several communities. For the sake of simplicity, nevertheless, and for possible clues to the historicity of the language areas, the clusters of communities are treated here as if they were discrete, and appropriately labeled protoforms are reconstructed. But it must always be kept in mind

that an item's assignment is likely to be raised to a higher level with the discovery of the term's occurrence in communities not included here. Conversely, the assignment of a term here may be at too high a level, due to extensive borrowing. I have made an attempt to err on the side of caution and assume a great deal of diffusion if a term is widely shared within its cluster and appears otherwise only in one or two contiguous communities in a neighboring cluster.

Figure 3 diagrams the internal relationships of Kalinga-Itneg as suggested above.

2. PHONOLOGY

2.1 PHONEMIC INVENTORY OF PROTO-KALINGA-ITNEG. Proto-Kalinga-Itneg (PKI) inherited the Proto–Central Cordilleran (PCC) phonemic inventory intact:

Consonants:	*p	*t		*k		*ʔ
	*b	*d		*g		
		*s				
	*m	*n		*ŋ		
		*l				
	*w		*y			

Vowels:			*i	*ɨ	*u	*V: (length)
				*a		

FIGURE 3. INTERNAL RELATIONS OF KALINGA-ITNEG
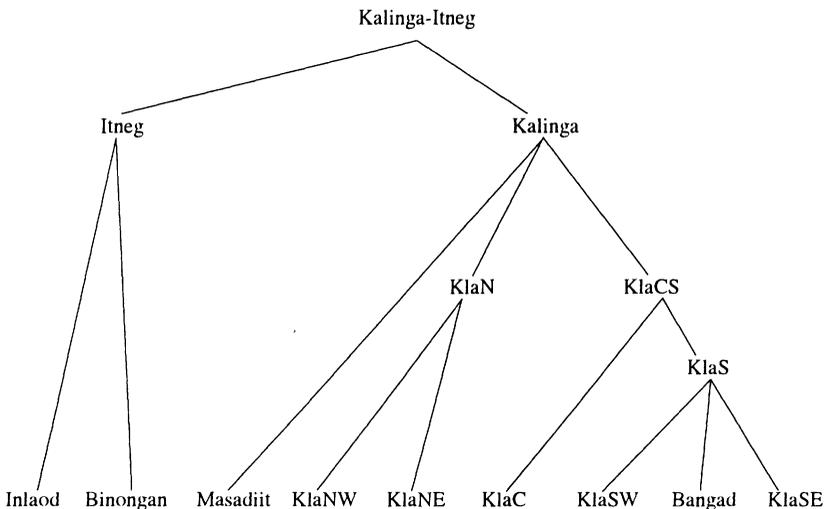
The canonical forms for the syllable in PCC include only CV(C), and further restrictions limited the distribution of the glottal stop to syllable-initial position and disallowed the occurrence of homorganic diphthongs (*iy and *uw).

2.2 ITNEG PHONOLOGY. Itneg continues to have the PCC (and PKI) phonemic inventory with only minor deviation from the ancestral forms. This language has preserved the four-vowel system. Here, the back vowel is represented as /o/ rather than /u/, following the practice in Reid (1971). The PKI word-final diphthongs */-iw/ and */-iy/ are generally reflected as /-aw/ and /-ay/, respectively. There is one apparent exception to the former: PSCC(R) *ʔi:siw 'bad, dirty, unacceptable' is reflected as expected in Lɪᴄ *ʔi:saw* 'dirty'; but with the meaning 'bad', Lɪᴄ has *ʔi:siw,* and Bᴀᴀ and Lᴀᴄ have *ʔi:siw.* With regard to word-final */-iy/, there are three apparent exceptions.

			PKI	Iᴛɢ[4]
Pᴀɴ(C)	*pa:jey	'rice'	*pa:giy	pa:giy
Pʜɴ(Z)	*ta:pay	'rice wine'	*ta:piy	ta:piy
PNCC	*ti:piy	'taro'	*ti:piy	ti:piy
(cf. PC	*ti:pay	'viand')		

These exceptions may be the result of a regular process, but with so few examples it is impossible to determine exactly what the conditioning factor(s) may be.

The PKI consonant system has been inherited with only one change; not surprisingly this concerns the lateral. In almost all environments, */l/ is reflected as /l/ in Itneg. In certain very restricted environments */l/ has been deleted.

In a word whose initial segment is a voiced stop and whose last is any voiced consonant, */l/ is lost between two occurrences of the low vowel. In these cases, the preferred disyllabic shape is maintained, if necessary, by reduplicating the initial CV of the reduced root.

			PKI	Pre-Iᴛɢ	Iᴛɢ
Pᴀɴ(Dy)	*baláy	'house'	*balay	*baay	babay
Pᴀɴ(Dy)	*ZálaNe	'path'	*da:lan	*daan	dadan
PC	*maŋ-da:lan	'to walk'	*maŋ-da:lan	*maŋ-daan	manan
PC	*bala:saŋ	'girl'	*bala:saŋ	*baasaŋ	ba:saŋ

If any of the specified conditions is not met, then the lateral phoneme is not deleted.

			PKI	Iᴛɢ
Pᴀɴ(C)	*[ŋ]aran	'name'	*ŋa:lan	ŋa:lan
Pᴘʜ(He)	*baRat	'banana'	*ba:lat	ba:lat
Pᴀɴ(B)	*baRaq	'lung'	*bala	bala
Pʜɴ(Z)	*pálaj	'palm'	*pa:lad	pa:lad
PSCC	*kalab	'climb'	*kalab	kalab

Likewise, */l/ is lost, and subsequently realized as /w/, after a long /u/ and before either central vowel.

			PKI	Itg
PC	*ku:lap	'blind'	*ku:lap	ko:wap
PAN(Z)	*qúlej	'snake'	*ʔu:lɨg	ʔo:wɨg
PAN(Z)	*qules	'blanket'	*ʔu:lɨs	ʔo:wɨs
PMP(Z)	*múla	'to plant'	*mu:la	mo:wa

Items that appear to violate this rule are probably the result of influence from
ILK or KLA, which have phonologically similar forms. For example, cor-
responding to PPH(Z) *daku:lap, DLS has *dako:lap* 'palm of hand,' as does ILK;
but compare SQN *dako:wap*. The strongest counterexample is provided by ITG
bo:lan 'moon,' which must retain the /l/ under the influence of ILK or MSD.

2.3 KALINGA PHONOLOGY.

The dialects of Kalinga have all undergone
at least some regular and more pervasive change than has Itneg. All varieties of
Kalinga have experienced change with regard to the high central vowel: uni-
formly, the word-final diphthong */-ɨw/ has become /-aw/ (subsequently being
reduced to /o/ in MDK).

			PCC	KLA	MDK
PPH(C)	*quhaw	'thirst'	*ʔuwɨw	ʔuwaw	ʔuwo
PC	*payaw	'ricefield'	*payɨw	payaw	payo
PCC(R)	*ʔa:kɨw	'to steal'	*ʔa:kɨw	ʔa:kaw	ʔa:ko

In other environments most KLA dialects reflect */ɨ/ as /o/. In two Masadiit dia-
lects (Manabo and Sal-lapadan) and in Gubang there is a rule whereby */ɨ/ be-
comes /a/ when the next vowel in the word is a central vowel. Elsewhere, */ɨ/
becomes /o/ in Masadiit and /u/ in Gubang.[5]

			PCC	Kla	Man
PAN(Dy)	*ʔenéme	'six'	ʔɨnɨm	ʔonom	ʔanom
PPH	*keteb	'bite'	kɨtɨb	kotob	katob
PC	*pesten	'to bundle'	pɨstɨn	poston	paston
PPHN	*besat	'sibling'	bɨsat	bosat	basat
PSCC	*ʔɨgnan	'to hold'	ʔɨgnan	ʔognan	ʔagnan

The KLASW dialects spoken in Kolayo and Tulgao share the rule whereby */ʔ/
is deleted in all environments (except perhaps word-initially). This has caused
a change in the canonical form such that vowel clusters are permissible.

			PCC	KLA	KLASW
PAN(B)	*kai[nŋ]	'skirt'	*ka:ʔin	ka:ʔin	ʔain
PAN(B)	*baSaR	'G-string'	*baʔal	baʔal	baal
PAN(Dy)	*buhuk	'hair'	*buʔuk	buʔuk	buuʔ
PPH(Z)	*halqu	'pestle'	*ʔalʔu	ʔalʔu	ʔalu
PSCC(R)	*tuʔŋal	'bone'	*tuŋʔal	tuŋʔal	tuŋal

As a later development, in some KLAS communities (KOL, TUL, BUT, BAN, LBO),
*/k/ has universally become /ʔ/. In the KLAC communities of Galdang and

Guinaang (Gieser 1958), this appears to be an ongoing process, with /k/ and /ʔ/
freely alternating in words that reflect */k/. All other dialects retain */k/ in all
environments, except the dialect of Ammacian in Quirino, where */k/ becomes
/ʔ/ in syllable-final position, unless followed by /k/ (see below).

			AMM	GUI	KLASW
PMP(C)	*kapes	'cotton'	ka:pos	ka:pos/ʔa:pos	ʔa:pos
PHN(Z)	*kăwáʔ	'spider'	kawa	kawa/ʔawa	ʔawa
PAN(Dy)	*anak	'child'	ʔanaʔ	ʔanak/ʔanaʔ	ʔanaʔ
PC	*baknaŋ	'rich'	baʔnaŋ	baknaŋ/baʔnaŋ	baʔnaŋ

All dialects of Kalinga except that spoken in Mangali have developed phonetic
variants of the lateral phoneme. These variants occur in several environments, gen-
erally not word-initially nor contiguous to the front vowel (see Reid 1973, Himes
1990). Most KLA communities express this variant as [ɫ], "a central resonant oral"
(Gieser 1970). Bangad, the KLASW dialects of Kolayo and Tulgao, and the
KLASE spoken in Lubo and Madukayong have retroflexed [r] rather than [ɫ], and
the KLASW communities of Amti, Danac, and Butbut have three rather than two
allophones of /l/ (Grayden 1979). Retroflexed [r] also occurs in very limited envi-
ronments in the KLAN communities of Magnao and Limos, where the usual vari-
ant is [ɫ] (Wiens 1976). In Ammacian, */l/ is reflected in ways very similar to what
has happened in Kankanaey. Essentially, */l/ is preserved word-initially, in gemi-
nate clusters, and in any environment where it is immediately preceded by the
front vowel. Elsewhere it is deleted, leaving Ø, /w/, or compensatory lengthening
of a preceding vowel or consonant.[6] Deletion of intervocalic */l/ then results in
vowel clusters not permitted in the protolanguage.

