

The Alta Languages of the Philippines^{*}

1. Introduction¹

This paper reports the results of fieldwork undertaken during the summer, 1987, on various little-known languages of the Philippines spoken by Negritos. The two languages discussed here are both known as Alta. For the purpose of distinguishing them, I shall henceforth refer to them as Southern Alta (ALT_S) and Northern Alta (ALT_N).²

The paper will discuss the degree of lexical relationship that Northern Alta and Southern Alta hold with each other, and with surrounding languages. It will also examine the reflexes of various reconstructed forms in these languages, and the phonological, lexical and morphological innovations that may be used to determine their immediate genetic relationships. It will be concluded that although these groups bear the same name, Alta, and live in geographically contiguous areas, they are clearly distinct languages and have quite different linguistic histories. Together they will be shown to be probably remotely re-

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² See section 4b for a list of the main languages which comprise the South-Central Cordilleran subgroup, and Figure 1 for a diagram of their subgrouping relationships.

lated to the South-Central Cordilleran language family,³ and the only extant Negrito groups to be related to this family. Some implications for prehistory will be outlined in the conclusion.

1.1 Location

Southern Alta speakers live primarily in the Sierra Madre of eastern Nueva Ecija and the adjacent coastal areas of Quezon Province. Language data was gathered in a settled community of some thirty houses surrounded by cultivated fields growing primarily corn at San Miguel, about nine hours by trail east of Rio Chico, a barrio of General Tinio. In addition to the usual more-or-less derogatory appellations given by non-Negritos to Negritos (such as Baluga, Pugot, Ita, and so on), the Southern Alta are commonly referred to as Kabuluwan, which probably associates them with the Bulu, a small river flowing west past Malibay in northern Bulacan province, with headwaters in the area of Mt. Bisal on the boundary of Nueva Ecija and Bulacan. Whether Alta still live along this river is unclear. However there are Southern Alta reported to be living considerably further south, near Norzagaray in Bulacan.

The range of Southern Alta speakers is bounded on the south by that of the Agta Negritos commonly referred to in the literature as Umiray Dumagat. To the north, Southern Alta speakers probably range no farther than the Gabaldon municipality (there are communities near Pagsanghan and Mabaldog, barrios of Gabaldon), although communities of Alta, speaking what appears to be a phonologically more conservative dialect of Southern Alta are located at Dicapanikian and Dicapanisan, on the coast north of Dingalan. A wordlist was collected from a speaker of the Dicapanikian dialect during a visit to Dingalan in June 1987.

Northern Alta speakers live in the Sierra Madre along the river valleys that flow out to the Baler plain in Aurora Province. These Alta are also known as Edimala (Wesley Petro, pers. comm.). There is also said to be a community at Dibut, on the coast south of Baler, and north of Dicapanisan, but I did not have

³ Editors' note: An Amganad Ifugao narrative text which makes reference to contact between Ifugaos and Alta Negritos is found in Madrid (1980:117-121). The text states that these Negritos lived in caves "on the mountain top between Hingyon and Ubwag". The location of these place names is not further identified in the article, but was apparently in the hunting range of Amganad Ifugao people.

opportunity to visit this area or to verify the language spoken. Field work was done with a Northern Alta speaker from Malabida, who was visiting in Bayanihan, a community of Ilongot speakers north of Maria Aurora at the edge of the Sierra Madre.

The range of the Northern Alta extends northward towards that of the speakers of Casiguran Agta, and perhaps as far as the headwaters of the Cagayan and Diduyon Rivers in Quirino province where a few families of Arta Negritos still live.