			PCC	KLA	AMM
PAN(B)	*beRek	'pig'	*bilik	bolok	booʔ
PC	*ʔali:sut	'wall'	*ʔali:sut	ʔali:sut	ʔai:sut
PAN(Dy)	*Dálem	'deep'	*ʔada:lim	ʔada:lom	ʔada:om
PAN(DY)	*ʔápuRe	'lime'	*ʔa:pul	ʔa:pul	ʔa:pu:
PSCC	*kilaŋ	'worm'	*kilaŋ	kolaŋ	kowaŋ
PAN(D)	*bulan	'moon'	*bulan	bulan	buwan
PPH(Z)	*ulpu	'thigh'	*ʔulpu	ʔulpu	ʔu:pu
PPH	*piklat	'scar'	*piklat	piklat	pikkat
PC	*belaŋ	'hard'	*bilaŋ	bolaŋ/nablaŋ	nabbaŋ
PAN(Dy)	*DeŋeR	'to hear'	*diŋlin	doŋlon	doŋŋon

In Lubuagan, phonetic [l] inherited from */l/ occurs only in word-initial position,
contiguous to the high front vowel, and in a geminate cluster. Elsewhere /l/ is
manifested as [ɫ], with the subsequent development of [ɫ] going to vowel length in
syllable-final position, often with concomitant fronting of a preceding vowel, as
for example, PC *nalʔum > *naɫʔum > *neɫʔum > *ne:ʔum 'ripe.' Lubuagan is
alone, of all Kalinga dialects, in reflecting */n/ as /l/ before a vowel (other than in
the /-in-/ infix); e.g., *ne:ʔum > *le:ʔum 'ripe,' and PAN(Dy) *ina > ʔila 'mother.'

Bangad, conversely, reflects */l/ as /n/ in word-final position after the front vowel: PSCC *su:bil > *su:bin* 'lip,' PPH(Z) *bitil > *bitin* 'hunger,' and PSCC *ʔi:bil > *ʔi:bin* 'cry, weep.'

One other area affecting the nasals is phonetic variation in Kolayo and Tulgaw of KLASW. The PKI series */m n ŋ/ is inherited intact in the phonemic inventory, but there are fricative variants in intervocalic position [β ř ɣ]: /ʔama/ > [ʔaβa] 'father,' /ʔina/ > [ʔiřa] 'mother,' /ʔi:ŋa/ > [ʔi:ɣa] 'ear.'

A dramatic area of phonetic variation crosscuts the regions proposed here. This concerns allophonic variation of the voiced stops in prevocalic position. Certain communities show no appreciable variation; other than Itneg, these include: (1) the Masadiit dialects spoken in Manabo and Sal-lapadan; (2) the KLAN dialects of Gubang and Imabaka of Malibcong, as well as the dialects spoken in Ammacian, Magnao, and Tabuk; and (3) the KLACS dialects of Taloctoc, Mangali, and Lubo in Tanudan, and Bunut in Paracilis. Other communities demonstrate some variation in the voiced stops, depending on point of articulation and/or the quality of the following vowel (see Gieser 1958 and 1970). These are: (1) the Masadiit dialects of Bucloc and Boliney; (2) Ibanaw in the north; (3) Balenciagao, Guinaang, Galdang, Lubuagan, and Puapo in KLAC; (4) all dialects of KLASW; (5) Bangad; and (6) Madukayong in KLASE. The allophonic variants in question are spirants whose nature is similar to their counterparts in some Bontok, Kankanaey, Ifugaw, and Isinai dialects (cf. Himes 1984).

3. PRONOUNS. The pronominal system of PCC contained the long form nominatives (Reid 1974, 1979), given here with the genitives as well:

	NOMINATIVE	GENITIVE
1S	*siyakén, *sakén	*-ku, -k
2S	*siʔika, *sikʔa	*-mu, -m
1+2S	*daʔita, *dita, *data	*-ta
3S	*siya	*-na
1P	*dakami, *dikami	*-mi
2P	*dakayu, *dikayu	*-yu
1+2P	*dataku, *ditaku	*-taku
3P	*daʔida, *dida	*-da

The pronominal system of ITG demonstrates certain changes:

	NOMINATIVE	GENITIVE
1S	diya:kɨn	-ko, -k
2S	dika	-no, -m
1+2S	dita[7]	-ta
3S	siya[8]	-na
1P	dikami	-mi
2P	dikayo	-yo
1+2P	ditayo	-tayo
3P	dayda	-da

The root of the 1+2P form is an apparent borrowing from Iloko, although the prefix is derived from the pre-CC(R) *daʔi- shared with KLA, and the /di-/ formative has been extended from the plural to the 1s and 2s forms (Reid 1974).

By and large, the KLA pronominal system reflects that reconstructed for PCC with few modifications, while the pronominal system in the Masadiit dialects shows the greatest divergence from the norm.

	Kalinga		Masadiit dialects	
	NOMINATIVE	GENITIVE	NOMINATIVE	GENITIVE
1S	sa:kon	-ku, -k	sa:kon	-ku, -k
2S	sika	-nu, -m	sika	-nu, -m
1+2S	dita	-ta	dita	-ta
3S	siya	-na	siya	-na
1P	dakami, dikami	-mi[9]	dakam	-mi
2P	dakayu, dikayu	-yu	dakay	-yu
1+2P	ditaku	-taku	ditakay, ʔitakay	-takay
3P	dida	-da	ʔida	-da

As ITG has extended the plural formative /di-/ to the singular, so also has Bangad extended the singular /si-/ to all of the other forms:

	NOMINATIVE	GENITIVE
1S	sa:ʔon	-ʔu, -ʔ
2S	siʔa	-nu, -m
1+2S	sita	-ta
3S	siya	-na
1P	siʔani[10]	-ni
2P	siʔayu	-yu
1+2P	sitaʔu	-taʔu
3P	sida	-da

4. EXCLUSIVELY SHARED INNOVATIONS

4.1 PROTO-KALINGA-ITNEG

4.1.1. Lexical Innovations. An item is considered a lexical innovation if it has no recognizable antecedent or apparent cognate in another language. Those innovations that occur in Itneg and at least one noncontiguous community of Kalinga are assigned to PKI with some degree of certainty.

*(ʔa)gaŋgaŋ, ITG *gaŋgaŋ,* MSD *ʔagaŋga,* MSD, KLAN *ʔagaŋgaŋ,* KLAS *gaŋgaŋan* 'cockroach'.[11]

*ʔa:maŋ, ITG (BIN), KLA *ʔa:maŋ* 'to laugh'. KnkN (Luba) *ʔa:maŋ* is a loan from KI.

*duglaŋ, ITG (BIN) *ʔidoglaŋ,* KLANE (TBK) *ʔiduggaŋ* 'to push'. The geminate /g/ in TBK is irregular; perhaps it is a loan from AMM, where the development of */gl/ to /gg/ is regular.

*gi:ŋa ITG, KLA *g:iŋa* 'word, language; to say'.

*k[iu]:sab, ITG (BIN) *ko:sab,* KLAC (LBG) *ki:sab* 'to bite'.

*kiwas, ITG, KLA *kiwas,* KLAS *ʔiwas* 'to wash (object)'.

*pi:ta, ITG (BIN), MSD, KLAN, KLAC *pi:ta* 'land, soil'. BUT cf. Tagalog *pita* 'lowland, watery land'.

*tu:li, ITG (BIN) *to:li,* KLA *tu:li* 'to tell a lie'.

Items whose distribution suggests that they may have diffused one way or the other are assigned to this level only tentatively.

*ʔatu:pak, ITG (PNR) *ʔato:pak* 'short (person)', MSD (MAN) *ʔatu:pak* 'short (person), low (object)'.

*ʔa:was, ITG (PNR) *ʔana:was,* MSD (MAN, SAL) *naʔa:was* 'tall, high'.

*ʔiyuŋ, ITG (LAC) *ʔiyoŋ* 'younger sibling;' KLANW (BNwM, MBKM) *ʔiyoŋ,* 'younger brother,' *ʔiyaŋ* 'younger sister.' This item looks suspiciously gender-marked, as a loan from Spanish would be. However, the gender marking in KLANW could be a later development by analogy with *manoŋ, manaŋ* 'elder brother, elder sister.'

*ʔumag, ITG (LIC) *ʔomʔomag,* MSD *ʔumʔumag* 'story'. The forms *ʔomʔomag* and *ʔumʔumag* are also found in one KNKN dialect of Abra and one dialect of Ada. Both are most likely borrowed from KI.

*ʔVsad, ITG (LAC) *ʔisad,* KLANW *ʔosad, ʔasad* 'to come'.

*ba[ln]sag, ITG (VIL) *bansag,* MSD (BUC) *balsag* 'to throw, toss'.

*da:pu, ITG *da:po,* MSD, KLANW *da:pu* 'thirst'. The occurrence of *da:po* in two dialects of KNKN in Abra is probably due to the influence of nearby KI forms.

*kɨ:kɨy, ITG *kɨ:kɨy,* MSD *ka:koy, ko:koy* 'armpit'.

*li:wan, ITG (LIC) *li:wan* 'big,' KLASW (DNC) *li:wanli:wan* 'tall'. Cf. PPH *li:wan* 'outside,' as someone or something 'big' or 'tall' is 'outside the norm.'

*makmak, ITG (BIN), MSD, KLANW *makmak* 'rice field'. ADA *makmak* 'rice field' is a loan from KI.

*sɨbad, ITG (BAA) *sɨbad, sombad,* KLANW (BNwM) *sumbad* 'to borrow'.

*sɨʔɨp, ITG *sɨʔɨp,* MSD *saʔop, soʔop* 'odor; to smell, sniff'.

*tabɨg, ITG *tabɨg,* MSD *tabog* 'fat (n., adj.)'.

*waŋɨl, ITG *waŋɨl,* MSD *waŋol, waŋlon* 'to work'. ADA has *waŋʌl, waŋol* 'to work,' which may be borrowed from KI, or it may be a unique item in ADA that has diffused to both ITG and MSD.

4.1.2 Semantic Innovations. Items are considered innovative if a term's meaning is significantly different from that of its antecedent. The following all have widespread distribution.

> *?a:kɨm 'ancestor', cf. ILK *?akem* 'charge, duty; take charge of', ITG *mana:kɨm,* KLANW *mana:kom,* KLAC *paŋa:kom* 'ancestors'.

> *balu 'good', cf. PAN(Dy) *baqeRu[h] 'new' and PC *baRu 'young, unmarried man'; ITG *balo,* KLA *balu* 'good, pleasant, pretty'. ADA *nabaru* and IsG *nama:ru* 'good' are probably borrowed from KI; the occurrence of /r/ rather than /l/ is most likely by analogy with the ILK loan *baru* 'new.'

> *bɨlat 'soup', cf. PPH *belat 'skin', PBK *bɨlat 'fat, grease'; ITG *bɨlat,* KLANW (BNwM), KLASW (KOL) *bolat* 'soup'.

> *si:na 'to split (wood)', cf. PC *si:na 'to separate from'; ITG (DLs) *?agsi:na,* KLAC (LBG) *?isi:la* 'to split (wood)'.

Two items are quite limited in their distribution in Itneg and perhaps should be assigned to lower levels:

> *bukɨs 'to cough', cf. PNCC *bukɨs 'to breathe hard'; ITG (LAC) *bokɨs,* KLANW, KLAC *bukos,* KLAC, KLAS *bu?os* 'to cough'.

> *pa:tuk 'noon', cf. PWMP(B) *pa[n]Tuk 'peak, apex'; ITG (PNR) *?agma:tok,* KLANW *mamma:tok, nammatu?,* KLAC, KLAS *mama:tok, mama:tu?* 'noon'

4.1.3 Phonological/Morphological Innovations. Morphological and/or phonological changes that are not predictable by regular rules are innovative.

> *?awad 'there is (positive existential)', cf. PAN(D) *vaḍa' 'there is'; ITG (BIN), KLA *?awad* 'there is'. This term also occurs in Isg, but because of its distribution it is most likely a loan from KI.

> *?uknum 'to swallow', cf. PSCC *?ukmun 'to swallow'; ITG (INL) *?oknom,* MSD, KLASW (ATI, DNC) *?uknum,* KLAS (BAN) *?ugnum* 'to swallow'. There is assimilation in voicing of the velar stop to the following nasal in BAN.

> *bayaŋyaŋ 'bamboo water container', cf. PC *bayeŋyeŋ 'bamboo water container'; ITG (BIN), KLAC *bayaŋyaŋ* 'bamboo water container'. This could be a loan from an unattested dialect of NC where *bayaŋyaŋ* is the expected reflex of *bayeŋyeŋ.

> *biba 'short (obj.)', cf. PAN(Dy) *babaq 'low'; ITG (SQN) *?abibba,* KLANW (AMM) *?abeba* 'short (obj.)'.

> *buba 'low, below, short', cf. PAN(Dy) *babaq 'low'; ITG *naboba,* KLA *?abuba* 'low;' ITG *boba* 'below;' KLA *?abuba, ?abuba?an, ?abubaŋ* 'short (object or person)'.[12]

> *dɨkɨt 'red', cf. PNCC *dikɨt 'red'; ITG (BIN) *dɨkɨt,* KLAN *dokot, dakut,* KLAC *dokot, do?ot* 'red'. BUT cf. ILK *dekket* 'dark brown, blackish.'

*gitbɨt 'dark', cf. PC *gisbet 'dark'; ITG *gitbɨt,* KLANW, KLAC *gitbot* 'dark'.

*lɨtun 'to swallow', cf. PAN(Dy) *[tT]elen 'to swallow'; ITG (BIN) *lomto:nɨn, lɨton,* KLANW *lumtu:non,* KLAC *loton,* KLAC, KLASE *lumtun* 'to swallow'.

*ŋi:law 'housefly', cf. PNCC *li:ŋaw 'housefly'; ITG, KLA *ŋi:law* 'housefly'. The ILK term *ŋi:law* 'housefly' is probably borrowed from KI; the progression from PAN(Dy) *láŋaw > PNCC *li:ŋaw > PKI *ŋi:law seems reasonable. Cf. KNKN *li:ŋɨw* 'a kind of small fly.'

There is one item that is suspect because of its distribution:

*ʔittuk 'small', cf. PAN(B) *i[n]tek 'small'; ITG (BIN) *ʔittok,* MSD (BUC, BLY) *ʔittuk* 'small'.

4.2 PROTO-ITNEG.

Items that occur in both the Inlaod (western) and Binongan (eastern) dialects are most likely to be derived from the language ancestral to both.

4.2.1 Lexical Innovations

*ʔayamʔa, BIN (LAC) *nayamʔan,* INL *ʔayma, nayma:ʔan, nayama:ʔa* 'rotten'.

*ʔ[ɨu]mɨg, BIN, INL (VIL) *ʔomɨg,* INL *ʔɨmɨg* 'to lie down'.

*ʔintɨn, BIN (LAC), INL *ʔintɨn* 'to bring'.

*ʔi:sɨg, BIN (BAA), INL *ʔi:sɨg* 'dirty'.

*ʔittɨy, BIN, INL *ʔittɨy* 'few'. MSD (MAN) *ʔittuy* is borrowed from ITG.

*[nŋ]a:di, BIN *na:di, ŋa:di,* INL (PNR) *ŋa:di* 'later'. ADA *na:di* is borrowed from ITG.

*mu:tun, BIN, INL *mo:ton* 'rat'.

*piskuŋ, BIN (LAC), INL (SQN) *piskoŋ* 'pond'. This item has diffused into MSD (BUC) as *piskuŋ* 'pond'.

4.2.2 Semantic Innovations

*dawɨs 'clean', cf. PNCC *dawɨs 'fitting, orderly'; BIN, INL *dawɨs* 'clean'.

*dɨgɨs 'rain', cf. PMP(B) *deRes 'heavy, of rain'; BIN, INL *dɨgɨs* 'rain'. This item represents an early borrowing from ILK or some language wherein the regular reflex of */R/ is /g/, although it does not show the geminate cluster of ILK *dɨgges* 'to gush out' or Isg *daggat* 'to rain heavily.'

*sampiŋ 'cheek', cf. ILK *sampiŋ* 'to tuck behind the ear'; Isg *tampiŋ* 'the part of the head immediately behind the ear', BIN, INL *sampiŋ* 'cheek'.

*wa:kas 'day', cf. PNCC *wa:kas 'morning, next day'; BIN, INL *wa:kas* 'day'. KNKN (Luba) and MSD (MAN, SAL) also have *wa:kas* 'day,' but because of the distribution *wa:kas,* with the meaning 'day,' is probably assignable to ITG. Ultimately this item may be related to PHN(B) *wakas 'to loosen, undo, uncover,' in a manner analogous to that in which Tagalog *bu:kas* 'tomorrow' is related to PHN(B) *bukas 'open, expose, unveil, uncover.'

4.2.3 Phonological/Morphological Innovations

*dika 'you (singular)', cf. PPH *sika 'you (sing.)'; BIN, INL *dika* 'you (sg.)'.

*ditayu 'we (inclusive)', cf. PMC(R) *siʔikita[yu, ku] 'we (incl.)'; BIN, INL *ditayo* 'we (incl.)'.

*diya:kɨn 'I', cf. PPH *siʔak-en 'I'; BIN, INL *diya:kɨn* 'I'.

*nɨn/-n 'already', cf. PPH *[qʔ]en/-n 'already, completion marker'; BIN, INL *nɨn/-n* 'already, completion marker'.

*sugay 'to delouse', cf. PPH(Z) *sukay 'comb; delouse'; BIN, INL (VIL) *sogay* 'to delouse'.

*tigaw 'to sit', cf. PC *tugaw 'to sit'; BIN (LAC), INL *tigaw* 'to sit'.

4.3 PROTO-BINONGAN (BIN).
Items that are shared exclusively by the communities in Lacub and Baay-Licuan are assigned to the level of Proto-Binongan.

4.3.1 Lexical Innovations

*ʔa:pɨs, LIC, LAC *ʔa:pɨs,* BAA, LAC *ʔapsɨn* 'to call', Isg *ʔapat* 'to invite' may be a loan from this ITG form.

*kupsit, LIC, LAC *kopsit* 'skin'. This item has diffused into MBKM as *kupsit* 'skin, bark (of tree)'.

*lubba, LIC, LAC *lobba* 'mud', MSD (MAN) *lubba* and ADA *lobba* 'mud' are probably borrowed from BIN.

*tawi LIC, BAA, LAC *tattawi,* LAC *tatawi* 'to know (fact or person)'.

4.3.2 Semantic Innovations

*ʔi:nit, 'noon', cf. PC *ʔi:nit 'sun', PPH(C) *qi:nit 'hot'; LIC, BAA *mammaʔi:nit,* LAC *mamaʔi:nit* 'noon'.

*ʔuwab, 'mouth', cf. PAN(B) *Suab 'to yawn'; LIC, BAA, LAC *ʔowab* 'mouth'.

*manan, 'to go home', cf. PITG *manan 'to walk'; BAA, LAC *manan* 'to go home'.

4.4 PROTO-INLAOD (INL). Items that occur only in the Inlaod communities for which data are available (Peñarrubia, Danglas, San Quintin, and Villaviciosa) are assigned to the level of Proto-Inlaod.

4.4.1 Lexical Innovations

*ʔalaŋu:gaŋ, PNR *ʔalaŋo:gaŋ,* DLS *ʔallaŋo:gaŋ* 'echo'. Cf. ILK *ʔaraŋu:ʔuŋ* 'to resound, to echo'.

*ʔatubba, PNR, DLS, SQN, VIL *ʔatobba* 'short'. McFarland (1977) gives *qatub-bat* for 'short' in PNR; MSD *ʔatubba* is likely to have been borrowed from INL.

*ʔiyan, PNR, SQN, VIL *ʔiyan* 'not (negator of nouns)', PNR, DLS, SQN, VIL *ʔiyan* 'not (negator of verbs)'.

*ʔutip, PNR, VIL *ʔotip* 'to lie'. BUT cf. Bikol *ʔutik* 'to lie'.

*diŋwa, PNR, DLS, SQN *diŋwa* 'skirt'.

*dubli:na, PNR, SQN *dobli:na,* PNR, DLS *dobna* 'he/she'. This certainly appears to be somehow derived from Spanish *doble* 'double, twice' and the 3s genitive pronoun *-na,* but the semantic link is obscure.

*dulsu, PNR, VIL dulsu 'rice husk'. Although the semantic relationship is not obvious, this could be a loan from Spanish *dorso* 'back, reverse'.

*du(:)tug, PNR *do:tog,* SQN *dotog* 'back (of person)'.

*lisaw, PNR, DLS, VIL *lisaw* 'to wash (obj.)'.

4.4.2 Semantic Innovations

*balbalay, 'bird', cf. PAN(Dy) *baláy 'house', and ILK *billit balay* 'house bird' PNR, DLS balbalay 'bird'. Because of its phonological shape and its distribution, this item is more likely to have originated in INL and diffused to MSD (MAN), rather than the reverse.

*kɨlsaŋ 'hard', cf. PC *kersaŋ 'rough (to the touch)'; PNR, DLS, VIL *kɨlsaŋ,* SQN *kilsaŋ* 'hard'.

*sublat 'to borrow', cf. ILK *sublat* 'to substitute for, to take someone's place'; DLS, SQN, VIL *soblat* 'to borrow'.

4.4.3 Phonological/Morphological Innovations

*ʔapya 'to make, do', cf. PCC *kapya 'to make, do'; PNR, DLS, SQN *ʔapya* 'to make, do'.

*ʔataddul 'long (object)', cf. PC *ʔatakduR 'long (obj.)'; PNR, DLS, SQN *ʔataddol,* PNR, VIL *ʔataddo* 'long'.

*ʔittɨy 'few', cf. PITG *ʔittɨy 'few'; PNR, DLS *ʔittɨy* 'few'.

*ʔuwad 'there is (positive existential)', cf. PKI *ʔawad 'there is'; PNR, DLS, SQN, VIL ʔowad 'there is'. This item has diffused into neighboring communities: MSD ʔuwad, KNKN (Ma-eng) ʔowad, and ADA ʔuwʌd 'there is'.

*kad 'to/at marker', cf. PCC(R) *ʔad 'to/at marker (distant)'; SQN, VIL kad 'to/at marker'. McFarland (1977) gives kat for this marker in PNR.

*lisan 'all', cf. PNCC *lɨsan 'all'; PNR ʔalisan, VIL ʔallisan, ŋalisan 'all'.