1.2 Previous references to Alta

The first reference to the Alta is probably in Ferdinand Blumentritt's *Versuch einer Ethnographie der Philippinen* (1882:32), and cited in Worcester (1906:791). Blumentritt referred to a group called "Altasanes" who lived in northwestern Nueva Vizcaya. Worcester (1906:826) stated categorically, "Altasanes. Name formerly applied to the *Ifugaos* of northwestern Nueva Vizcaya. No such people now exists."⁴

It is not until 1937 that the first information on the language of these Negritos appeared. Vanoverbergh (1937) refers to the group as Baler Negrito. The 313 words and phrases that he published were "written down with the help of two Negrito men from Ditailin, both of whom spoke Tagalog, while one of them also spoke fluent Iloko." Ditailin is located between the towns of Baler and Maria Aurora. The dialect as recorded by Vanoverbergh is representative of what I here refer to as Northern Alta. The great majority of the forms are the same as, or similar to, those that I recorded. In 1956, the anthropologist Robert B. Fox collected a 206-item wordlist at a place called Ditayilin, apparently the same area that Vanoverbergh had visited. The language is also Northern Alta.

⁴ There are other early references to Negritos which may have been Alta. In the Report of the Philippine Commission (3:333-412) published in 1900, (cited in Worcester 1906:793) the Jesuit Mission of Manila mentions the presence of "Balugas" (referring to Negritos who have intermarried with non-Negritos) in the eastern Cordillera of Nueva Ecija (precisely the area occupied today by Southern Alta). "Dumagas" (sic) are reported in the mountains from Baler and Casiguran to Cape Engaño (the Baler "Dumagats" were probably Northern Alta.) Similarly, in the posthumous publication of Garvan's fieldwork in the early 1900's (Garvan 1963:8-9), he reported Baluga "20 kil. east of Norzagaray" and "20 kil. north of Malolos", which would place them somewhat south of the present location of the Alta. However, he was probably referring to Southern Alta, rather than to the Dumagats of Dinalan and vicinity. Reed (1904:18) refers to Blumentritt's note about the Negritos of Baler, but comments, "...it yet remains for someone to make a study of them on the spot."

The name Alta (Baler and Ditailin) is also found on Fox and Flory's map of Philippine ethnolinguistic groups (1974).

The only data previously available on Southern Alta is an unpublished wordlist of 350 items collected by Wesley Petro (1974), formerly of New Tribes Mission.

2. The Relationship between Northern and Southern Alta

One of the most surprising facts to emerge from this study is the distance of the relationship of the two Alta speech communities. Having the same name, and being distributed across geographically contiguous ranges, I originally assumed that they were probably dialects of a single language, or at least fairly closely related languages, similar to the relationship which exists between the various contiguous Agta languages of northeast Luzon (Headland 1975). However, even a cursory examination of the data shows that this is far from the truth. The two Alta languages are only distantly related to each other.

Of the 539 lexical items collected,⁵ the two languages share only 185,⁶ or 34%. They share only 37% (111/300) of inherited forms, that is, those forms for which reconstructions at some earlier stage are available. That these two languages are among the lexically most innovative of Philippine languages is suggested by an examination of their reflexes of Blust's (1981) modified Hudson list of 200 items.

This list, for which Proto-Malayo-Polynesian reconstructions are available for all items,⁷ was developed by Blust to compare retention rates among Austronesian languages.⁸ He has calculated the retention rates for various northern

⁵ For best comparability with the lexicons of other Philippine languages, I decided to use McFarland's (1977) wordlist. For best comparability with the syntax of other Philippine languages, I based elicitation on the structures found in Yamada and Tsuchida (1983).

⁶ Only true cognates, that is, forms which are relatable by systematic sound correspondences, were counted as being shared. Two similar forms, either or both of which were clearly borrowed because they contained irregular reflexes of reconstructed forms, or which contained a unique phonological or semantic development were not counted as cognate.

⁷ Proto-Malayo-Polynesian, as commonly used today, is the parent language of all Austronesian languages, excepting the Formosan Austronesian languages, that is, those spoken on the island of Taiwan.

⁸ Editors' note: The Austronesian Basic Vocabulary Database is now online at: <http://language.psy.auckland.ac.nz>.