4.5 PROTO-KALINGA

4.5.1 Lexical Innovations. Those items that are found in at least two of the three major subdivisions (MSD, KLAN, KLACS) are probably not the result of local diffusion, and they are assigned to the level of PKLA with some confidence. All reconstructions that follow are presented in Pre-Kalinga form for ease of comparison.

*ʔiml[aɨ]s, KLANW ʔimlos, KLAC ʔimlas 'smooth'.

*ʔimus, KLANE (Limos; Wiens 1979) ʔimus 'to ask'; KLAC, KLAS ʔimus 'question'.

*bɨʔin, KLAN (BNWT), KLASW (DNC) boʔon 'to smell, sniff'.

*bidbid, KLANE, KLAC, KLASE bidbid 'wind'.

*bukud, KLANE (Limos; Wiens 1979) bukud 'to carry on shoulders'; KLAC, KLASE bukud, KLAS buʔud 'to bring, carry'. This item has diffused into BLW as buʔud 'to carry, bring'.

*butik, KLAN, KLAC, KLAS butik, butiʔ 'rib, ribcage'.

*dawat, KLANW, KLANE (Limos; Wiens 1976) ʔidawat 'to throw away'; KLAC dawat 'to throw, toss'. This item has diffused into LAC ʔidawat 'to throw away'. It is possibly from PMP(Z) *dawat 'reach for, achieve, get'.

*d[ɨi]kɨt, MSD dokot, manikot, KLANW (BNWB) manikot 'to split'; KLANE (Limos; Wiens 1979) dikot 'chop wood'; KLAC manʔiʔot, dikton, KLASW diʔot, KLASE dikot, dokot, diʔot 'to split'.

*dimluŋ, MSD, KLAS dimluŋ, dimloŋ 'dew'. This item has also spread to LAC as well as to KNKN (Ma-eng).

*dutʔuk, MSD (BLY), KLAC (BLC) dutʔuk 'to stab'.

*gallis, KLAN (BNWB), KLAC, KLAS gallis 'sand'. BLW gʌllih is a likely borrowing from KLASE.

*la:su, MSD, KLAN, KLAC, KLAS la:su 'easy'.

*layakan, KLAN (MBKM) layakan, KLASE (MNG) layakkan 'cockroach'.

*nat, MSD *sinat,* KLAN *sinat, sanat, ʔutnatye,* KLAC *sinat, yanat, natda,* KLASW *ʔannatda,* KLASE *sanat, ʔasannat,* KLAS (BAN) *sanat* 'there (near addressee)'; MSD *natu, natoy,* KLAN *sinat, sanat, siyanat,* KLAC *sinat, siyanat, yanat, natda,* KLASW *ʔannatda, ʔanatda,* KLASE *sanat, ʔannat* 'that (near addressee)'.

*pa:tud, MSD, KLAN, KLAC *pa:tud* 'to kick'.

*pig[gk]al, KLAN, KLAC *ʔipiggal, ʔipigkal* 'to throw, toss'.

*piʔiŋ ~ puʔuŋ, MSD *napʔoŋ,* KLAN, KLAC *poʔoŋ* 'thick'.

*[st]abbak, MSD (MAN) *sabbak,* KLAC, KLASW *tabbaʔ,* KLASW, KLASE *tabbak* 'flower'.

*sagad(d)aŋ, MSD *nasagaddaŋ,* MSD, KLANW *nasagadaŋ* 'rough (to the touch)'.

*sissi:wit, KLAN *sissi:wit,* KLAC *sissi:wit, ʔisi:wit, si:wit,* KLAS *ʔissi:wit, sissi:wit, sisi:wit* 'bird'.

*si:wak, KLANW, KLAC, KLAS *si:wak,* KLAC *si:waksi:wak,* KLASW, KLASE *si:wasi:waʔ* 'shooting star'.

*sunu, KLANW (BNWT), KLAC *ʔisuno,* KLAC *sunu* 'to push'.

*ta:ʔud, KLANW (BNWT) *ta:ʔud,* KLAC *ta:ʔud, ta:ʔod* 'to fly'. BUT cf. Bontok *taʔod* 'to jump down.'

*t[ɨu]gdak, KLAN *togdak, toddak, tugdak, tuddak,* KLAC *toddak, tugdak, tuddak,* KLAS *toddaʔ, toddak, tutdaʔ, tuddak* 'to run'. There is regressive assimilation of the velar stop in most forms and the subsequent devoicing of the first /d/ in TUL.

One item that occurs only in Abra may be assignable to PKLA or it may have diffused from the one community to the other:

*ki:tuŋ, KLANW (BNWM) *ki:toŋ,* KLASW (ATI) *ki:tuŋ* 'buttocks'.

4.5.2 Semantic Innovations. Items exhibiting semantic shift that have widespread distribution include:

*ʔabus 'already', cf. PNCC *ʔabus 'completed'; KLANW, KLASE (MNG) *naʔabus* 'already'.

*ʔad 'to/at (near)', cf. PCC(R) *ʔad 'to/at (far)'; MSD, KLAS (BAN), KLASE *ʔad* 'to/at (near)'.

*ʔɨy 'path', cf. PC *ʔay 'to go; bring, take'; KLANW (Bnw) *maʔoy,* KLAC (TLC), KLASE (LBO) *moʔoy,* KLASW (DNC) *ʔaʔayyon* 'path'.

*di 'that, there (near addressee)', cf. PCC *di 'that, there (far from both speaker and addressee)' and Proto Central Philippine (Z) *di 'this, here (near

speaker)'; KLANW (AMM) *sadi*, KLASE *ʔandi, saʔandi* 'that (near addressee);' KLASE *saʔandi, ʔasandi* 'there (near addressee)'.

*gi:ŋa 'to call', cf. PKI *gi:ŋa 'word, language; to say'; KLANW, KLAC (GUI) *gi:ŋa* 'to call'.

*kap[ɨu]s 'poor', cf. PPh *kapus 'insufficient, lacking'; KLANW (BNwB) *kapos*, KLAC *kapos, kapus,* KLASW *ʔapos,* KLASE *kapus* 'poor'.

*kawad 'where?', cf. ILK *kawad* 'place' (Lawrence Reid, pers. comm.); KLAN *kawad, kawadna,* KLASW *ʔawanna,* KLAS (BAN) *ʔawadna* 'where?'.

*la:was 'tall, high', cf. TAG *lawas* 'hitting above and beyond the target point'; KNKN *la:was* 'straight, upright', and PAN(B) *lawas 'wide, broad'; MSD (BUC) *la:was* 'tall (person)', KLAS (BAN) *la:was* 'high (object)'.

*lɨŋʔag 'body; old (person); man', cf. PSCC(R) *lɨŋʔag 'to breathe, have life'; MSD, KLAN, KLAC, KLAS *loŋʔag* 'body'; KLAN, KLAC *maloŋʔag,* KLAS *malmaloŋʔag* 'old (person)'; KLANE (TBK), KLASE *maloŋʔag,* KLAC *mamaloŋʔag* 'man (esp. married man)'.

*lɨpɨs 'rotten', cf. PC *lepas 'finish'; MSD, KLAN, KLAC, KLASE *nalpos,* KLAC *lopos* 'rotten'.

*likwɨs 'to turn', cf. Ifugaw *likwo[h] 'to encircle in order to catch'; MSD (BUC) *lekwos,* KLAC *liʔwos,* KLASW (DNC) *likwos,* 'to turn'.

*mu:la 'seed for planting', cf. PMP(Z) *múla 'to plant'; KLANE (TBK) *tagimu:la,* KLAC, KLAS *mu:la* 'seed for planting'.

*naʔid 'not, negator of past verbs', cf. PCC(R) *naʔid 'none'; KLANW (MBKM), KLASW, KLASE *naʔid,* KLAC (LBG) *laʔi,* KLASE (LBO) *naʔi* 'not (v., past)'. There is apocope in LBG and LBO; cf. also KLAC (TLC) *naʔi* 'not (negator of nominals)'.

*nun 'already', cf. PPh *nuʔun 'past time'; MSD (BLY), KLANW (AMM) *nun* 'already'.

Since its distribution is limited to Abra, one item may actually be a local innovation that spread to the other dialects:

*pa:ʔiŋ 'thigh', cf. Isg *pa:ʔiŋ* 'hipbone', IFG *pa:ʔiŋ* 'temple, side of the head'; MSD (BUC), KLANW (BNwM and Bnw of Gacab, Malibcong), KLASW (ATI, DNC) *pa:ʔiŋ* 'thigh'.

4.5.3 Phonological/Morphological Innovations.
Phonological and morphological innovations with widespread distribution include the following.

*ʔɨbɨk 'mat', cf. PHN(B) *a(m)bek 'mat'; MSD, *ʔobok,* KLAN, KLAC, KLAS *ʔobok, ʔoboʔ* 'mat'.

*ʔ[ɨiu]lla:tɨy 'bridge', cf. PC *ʔara:tay 'bridge'; MSD (BLY) *ʔolla:toy,* KLAC (GAL, BLC, LBG, PUA) *ʔilla:toy,* KLAC (TLC) *ʔulla:toy* 'bridge'.

*ʔud 'to/at (near or far)', cf. PCC(R) *ʔad 'to/at (far)'; KLANW, KLAC *ʔud* 'to/at (near or far)'.

*ʔupik 'bark (of tree)', cf. PAN(D) *ʔu(m)pak 'bark'; KLANW *ʔupik, ʔupek,* KLAC *ʔupik* 'bark'.

*ʔuway 'to wait', cf. Iloko *ʔu:ray* 'to stop, wait'; MSD, KLAN, KLAC, KLASE *ʔuway* 'to wait'. This term must originally have been borrowed from ILK; if it were a regular development from some higher level form the expected reflex would be *ʔuwoy.

*balat 'soup', cf. PKI *bɨlat 'soup'; KLANW, KLAC, KLAS *balat* 'soup'.

*ba(n)ti:lig 'hill', cf. PSCC *ba(n)ti:lid 'mountain, hill'; MSD (BUC) *banti:lig,* KLANW (MBKM) *bati:lig* 'hill'.

*d[ɨu]ba 'below, low', cf. PKI *buba 'low, below'; MSD, KLANW, KLANE *duba, doba* 'below;' MSD, KLANW *duba, doba* 'low'.

*du(:)ŋul 'knee', cf. PPH *du:luŋ 'knee'; KLAN (MBKM) *du:ŋul,* KLAC (BLC) *duŋul* 'knee'.

*duwanan 'right (side)', cf. PC *diwanan 'right'; MSD (BLY), KLANW (Gub, BNwB) *duwanan* 'right'.

*gikbɨt 'dark', cf. PC *gisbet and PKI *gitbɨt 'dark'; KLAN, KLASE *gikbot, giʔbot* 'dark'.

*kɨpya 'to make, new', cf. PCC *kapya 'to make, to do'; KLANW *kopya,* KLAC *ʔopya* 'to make, to do';KLAN, KLAC, KLASE *kakopya,* KLAS *ʔaʔopya* 'new, newly made'.