Philippine languages as follows (Blust, pers. comm.): Ilokano 44.7% (89/199), Ibanag 41.8% (81/194), Itbayaten 40.2% (74/184), Pangasinan 37.2% (74/199), Bontok 36.9% (73/198), and Ilongot 34.2% (68/199). Tagalog has retained 46% (92/200), and Tboli in the southern Philippines has retained 37.4% (73/195). Southern Alta has retained only 35.1% (67/191), and Northern Alta 38.2% (73/191). They share between themselves just 26.2% (50/191) of the reflexes.

Comparison of the full (539 item) lists with those in McFarland (1977) and published sources for other Philippine languages (mainly Reid 1971, and especially Headland and Headland 1974), indicates that approximately 28.2% (152/539) of the Southern Alta list are unique forms,⁹ see Table 1, while the Northern Alta list contains some 22.6% (122/539) unique forms, see Table 2.

[Tables 1 and 2 about here](#)

Lexical innovation is one explanation for the low percentages of inherited forms. Replacement of such items by forms borrowed from languages with which the Alta have maintained symbiotic trading relationships over perhaps thousands of years, is another (see a fuller discussion of this hypothesis in Reid 1987, Headland and Reid 1989, and 1991). Although not so apparent in looking at the basic meanings of the Blust list, Southern Alta showing only five probable borrowed forms and Northern Alta only eight probable borrowings, when looking at the other 329 items in the elicited lists, the affect of borrowing, especially from Tagalog, is highly significant (see Reid 1989).

Although only distantly related, the two languages possibly form a subgroup. Some ten lexical items in the full lists appear to be uniquely shared lexical innovations between the two languages (see Table 3). Another five sets of cognates are uniquely shared with Casiguran Dumagat (see Table 4).

[Tables 3 and 4 about here](#)

⁹ Unique forms are those forms for which no true cognate has been found in other languages. The term thus includes forms which may appear similar to those in other languages but which have undergone some innovation such as either a semantic shift or a sporadic phonological change which is not shared with other languages.

It will become clear when examining the innovations that the Alta languages share with South-Central Cordilleran languages that their closest genetic relationship is with this family of languages, a family to which the Casiguran Dumagat (Agta) language does not belong. This language, as with the other Agta languages of northeast Luzon, as well as with Paranan and East Cagayan Negrito, are more closely related to the Northern Cordilleran family. The forms that the Alta languages together uniquely share with Casiguran Dumagat then (see Table 4), cannot be considered to be evidence of a Negrito subgroup consisting of Casiguran Dumagat (Agta) and the Alta languages. Rather, this is evidence of the considerable interaction between these groups, going back prior to the dispersal of the Alta (for further discussion, see Reid 1989). This is also apparent from the data given in Tables 5 and 6, which show that both Northern and Southern Alta separately share a number of unique lexical items with Casiguran Dumagat, items that they do not share with each other. The direction of borrowing cannot be determined since nearly all seem to have participated in the phonological changes that characterize the inherited lexicons of the individual groups.

[Tables 5 and 6 about here](#)

The data in Table 7 suggests that interaction between the various Negrito groups of Northern Luzon has been long and continuous. The forms given in this chart have not yet been found to have cognates in any non-Negrito language. Arta is probably distantly related to Ilokano, and is the only other language in Luzon with an /r/ reflex of *R. Central Cagayan Agta (Agta) is fairly closely related to Ibanag, and is a Northern Cordilleran language. The possibility that these forms are part of a pre-Austronesian Negrito language stratum is examined in Reid (1990).

[Table 7 about here](#)

3. Alta Reflexes

This section deals with the reflexes of various reconstructed phonemes in Northern and Southern Alta.

3.1 Reflexes of *R

Reconstructions containing *R are available for various protolanguages ancestral to the Alta group. These include Proto-Austronesian, Proto-Philippines, and Proto-Cordilleran. The Proto-Austronesian constructions cited in the following tables are primarily from the works of Dempwolff (D), Dyen (Dy), Blust (B), and Ferrell (F). The Proto-Philippine reconstructions are primarily those of Zorc (Z) and Charles (C). All these reconstructions are as cited in Wurm and Wilson (1975). The Proto-Cordilleran reconstructions are primarily my own (Reid 1988) (R) and Himes (1988) (H).

In both Southern and Northern Alta *R became [l], see Table 8. Other reflexes of *R, primarily [g], but also [y], probably indicate borrowed forms either from a Northern Cordilleran language, such as Agta, Gaddang, or Itawis, or from Tagalog in which [g] is the regular reflex of *R, or from a Sambalic language in which *R regularly became [y]. Examples of such forms are given in Table 9.

[Tables 8 and 9 about here](#)

3.2 Reflexes of *j

In all Northern Philippine languages the reflex of *j usually fell together with that of *g, being one of the phonological innovations that distinguish these languages from all other Philippine languages, in which the reflex of *j fell together without that of *d. However, in the languages of the South-Central Cordilleran family, *j* became [d] rather than the expected [g] in forms that had either an initial or final velar nasal, specifically the forms for ‘charcoal’ (*ʔujɨŋ) and ‘name’ (*ŋ-ajan) (Conant 1911:84-85). In Alta, the latter two forms show [d], as expected (see Table 10), however, four of the remaining six forms which

appear to be reflexes of forms containing *j also show [d], rather than the expected [g].¹⁰

[Table 10 about here](#)

It is possible that at least some of the forms having a [d] reflex of *j are borrowed, but it is also possible that these languages are unique among Northern Philippine languages as having a [d] reflex of *j, a conclusion which, if true, would have interesting subgrouping implications. Further search (especially in Southern Alta) for reflexes of additional reflexes of this proto-phoneme is necessary before jumping to this conclusion.

3.3 Reflexes of *k

In Northern Alta, *k became a glottal stop [ʔ]. It remained unchanged in Southern Alta. See Table 11.

[Table 11 about here](#)

3.4 Reflexes of Proto-Alta *V?V sequences

In Northern Alta, sequences which were reflected with an intervocalic glottal stop lost the glottal stop, and the surrounding vowels coalesced into a single, usually long vowel, as in Table 12. In Southern Alta, only sequences of vowels with adjacent tongue positions, such as [uʔo] < *uʔə, appear to have been reduced to a single vowel.

[Table 12 about here](#)

3.5 Reflexes of *ə

The usual reflex of *ə in Northern Alta is a mid to high central vowel represented in the transcriptions in this paper as [ɨ]. In Southern Alta the reflex is generally a mid back rounded vowel [o], although I sometimes recorded it as

¹⁰ Northern Alta has a geminate [dd] preceding [ɨ] from *a, probably a recent development, see ‘dry’, ‘name’, and ‘weave cloth’.

a high back rounded [u].¹¹ It should be noted that Southern Alta geminates an intervocalic root medial consonant following a reflex of *ə, a feature of the phonologies of Ilokano and most Northern Cordilleran languages. Northern Alta does not participate in this sound change. See Table 13.

[Table 13 about here](#)

3.6 Reflexes of *a

In Southern Alta, *a is typically raised and fronted to [e] following voiced obstruents in inherited forms. In Northern Alta, it is typically raised to [i], but apparently only following voiced obstruents in initial syllables containing short vowels. A number of cases are found in both languages where *a is also reflected as [a] in these environments. These may indicate borrowing from Tagalog, or from one of the many northern Philippine languages with which Alta has been in contact that continue to reflect *a unchanged. In Table 14, forms with such irregular reflexes are placed in parentheses.

[Table 14 about here](#)

In both Northern and Southern Alta there is some evidence that the diphthongs *ay and *əy, and *aw and *əw became respectively [i] (or [e]), and [u]. See Table 15.

A considerable number of forms (possibly borrowed) retain unchanged diphthongs. See Table 16.

[Tables 15 and 16 about here](#)

¹¹ A careful phonemic analysis has not been completed, and so the phonemic status of [o] and [u], also of [i] and [e] is at present uncertain. All transcriptions are phonetic, and the quality of some vowels is somewhat uncertain. There is uncertainty also about the occurrence of final glottal stop in the two languages. In Southern Alta, it appears to be an optional non-phonemic closure of otherwise vowel final words. In Northern Alta, it is clearly the reflex of a final *k.