*lu:ʔu 'to forget', cf. PHN(B) *liqu 'to forget'; MSD (MAN), KLANW (Gub) *luʔu:wan* 'to forget'.

*maʔis 'sweet', cf. PPH *hamis and PC *miʔis 'sweet'; KLAN, KLAC, KLAS *maʔis* 'sweet'.

*pakɨt 'to stick to', cf. PHN(Z) *pəkə́t 'stick(y)'; MSD, KLAN, KLAC, KLAS *pakot,* KLAC, KLAS *paʔot* 'to stick to'.

*piŋa:piŋ 'cheek, face', cf. PPH *piŋpiŋ 'cheek'; KLANW *piŋa:piŋ* 'cheek'; KLAC (GUI) *piŋa:piŋ* 'face'.

*sɨbgɨn 'to burn', cf. PPH(Z) *səjəb 'to burn'; KLANW, KLAC, KLAS *subgon, sobgon,* KLASE *sobgon* 'to burn'. The expected form, of course, is *sogbon, as is reflected in Isinai *soxbon.*

*t[ai]gammu 'to know', cf. PC *ʔammu 'to know'; KLAN, KLAC *tagammu, tigammu,* KLAC, KLAS *ʔagammu,* KLASW *tigamu, gammu, tagammuŋ,* KLASE *ʔigammu* 'to know (fact or person)'. There is loss of the initial stop in some KLACS areas.

*(t)aplaw 'to float', an apparent blend of PNCC *taplak and PC *tapaw 'to float'; MSD (BLY) *manaplaw,* KLANW (BNwB) *manʔaplaw* 'to float'.

4.6 PROTO-MASADIIT

4.6.1 Lexical Innovations

*kaysan, MAN, SAL, BLY, BUC *kaysan* 'to go home'.

*kiy[ɨu]p, MAN *kiyup,* SAL, BLY *kiyop* 'anus'.

*su:lad, BUC, BLY *su:lad* 'to cook'; MAN, BLY, BUC *sinu:lad* 'viands'. BIN (LIC) *so:lad* 'to cook' and INL *sino:lad* 'viand' must be borrowed from MSD (see 2.1). Cf. PNuCC *sulʔat 'to cook, to cook rice'.

4.6.2 Phonological/Morphological Innovations

*ʔaŋ 'only', cf. PPH *laŋ 'only'; MAN, SAL, BLY, BUC *ʔaŋ* 'only'.

*dakam 'we (excl.)', cf. PC *dakami 'we (excl.)'; MAN, SAL, BLY, BUC *dakam* 'we (excl.)'.

*dakay 'you (pl.)', cf. PC *dakayu 'you (pl.)'; MAN, SAL, BLY, BUC *dakay* 'you (pl.)'.

*ditakay 'we (incl.)', possibly a blend of PCC(R) *dita 'we (dual incl.)' and PPHN *kayu 'you (pl.)'; MAN, BLY *ditakay,* SAL *ʔitakay,* BUC *ʔittakay* 'we (inclusive)'. There is unexplained loss of initial /d/ in SAL and BUC.

*pillat 'scar', cf. PC *piglat 'scar'; BLY, BUC *pillat* 'scar'.

4.7 PROTO–NORTHERN KALINGA. Those items that occur in the Northwest Kalinga and Northeast Kalinga areas are attributed to PKlaN with some confidence.

4.7.1 Lexical Innovations

*ʔatti[kŋ], KLaNW (MBKM) *ʔattek,* KLaNW (AMM), KLaNE *ʔatteŋ* 'excrement'. This may be a modified loan from Northern Cordilleran *ʔattay* 'excrement.'

*bilug, KLaNW (MBKM, AMM), KLaNE (TBK) *bilug* 'widow'. LAC has borrowed this item from KLaNW.

*dadag, KLaNW (AMM), KLaNE *dadag* 'bad'. Cf. Ifugaw *dadag* 'destruction.'

*lawa, KLaNW, KLaNE (TBK) *lawa,* KLaNE (MAG) *la* 'only'.

*sa:t[ɨu]n, KLaNW *sinsa:ton, sa:ton,* KLaNE (TBK) *satunon* 'today'.

*su:lag, KLaNW (AMM) *su:wag,* KLaNE *su:lag* 'anger'. Cf. KNKN *so:wag* 'pity, compassion'.

4.7.2 Semantic Innovation

*kiyaŋ 'to walk', cf. PPH *kiyaŋ 'pace, step'; KLANW (AMM), KLANE (TBK) *kiyaŋ* 'to walk'.

4.8 PROTO–NORTHWEST KALINGA. Those items shared by at least two of the dialects in this subgroup—Ibanaw, Imabaka, Gubang, and Ammacian—are attributed to PKlaNW.

4.8.1. Lexical Innovations

*ʔatap, BNWT *ʔatap,* GUB *ʔatpun* 'to see'.

*ʔi:naw, BNWM, BNWB, MBKM, GUB, AMM *ʔi:naw* 'to smell, stink; bad-smelling'. This item has diffused into LAC.

*dulla:lu, BNWM, BNWB, GUB *dulla:lu* 'dragonfly'. BNW of Gacab, Malib-cong also has *dulla:lu;* GAL has apparently borrowed this item from BNW.

*gɨsay, BNWD *nagsay* 'rotten', GUB *gusay* 'bad, ugly'. Cf. KNKN *gɨsay* 'good; taking fire easily (pitch pine)'.

*kubʔul, BNWD, BNWB, MBKM *kubʔul* 'to blow'.

4.8.2 Semantic Innovations

*pu:ŋut 'to fight', cf. ILK *pu:ŋut* 'to pull the hair of'; BNWM, MBKM *pu:ŋut* 'to fight'. This has diffused into LAC *po:ŋot* 'to fight' from the nearby KLANW communities.

*tumʔ[ɨu]k 'to sit', cf. IFG *tu:mok* 'to make something touch another thing by its end'; BNWM, BNWT, GUB *tumʔuk,* BNWB *manumʔok,* MBKM *tumʔok* 'to sit'.

4.8.3 Phonological/Morphological Innovations

*ʔatiNla:wa 'spider', cf. PAN(Dy) *láwaʔ 'spider'; BNWM, BNWB, MBKM *ʔatillala:wa,* BNWM and BNW of Gacab, Malibcong *ʔatillawla:wa* 'spider'.

*si:yɨp 'to sleep', cf. PNCC *su:yɨp 'to sleep', MBKM, AMM *si:yop* 'to sleep'.

4.9 PROTO-IBANAW. KLANW data are available from several sites where Ibanaw is spoken: Daguioman, Malibcong, and Balbalan's Talalang and Balbala-sang. Innovations shared within this group are assigned to the level of PBNW.

4.9.1 Lexical Innovations

*galiN, BNWT *galiŋ,* BNWB *galin* 'to lie down'.

*k[aɨ]bʔal, BNWM *ʔikobʔal* 'to throw away', BNWT *kabʔal* 'to throw, toss'.

*laːlap, BNwD, BNwT, BNwB *laːlap* 'to fight'. This item also has diffused into GAL.

*lukuŋ, BNwM *lukoŋ,* BNwB *lukuŋ* 'stream'. BUT cf. Isg *loːkoŋ* 'basinlike depression in a brook', PPH(Z) *ma-lukuN 'bowl, cup'.

4.9.2 Phonological/Morphological Innovations

*nawag 'wide', cf. PPH *lawag 'wide'; BNwT, BNwB *nanawag* 'wide'.

*taddak 'to run', cf. PKLA *t[ɨu]gdak 'to run'; BNwT, BNwB *taddak* 'to run'.

4.10 PROTO–NORTHEAST KALINGA

4.10.1 Lexical Innovation

*bullat, LIM *bollat* 'weed' (Wiens 1979), MAG, TBK *bullat* 'grass'. BUT cf. IsG *bulaːt* 'a common creeping herb'.

4.10.2 Phonological/Morphological Innovations

*ʔut 'to/at marker', cf. PKLA *ʔud 'to/at marker'; MAG, TBK *ʔut* 'to/at marker'.

*baːdut 'clothes', cf. PAN(D) *bazuh 'clothes'; Limos (Wiens 1979), MAG, TBK *baːdut* 'clothes'. While this item occurs also in AMM, it is a probable loan from KLaNE.

*dulud 'to push', cf. PPH(Z) *tulu[d] 'to push along'; MAG *ʔidulud,* TBK *ʔidullud* 'to push'.

4.11 PROTO–CENTRAL-SOUTH KALINGA. Items that are not shared by any of the MSD or KLaN communities and that occur in the Central and Southern Kalinga areas are assigned to PKlaCS. Listed here are those items that appear not to be centered in the KLaC nor in the KLaS regions. Some of them, of course, are of such limited distribution that they most probably are local innovations that spread to another community or two in relatively recent times and do not represent items inherited from some higher level.

4.11.1 Lexical Innovations.

*ʔammɨ[kt], KLaC (BLC) *ʔammot* 'buttocks', KLaC (LBG) *ʔamot,* KLaSE (LBO) *ʔamʔammoʔ* 'anus'.

*ʔullaːlim, KLaC, KLaS *ʔullaːlim* 'story'.

*baksal, KLaC (GAL), KLaS (BAN) *baʔsal* 'to lie down'.

*bintug, KLAC (GUI), KLASE *bintug* 'to throw, toss'.

*d[ai]la:ʔag, KLAC *dala:ʔag, dila:ʔag, dalʔag,* KLAS (BAN) *dala:ʔag,* KLASW *dalag, dilag,* KLASE *dila:ʔag* 'red'.

*dawa, KLAC (LBG), KLASE (LBO) *mandawa* 'midnight'.

*[dg]i:ta, KLAC, KLAS (BAN) *di:ta,* KLAC (GUI) *gi:ta,* KLASW *gi:tagi:ta* 'earthquake'.

*kalittubaŋ, KLAC (TLC), KLASE (MNG) *kalittubaŋ* 'eggplant'.

*kam(a)lug, KLAC (LBG) *kamlug,* KLASW (DNC) *kammalog* 'ghost'.

*kamnɨt, KLAC (GAL) *ʔamnot,* KLAS *kamnot* 'difficult', KLASW *ʔamnut* 'hard (substance)'.

*kiwa:ʔal, KLAC, KLAS *kiwa:ʔal, ʔiwa:ʔal* 'to work'. Northern Bontok (Saclit) also has *kiwa:ʔal* 'to work', but it is most likely borrowed from KLA.

*kutiNɨl, KLAC (LBG) *kutile:* 'hard (substance)', KLASE (LBO) *ʔutiŋol* 'strong, healthy'.

*lid[ɨu]y, KLAC, KLAS, *lidoy,* KLASE *liduy* 'taro'. BLW *lidoy* is a loan from KLA.

*li:tap, KLAC, KLASE *li:tap,* KLASW (BUT) *ʔi:tap* 'flood'. There is unexplained loss of initial /l/ in BUT.

*p[ɨu]ya:ʔaw, KLAC (TLC) *puya:ʔaw,* KLAS (BAN) *poya:ʔaw* 'wind'.

*sil[ɨu]p, KLAC, KLAS *silop, silup* 'clothes'.

*t[ɨu]ll[ɨu]ŋ, KLAC (LBG) *ʔitolloŋ,* KLAC (TLC) *ʔitulloŋ,* KLASW (DNC) *ʔitolloŋ* 'to see'.

4.11.2 Semantic Innovations

*ʔawid 'to run', cf. PC *ʔawid 'to go home'; KLAC (TLC), KLASE (BAN) *ʔawid* 'to run'.

*ʔɨ:yɨn 'to go home', cf. PC *ʔay 'to go; to bring'; KLAC (BLC, LBG, TLC), KLASE (MNG) *ʔumo:yon* 'to go home'.

*ʔi:mis 'to laugh', cf. PNCC *ʔi:mis 'to smile'; KLAC (TLC), KLASE (MNG) *ʔi:mis* 'to laugh'.

*ba:yu 'to stab', cf. PPH(He) *bayu 'to pound'; KLAC (GUI), KLASW (KOL) *ba:yu* 'to stab'.

*dɨla, 'low', cf. PCC *dɨla 'below'; KLAC *nadola,* KLAS *kadolaʔan, ʔadolaʔan* 'low'.

*li:tiŋ 'shallow', cf. IFG *li:tiŋ 'water; KNKN *li:tiŋ* 'potable (water)', KLAC (PUA), KLASE (MNG) *li:tiŋ* 'shallow (water)'.

*padda, KLaC (TLC), KLaSE (LBO) *padda* 'light (color)'.

*sa:na 'today', cf. PNCC *naʔiy 'today, this'; KLaC *sa:na, sinsa:na,* KLaSW *sa:na, sasa:na,* KLaSE *sasa:na, sinsa:na, sesa:na* 'today'.

*sa:ŋa 'anger', cf. PNCC *sa:ŋa 'sad, lonely'; KLaC, KLaSE *sa:ŋa* 'anger'.

4.11.3 Phonological/Morphological Innovations

*ʔabɨy 'vagina', cf. PNCC *ʔubɨy 'vagina'; KLaC (LBG), KLaSE (LBO) *ʔaboy* 'vagina'.

*ʔalpu 'thigh', cf. PPH(Z) *ulpu 'thigh'; KLaC (PUA), KLaSW (BUT) *ʔalpu* 'thigh'.

*ʔaŋiŋi:wan 'shadow', cf. PC *ʔanini:wan 'shadow'; KLaC (GUI) *ʔaŋŋi-ŋi:wan,* KLaS (BAN) *ʔaŋiŋi:wan,* KLaSW (KOL) *ʔaniŋi:wan* 'shadow'.

*banʔit 'small', cf. PCC *banʔig 'small'; KLaC *banʔit, banbanʔit,* KLaS *banʔit* 'small', KLaSW *banit* 'narrow'.

*kuʔu 'to scratch', cf. PNCC *kuku 'to scratch'; KLaC (LBG) *kuʔu:wan,* KLaSE (MDK) *kuʔu* 'to scratch'.

*sɨggin 'to burn', cf. PPH(Z) *sɨjɨb and PKLA *sɨbgɨn 'to burn'; KLaC (LBG) *suggun,* (TLC) *suggon,* KLaS (BAN) *soggon* 'to burn'.

4.12 Proto–Central Kalinga (KLaC).
There are a number of items that are found exclusively in KLaC communities or that occur predominantly there. Those that appear in a KLaS community are listed after those in KLaC.

4.12.1 Lexical Innovations

*ʔallVt[ɨu]ŋ, GUI, TLC *ʔalluton,* GAL *ʔalloton,* BLC *ʔalliton;* KLaSW (KOL) *ʔalluton* 'anus'.

*ʔam[ɨu]y, BLC, LBG, PUA, TLC *ʔamoy;* KLaSW (DNC) *ʔamoy* 'to sit'.

*ʔamtuk, GUI *ʔamtuʔ,* BLC *ʔamtok* 'to fight'.

*baksi, GUI *baʔsi,* BLC *baksi* 'abaca'.

*balli:liŋ, BLC *balli:leŋ,* LBG *belli:liŋ,* PUA *billi:liŋ;* KLaSW (KOL) *balli:li* 'dragonfly'. There is apocope in KOL.

*d[au]ʔ[ɨu]y, GUI *duduʔuy,* BLC, PUA *duduʔoy,* LBG *dadaʔoy;* KLaSE (LBO) *dadaʔoy* 'sad, lonely'.

*gamp[ɨu]t, BLC, TLC *nagamput,* LBG *lagampot* 'already'; KLaSW (KOL) *nagampot* 'already'.

*la:ʔ[ɨu]ŋ, GAL *ʔila:ʔoŋ 'to throw, toss', PUA *ʔila:ʔoŋ 'to throw away'.

*laŋga:ŋan, BLC *laŋa:ŋen,* LBG, TLC *laŋa:ŋan;* KLASW (DNC) *laŋa:ŋan* 'cockroach'.

*puti:lak, GAL, BLC, LBG *puti:lak* 'white;' KLAS (BAN) *puti:lak* 'white'.

*tugda, GUI, GAL, BLC *tugda* 'breakfast,' LBG *tugda* 'lunch;' KLAS (BAN) *tugda* 'breakfast'. BUT cf. PPH(C) *tu[dD]a[q] 'remains' and PHF(Z) *tedaʔ 'leftovers; remainder'.

4.12.2 Semantic Innovations

*ʔibɨs 'to repeat', cf. PNCC *ʔibɨs 'to follow each other'; GUI *ʔobos,* GAL *ʔobson* 'to repeat'.

*ʔisa pɨn 'not (v., past and nonpast)', cf. PAN(Dy) *ʔisá 'one', PPH *ʔisa 'one; other, not this one'; GUI *ʔissa pon,* BLC, PUA *hapon* 'not (negator of nonpast verbs)', BLC, PUA *hapon* 'not (negator of past verbs)'.

*ki:bit 'to sew', cf. PNCC *ki:bit 'to pinch'; GUI *ʔi:bit,* LBG *ke:bit* 'to sew'.

*sa:di 'today', cf. PNCC *di 'that, there', possibly a fusion of a marker *sa + the deitic *di 'here, now'; GUI, PUA *sin sa:di,* GAL *sa:di,* BLC *hin sa:di;* KLASE (MNG) *sin sa:di* 'today'.

4.12.3 Phonological/Morphological Innovations

*ʔiway 'to wait', cf. PKLA *ʔuway 'to wait'; GAL, BLC, PUA *ʔiway* 'to wait'.

*ʔiwɨy 'rattan', cf. PAN(Dy) *quaqȝayi 'rattan'; GUI, GAL, BLC, PUA *ʔiwoy;* KLAS (BAN) *ʔiwoy* 'rattan'.

*dɨlʔag 'neighbor', cf. PSCC *daʔlag 'neighbor'; GAL, BLC *dolʔag* 'neighbor'.

*lanti 'green', cf. PNCC *lansi 'green'; GUI, GAL, BLC, LBG, PUA *lanti* 'green'. BUT cf. Tagalog *luŋtiʔ* 'green.'

*lubɨn 'to bury', cf. PSCC(R) *lɨbɨn 'to bury, day of mourning' and PAN(Z) *lebeŋ 'to bury'; GAL *ʔilubon,* BLC, TLC *lubon,* LBG *ʔilubun* 'to bury'.

*santuk 'to hit, box', cf. PPH *suntuk 'to hit (with the fist)'; GAL *santok,* LBG *santuk;* KLASE (MNG) *santuk* 'to hit, box'.

*sikid 'to stand', cf. PC *sikad 'to stand'; BLC, LBG *sikid* 'to stand'.

4.13 PROTO–SOUTHERN KALINGA. Items that appear only in the KLAS area or that seem to be centered there are included here.

4.13.1 Lexical Innovations

*badu:ʔul, KLASE (MNG) *babadu:ʔul,* KLASW (BUT) *badu:l,* KLAC (TLC) *babadu:ʔol* 'sad, lonely'.

*laŋgan, KLASW (DNC) *lalaŋgan,* (BUT) *laŋgan,* KLASE (LBO) *lalaŋgan,*
'water jar'. Northern Bontok (Saclit) *laŋgan* is a probable loan from KLASW.

*lind[ɨu]ŋ, KLAS (BAN), KLASW (KOL, TUL, BUT, DNC), KLASE (LBO)
lindoŋ; KLAC (LBG) *lindoŋ* 'straight'.

*pɨtaw, KLAS (BAN), KLASE (MNG, LBO) *potaw* 'cogon'.

4.13.2 Semantic Innovations

*ʔuma 'slow', cf. PC *ʔu:ma 'tired'; KLAS (BAN) *ʔumʔumma* 'slow,' KLASE
(MNG) *ʔumʔumaʔam* 'do it slowly'.

*maŋan 'morning, noon', cf. PPH(Z) *maŋan 'to eat'; KLAS (BAN) *maŋ-
maŋan* 'morning', KLASW (BUT) *maŋmaŋan* 'noon'.

4.13.3 Phonological Innovations

*ballu 'to throw, to throw away', cf. PNCC *balnu 'to throw, to throw away';
KLASW (KOL, ATI) *ʔiballu* 'to throw, toss', KLAS (BAN) *ʔiballo,* KLASW
(ATI, DNC) *ʔiballo,* KLASW (BUT) *ʔiballu,* KLASE (MNG, LBO, MDK) *ʔiballu*
'to throw away;' KLAC (LBG) *ʔibillu* 'to throw, to throw away,' KLAC (TLC)
ʔiballu 'to throw away'.

*duddut 'feather, body hair', cf. PC *dutdut 'feather, body hair'; KLAS
(BAN), KLASE (LBO) *duddut* 'feather, body hair'. Gaddang *duddut* is a
regular development from PC *dutdut 'feather, body hair'.

*kalidulwa 'soul, spirit', cf. PC *kaliduwa 'soul, spirit'; KLAS (BAN),
KLASW (TUL) *ʔalidulwa* 'soul'.

*kɨsdɨl 'strong', cf. PSCC *kɨdsɨl 'strong, hard'; KLAS (BAN), KLASW
(KOL) *ʔosdol,* KLASE (MNG) *kosdol,* (MDK) *kasdol* 'strong', KLASE (LBO)
ʔosdol 'hard'; KLAC (TLC) *kosdol,* (LBG) *kosde* 'strong'.

*kɨtɨg 'to bite', cf. PPH *keteb 'to bite'; KLAS (BAN) *ʔumtog,* KLASE (LBO)
ʔotog, (MDK) *kumtog* 'to bite'.

*liNsi 'green', cf. PNCC *lansi 'green'; KLAS (BAN), KLASW (BUT),
KLASE (MDK) *linsi,* KLASE (LBO) *liliŋsi* 'green;' KLAC (TLC) *liŋsi* 'green'.
BLW (Alunugan) *lilinhi* 'green' is a likely borrowing from KLASE.

4.14 PROTO–SOUTHWESTERN KALINGA

4.14.1 Lexical Innovations

*ʔalimawmaw, KOL, TUL, BUT *ʔalimawmaw* 'echo'. BUT cf. Tagalog
ʔaliŋawŋaw 'echo'.

*pi:pit, KOL, BUT *pi:pit* 'skinny'.

*tagliŋ, KOL, TUL *tagliŋ* 'cold'.

4.14.2 Semantic Innovations

*buduk 'anger', cf. Bontok *bodok* 'to speak angrily', Ifugaw *buduk* 'explosion'; KOL *budoʔ,* BUT *buduʔ* 'anger'.

*piya 'sweet', cf. PAN(B) *pia 'good'; DNC, KOL, TUL, BUT *piya* 'sweet'.

4.14.3 Phonological/Morphological Innovations

*baʔit 'small', cf. PKLA *banʔit 'small'; KOL *baʔit,* TUL *baʔbaʔit* 'small'. Cf. BAN, which has both *ganʔit* and *gaʔit* 'small'.

*kattil 'sweet potato', cf. PKI *ka(n)tiːla 'sweet potato'; ATI, DNC *kattil* 'sweet potato'.

*tugba 'to spit', cf. PMC(R) *tugpa 'to spit'; KOL, TUL *tugba* 'to spit'.

*yaNpaw 'light (weight)', blend of PC *laŋpaw and PSCC *yaʔpɨw 'light (weight)'; DNC, KOL *yampaw,* DNC *yaŋpaw* 'light (weight)'.

4.15 Proto–Southeastern Kalinga. Several items are found exclusively in KLASE, and several more appear to be centered there with representation also in nearby TLC and occasionally in LBG.

4.15.1 Lexical Innovations

*ʔiːtak, MNG *ʔiːtak,* LBO *ʔiʔiːtaʔ,* MDK *ʔaʔiːtak;* KLAC (TLC) *ʔiʔiːtak* 'white'.

*dalnig, MNG, LBO *dalnig;* KLAC (TLC) *dalnig* 'neighbor'.

*gɨːŋat, LBO, BUN, MDK *goːŋat, goŋaːton,* LBO *gumnat* 'to kill'.

*kimɨt, MNG *makimot,* LBO *ʔimot* 'to fear'.

*kuːya, MNG *kuːya,* LBO *ʔuːya;* KLAC (TLC) *kuːya* 'weak'.

*lapsak, MNG *lassak,* LBO linapsaʔ, MDK *lapsak* 'floor'. With regressive assimilation of the bilabial stop in MNG.

*ŋaʔi, MNG, BUN *ŋaʔi* 'whatʔ, whoʔ'. Cf. ILK *ŋay,* adverbial form that commonly follows interrogatives (Lawrence Reid, pers. comm.).

4.15.2 Semantic Innovations

*ʔagaːʔag 'to weep', cf. PNCC *ʔagaːʔag 'to squeal'; MNG, LBO *ʔagaːʔag* 'to cry, weep'.

*gasiːlaŋ 'sweet potato', cf. PNCC *gasiːlaŋ 'kind of grain'; MNG, BUN *gaseːlaŋ,* LBO *gassiːlaŋ,* MDK *gasiːlaŋ* 'sweet potato'; KLAC (LBG) *kasiːlaŋ,* (TLC) *gasiːlaŋ* 'sweet potato'. The devoicing of the initial stop in LBG is unexplained; Gaddang of Mountain Province has *gasiːlaŋ,* but it is a probable loan from KLASE.

*suːŋad 'mouth (of person)', cf. PPH(Z) *suŋaD 'snout'; Mng, Bun, Mdk *suːŋad,* Lbo *suːŋat;* KlaC (Tlc) *suːŋad* 'mouth'. There is unexplained devoicing of the final segment in Lbo.

4.15.3 Phonological/Morphological Innovations

*balaːtaŋ 'chin', cf. PNCC *palaːtaŋ 'chin'; Lbo, Mdk *balaːtaŋ* 'chin'.

*dupit 'shore', cf. PAn(D) *da(m)pit 'edge'; Lbo, Mdk *dupit* 'shore'.

*giłibi 'yesterday', cf. PNCC *galabi 'yesterday'; Lbo *golbiyan,* Mdk ʔad *golobiyan* 'yesterday'.

*kisyad 'to kick', cf. PSCC *sikyad 'to kick'; Mng *kisyad,* Lbo *ʔisyad* 'to kick'.

*tawwaŋ 'river', cf. PNCC *dawwaŋ 'river'; Mng, Lbo, Bun *tawwaŋ* 'river'.

5. CONCLUSION. The Itneg and Kalinga languages, spoken primarily in Abra and Kalinga provinces, differ from other Central Cordilleran languages in a number of features. They also exhibit the types of dialect variation common to other CC languages, phonologically, morphologically, and lexically. While Itneg is comparatively conservative phonologically in its retention of the PCC phonemic inventory, Kalinga shares phonological variation in its reflexes of the high central vowel, the lateral, and the voiced stops with Bontok, Kankanaey, Balangaw, Ifugaw, and Isinai. The lexical, morphological, phonological, and semantic innovations that occur within the KI group of dialects argue for a division into eastern and western Itneg, and for a tripartite division of Kalinga into Masadiit, Northern, and Central-South areas. In the case of both languages, these linguistic distinctions are likely to be reflective of the ways in which Abra and Kalinga were populated, and of subsequent interaction.

The eastern Itneg area was most likely settled before the demographic influx of Inlaod speakers (and later, Iloko speakers) into the central Abra area. There is a very large number of Iloko words that have diffused into all the CC languages. Within Itneg, the differential influence of Iloko is reflected in that the vocabularies of the eastern sites contain 35 Iloko items (on a standard 574-word eliciting schedule) not generally appearing in the west, whereas the western communities use 196 Iloko words that do not occur in the eastern wordlists.

Likewise, the different regions of the Kalinga-speaking area show the influence of neighbors. As noted above in passing, there has been considerable linguistic exchange between Southern Kalinga and Bontok, as there has been between Southeastern Kalinga and Balangaw. The Northern Cordilleran languages of the Cagayan Valley have contributed lexemes to all of the CC languages, and some of this is very apparent, as the Isnag and Adasen words in Itneg, and the Gaddang terms found in Balangaw, Ifugaw, and Isinai. There are 14 NC terms that are

restricted in their distribution to the northern Kalinga area. This is evidence, of course, of more intimate and/or more enduring contact between the peoples speaking NC languages and the KʟᴀN dialects. An additional 15 items, however, are generally shared widely by Kalinga dialects, and some of these occur in Bontok, Kankanaey, and other Nuclear Central Cordilleran locales as well. The infusion of some quite basic vocabulary must date back a very long time, before certain sound changes occurred in NC and before certain inherited lexemes were replaced by innovations within that family. Since Bontok and Kankanaey are not geographically close to any NC-speaking community today, these contributions to the vocabulary must have been direct loans at a distant time in the past, or they must have entered the languages via contact with another language, such as Kalinga. The data that follow provide an example of this point.

			NC	KʟA	Bᴏɴ
PPʜ(He)	*qaRtey	'liver'	ʔagtay[13]	ʔagtoy	ʔagtɨy
PC(R)	*takdeR	'stand'	taʔdʌg[14]	takdog	takdɨg
PC	*sakRud	'horn'	saʔgud[15]	sakgud	sakgod
PAɴ(Dy)	*beRas	'husked rice'	bʌggas[16]	bogas	bɨgas

In each of these cases, both KʟA and Bᴏɴ have /g/ where the expected reflex of */R/ is /l/. Indeed, Bontok of Tocucan has ʔaltɨy 'liver;' Iᴛɢ (Pɴʀ) has saklud 'horn;' and KɴᴋN has biʔas 'weeds'.[17] In the light of evidence such as this, Keesing may well have been right in tracing the origins of the modern Kalinga along a path traveling southward along the Cagayan River. During such a migration, the Kalinga would have come into contact with speakers of NC languages, and, over what must have been a significant timespan, considerable exchange of linguistic knowledge would have occurred.

When the items suspected of being diffused are sorted out, there still remains a considerable residue that can confidently be ascribed to the languages ancestral to modern Itneg, to modern Kalinga, and to the two of them together.

APPENDIX

Most of the data on which this paper is based were collected in the field during the years 1962–64, 1966–68, 1977, 1981, 1989, and 1995. The literature provided some data for the dialects spoken in Peñarrubia (McFarland 1977), Baay-Licuan (Reid 1971, Walton 1975), Manabo (McFarland 1977), Limos (Wiens 1976, 1979), Tabuk (McFarland 1977), and Guinaang (Gieser 1958, 1970, 1972a, 1972b, Hale and Gieser 1977, Reid 1971). Comparative data were taken from Headland and Headland (1974), Himes (1988), Lambrecht (1978), McFarland (1977), Panganiban (1973), Reid (1971, 1976), Scott (1957), and Vanoverbergh (1933, 1956, 1972).

The dialect areas proposed here, and the abbreviations for the research sites, are as follows:

Itneg (ITG)

Binongan (BIN): Nalbuan, Baay-Licuan (LIC), Tumalip, Baay-Licuan (BAA), and Poblacion, Lacub (LAC), all in Abra.

Inlaod (INL): Dumayco and Poblacion, Peñarrubia (PNR), Caopasan, Danglas (DLS), Tangadan and Poblacion, San Quentin (SQN), and Lumaba, Villaviciosa (VIL), all in Abra.

Kalinga (KLA)

Masadiit (MSD): Poblacion, Manabo (MAN), Subusob, Sal-lapadan (SAL), Poblacion, Boliney (BLY), and Labaan, Bucloc (BUC), all in Abra.

Northern Kalinga (KLAN)

Northwestern Kalinga (KLANW): Ibanaw of Poblacion, Daguioman (BNWD), Ibanaw of Taripan and Poblacion, Malibcong (BNWM), both in Abra; Ibanaw of Talalang (BNWT) and Balbalasang (BNWB) in Balbalan, Kalinga; Imabaka of Dulao, Malibcong (MBKM) and Gubang of Buanao, Malibcong, Abra; and KLANW of Ammacian (AMM), Quirino, Kalinga.

Northeast Kalinga (KLANE): Magnao (MAG) and Poblacion (TBK), Tabuk, Kalinga.

Central-South Kalinga (KLACS)

Central Kalinga (KLAC): Guinaang (GUI), Galdang (GAL), Balenciagao (BLC), and Puapo (PUA) in Pasil, Manangol and Poblacion, Lubuagan (LBG), and Taloctoc (TLC), Tanudan, all in Kalinga.

Southern Kalinga (KLAS)

Southwestern Kalinga (KLASW): Kolayo, Balatoc (KOL) in Pasil, Tulgao (TUL) and Ngibat, Butbut (BUT) in Tinglayan, all in Kalinga; Amti (ATI) and Danac (DNC), Boliney, both in Abra.

Bangad, Tinglayan (BAN)

Southeastern Kalinga (KLASE): Mangali (MNG) and Lubo (LBO) in Tanudan, Kalinga; Bunut (BUN) in Dalipoy, Paracilis, and Madukayong (MDK) in Natonin, Mountain Province.

NOTES

tributed many useful comments on earlier drafts of the paper, as have the anonymous readers, but I alone remain responsible for any errors and shortcomings in the text.

     Abbreviations used for many of the language and dialect names are to be found in the Appendix. In addition, the following are also used: ADA, Adasen; BLW, Balangaw; BON, Bontok; CC, Central Cordilleran; IFG, Ifugaw; ILK, Iloko; KI, Kalinga-Itneg; KNKN, Northern Kankanaey; NC, Northern Cordilleran; PAN, Proto-Austronesian; PC, Proto-Cordilleran; PCC, Proto–Central Cordilleran; PHF, Proto-Hesperonesian-Formosan; PHN, Proto-Hesperonesian; PITG, Proto-Itneg; PKI, Proto-Kalinga-Itneg; PKLA, Proto-Kalinga; PMC, Proto-Meso-Cordilleran; PMP, Proto-Malayo-Polynesian; PNCC, Proto–North Central Cordilleran; PNUCC, Proto–Nuclear Central Cordilleran; PPH, Proto-Philippine; PPHN, Proto–Northern Philippine; PSCC, Proto–South-Central Cordilleran; PWMP, Proto–Western Malayo-Polynesian.

2. In Manabo the dialect is called Muyadán rather than Masadiit.

3. Ibanaw and Imabaka reveal the eastern origin of these dialects, in being named after regions, rivers and/or place-names in Balbalan. Gubang is taken from the river and the former village Gobang (Scott 1969:131), also in Balbalan.

4. Reconstructions at the levels of PAN, PMP, PWMP, PHN, and PPH are those of Blust (B), Charles (C), Dempwolff (D), Dyen (Dy), Healey (He), and Zorc (Z) as they appear in Wurm and Wilson (1975). Additional reconstructions are from Blust (1970, 1980, 1986, 1989), Zorc (1986, 1994), and Himes (unmarked). Reconstructions at the levels of PC and below are those of Reid (R) and Himes (unmarked).

5. McFarland records *?oŋol* for MAN, but my data have the expected *?aŋol* from PNCC *?iŋil 'nose'.

6. The consonant cluster */nl/ is reflected as /ll/; e.g., *mallaŋoy* 'to swim' vs. *mantapog* 'to swim'. The data at hand do not contain any occurrences of *l preceded by another alveolar consonant, but note the velar substitution in the reduplicated root of *mallag-ladi:ŋit* 'sad, lonely'.

7. ITG and KLA both have reflexes of PPHN *Duwata '1 + 2 s' as *dowa:ta* and *duwa:ta*, respectively; cf. Sambal of Botolan *luwa:ta*. LAC also has the form *dikta*.

8. The Inlaod dialects have the etymologically curious forms *dobli:na* and *dobna*.

9. BAN, MNG, LBO, and MDK have the 1P genitive /-ni/, a development shared with BLW, which Reid (1974, pers. comm.) suggests is an analogical development so that all nasal initial genitive pronouns begin with an alveolar.

10. As in BLW, BAN has extended the /n/ of the genitive to the long nominative form.

11. Segments that appear to have been optional are enclosed in parentheses; for example, the lexeme that yielded both *kanti:la* and *kati:la* is reconstructed as *ka(n)ti:la. Ambiguous segments are enclosed in square brackets; thus, *[st]abbak is reconstructed for the lexeme ancestral to both *sabbak* and *tabbak*.

12. Lawrence Reid (pers. comm.) suggests that this item could be a loan from ILK *baba* 'below', with a shift from /a/ to /u/ between voiced bilabial stops, but this rule does not seem to operate in KI. Cf. PAN(Z) *ba-báHi > ITG, MSD, KLAN, KLAC, KLAS *baba:?i* 'woman, female'; PAN(C) *babuy 'pig' > ITG *ba:boy*, KLA ba:buy 'wild pig'; PSCC *ba?ba > KLAS *baba* 'tooth'.

13. Isnag and Malaweg; most NC languages have reflexes of Proto–Northern Cordilleran *?agel 'liver'.

14. Malaweg, Itawis, and Gaddang.

15. Adasen, Isnag, and Malaweg; Itawis and Gaddang *ta?gud* 'horn'.

16. Adasen and Malaweg; Itawis and Gaddang *bʌggat* 'husked rice'.

17. While no CC language for which evidence is available has an expected reflex of *takdeR, Ahin Kalanguya (a Southern Cordilleran language closely releated to CC) has *tekdel* 'to stand'.

REFERENCES

Barton, Roy F. 1949. *The Kalingas: Their institutions and custom law.* Chicago: University of Chicago Press.

Blust, Robert. 1970. Proto-Austronesian Addenda. *Oceanic Linguistics* 9:104–162.

———. 1980. Austronesian etymologies. *Oceanic Linguistics* 19:1–181.

———. 1986. Austronesian etymologies—III. *Oceanic Linguistics* 25: 1–123.

———. 1989. Austronesian etymologies—IV. *Oceanic Linguistics* 28:111–203.

Brainard, Sherri. 1985. Upper Tanudan Kalinga texts. In *Studies in Philippine Linguistics,* ed. by Fe T. Otanes and Austin Hale. Supplementary Series: Philippine Texts No. 1. Manila: Linguistic Society of the Philippines and Summer Institute of Linguistics.

Cole, Fay Cooper. 1922. The Tingguian: Social, religious and economic life of a Philippine tribe. *Field Museum of Natural History, Anthropological Series* 14:231–493.

———. 1945. The peoples of Malaysia. Princeton: D. Van Nostrand.

Dozier, Edward P. 1966. *Mountain arbiters: The changing life of a Philppine hill people.* Tucson: University of Arizona Press.

Gieser, C. R. 1958. The phonemes of Kalinga. In *Studies in Philippine Linguistics,* pp. 10–23. Oceania Linguistic Monographs No. 3. Sydney: University of Sydney.

———. 1970. The morphophonemic system of Guininaang (Kalinga). *Philippine Journal of Linguistics* 1:52–68.

———. 1972a. *Kalinga sequential discourse. Philippine Journal of Linguistics* 3:15–33.

———. 1972b. Phonemic and morphemic efficiency in Kalinga. *Phonetica* 25:216–246.

Grayden, Bruce. 1979. The Southern Kalinga /l/. Papers in Philippine Linguistics No. 9. *Pacific Linguistics* A-50:91–100.

Hale, Austin, and C. R. Gieser. 1977. Approaches to an explanatory discourse in Guinaang Kalinga. Studies in Philippine Linguistics, 1 (1):133–146. Manila: Linguistic Society of the Philippines and Summer Institute of Linguistics.

Headland, Thomas N., and Janet D. Headland. 1974. *A Dumagat (Casiguran)–English dictionary.* Pacific Linguistics C-28. Canberra: The Australian National University.

Himes, Ronald S. 1984. Allophonic variation and the Bontok-Kankanaey voiced stops. *Philippine Journal of Linguistics* 15.1,2:49–56.

———. 1988. Central Cordilleran, Philippines, cognate sets 1–574. Online database in The Pacific and Asian Language Archives, University of Hawaii.

———. 1990. An algorithm for the derivation of Isinai from Proto–Central Cordilleran. *Philippine Journal of Linguistics* 21.2:1–13.

———. 1994. Central Cordilleran addenda II. *Philippine Journal of Linguistics* 15:1, 2:1–42.

Keesing, Felix M. 1962. *The ethnohistory of northern Luzon.* Stanford, Stanford University Press.

Lambrecht, Frans Hubert. 1978. *Ifugaw–English dictionary.* Baguio City: The Catholic Vicar Apostolic of the Mountain Province.

Lawless, Robert. 1977. *Societal ecology in northern Luzon: Kalinga agriculture, organization, population, and change.* Papers in Anthropology, vol. 18, no. 1. Norman, Oklahoma: Department of Anthropology, University of Oklahoma.

McFarland, Curtis D. 1977. *Northern Philippine linguistic geography.* Monograph Series No. 9. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.

———. 1980. *A linguistic atlas of the Philippines.* Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.

Panganiban, Jose V. 1973. *Diksyunaryo Tesauro Pilipino–Ingles.* Quezon City: Manlapaz Publishing Co.

Reid, Lawrence A., ed. 1971. *Philippine minor languages: Word lists and phonologies.* Oceanic Linguistics Special Publication 8. Honolulu: University of Hawai'i Press.

Reid, Lawrence A. 1973. Kankanay and the problem *R and *l reflexes. In *Parangal kay Cecilio Lopez: Essays in honor of Cecilio Lopez on his seventy-fifth birthday,* ed. by Andrew B. Gonzalez, pp. 51–63. Philippine Journal of Linguistics, Special Monograph Issue No. 4.

———. 1974. The Central Cordilleran subgroup of Philippine languages. *Oceanic Linguistics* 13:511–560.

———. 1976. *Bontok–English dictionary.* Pacific Linguistics C-36. Canberra: Australian National University.

———. 1979. Towards a reconstruction of the pronominal systems of Proto-Cordilleran, Philippines. In *South-East Asian Linguistic Studies,* vol. 3, pp. 259–275. Pacific Linguistics C-45. Canberra: Australian National University.

———. 1992. *Guinaang Bontok texts.* Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.

Scott, William H. 1957. *A vocabulary of the Sagada Igorot dialect.* Philippine Studies Program, Transcript No. 6. Chicago: Department of Anthropology, University of Chicago.

———. 1969. *On the Cordillera: A look at the peoples and cultures of the Mountain Province.* Manila: MCS Enterprises, Inc.

Vanoverbergh, Morice. 1933. *A dictionary of Lepanto Igorot or Kankanay, as it is spoken at Bauko.* Internationale Sammlung Linguistischer Monographien 12. Modling bei Wien: Verlag Anthropos.

———. 1956. *Iloko–English dictionary.* Translated, augmented, and revised from Rev. Andrés Carro's Vocabulario Iloco–Español. Baguio City: Catholic Press.

———. 1972. *Isneg–English vocabulary.* Oceanic Linguistics Special Publication 11. Honolulu: University of Hawai'i Press.

Walton, Janice. 1975. *Binongan Itneg sentences.* Pacific Linguistics B-32. Canberra: Australian National University.

Wiens, Hartmut. 1976. Phonological features of Limos Kalinga, with comments on affected speech. *Philippine Journal of Linguistics* 7:38–47.

———. 1979. The semantic function of focus affixes in Limos, Kalinga. Papers in Philippine Linguistics No. 9. *Pacific Linguistics* A-50:19–47.

Wurm, S. A., and B. Wilson. 1975. *English finderlist of reconstructions in Austronesian languages (post-Brandstetter).* Pacific Linguistics C-33. Canberra: Australian National University.

Zorc, R. David. 1986. The genetic relationships of Philippine languages. In *Focal 2: Papers from the Fourth International Conference on Austronesian Linguistics,* ed. by Paul Geraghty, Lois Carrington, and S. A. Wurm, pp. 147–173. Pacific Linguistics C-94. Canberra: Australian National University.

———. 1994. Austronesian culture history through reconstructed vocabulary (an overview). In *Austronesian terminologies: continuity and change,* ed. by A. K. Pawley and M. D. Ross, pp. 541–594. Pacific Linguistics C-127. Canberra: Australian National University.