4. Subgrouping the Alta Languages

4.1 Evidence for an Alta subgroup

An examination of the phonological reflexes given in Tables 8-16, provides no evidence for subgrouping the Alta languages together. There are no exclusively shared innovations. The only evidence to support this subgrouping hypothesis is the set of uniquely shared innovations given in Table 3. The paucity of this evidence is striking. It is possible that the sets of forms given in Table 3 are not the sole remaining evidence of a Proto-Alta, but are in fact the result of borrowing between two otherwise separate branches of the family to which they are most closely related. Northern Alta shares far more unique forms with Casiguran Dumagat than it does with Southern Alta, and it does not subgroup with that language. There is considerable evidence, however, that suggests that the Alta languages are more closely related to the Central and Southern Cordilleran languages than they are to any other Philippine language subgroup.

4.2 Evidence for subgrouping with South-Central Cordilleran

The Southern Cordilleran languages are a group of languages spoken in the southern parts of the Cordillera Central of Northern Luzon, and the surrounding lowlands. The most important languages are Pangasinan, Inibaloi, Karaw, Kallahan, I-wak, and Ilongot. The Central Cordilleran languages are spoken further to the north, and consist primarily of Isinai, Ifugao, Bontok, Kankanay, Balangaw, Kalinga, and Itneg (Reid 1974, Zorc 1985). These languages all share a number of innovations which are also shared by the Alta languages. These innovations are of three kinds, phonological, morphological and lexical.

4.2.1 Phonological

All South-Central Cordilleran languages as well as Alta show *R > [l] (see Table 8). Although [l] is found as a reflex of *R in other areas of the Philippines (specifically Kalamian Tagbanwa in Palawan, and the Bilic subgroup in the south of Mindanao), these are the only languages in Luzon that have this reflex. Other Luzon languages show either [r], [g], or [y] as their reflex of *R (Conant 1911, Reid 1973).

4.2.2 Morphological

All South-Central Cordilleran languages as well as Alta share in the irregular development of the verbal prefix PPh *maR-. The expected reflex in these languages, as well as in Alta would be *mal-*, which is a non-occurring form. The actual form which occurs across this family has a final alveolar nasal, usually *man-*, although a variety of other forms with different vowels also occur, the result of a sporadic shift of the medial [a] to [ə], and the subsequent changes that this vowel has undergone.¹² This prefix functions in the South-Central Cordilleran languages and in Alta in similar ways to that of the equivalent prefix *mag-* in Tagalog, and *ag-* in Ilokano, and is not to be confused with the ubiquitous *maŋ-* prefix (from *maN-), which not only assimilates to the point of articulation of the initial consonant of the stem to which it attaches but often also results in deletion of that consonant, especially if it is a voiceless obstruent.

Northern Alta consistently uses *min-* (the reflex of *mən-), see Table 17, even with verbs that, because of irregular sound reflexes or foreign phonology, are clearly borrowings from Tagalog, or some other language (e.g., ‘dance,’ ‘sell,’ ‘sweep,’ ‘wash clothes,’ ‘wash face,’ ‘weave cloth,’ etc.).

[Table 17 about here](#)

Southern Alta, on the other hand (see Table 18), although using the verbal prefix *man-* on roots that appear to be inherited, also uses either *mon-* or *mun-* (the reflex of *mən-). On some roots that are clearly Tagalog loans, the Tagalog prefix *mag-* is used, with others a prefix *mog-* is used, perhaps developed by analogy with the *man-/mon-* affixes. To what extent the variability shown here is a feature of the speech community or is a characteristic only of the language assistant who gave me the data is unknown. Although my data do not show any verb occurring with more than one of the above affixes, it is possible that the different forms may mark aspectual or other syntactic information.

[Table 18 about here](#)

¹² Editors’ note: See Liao (2004) for a comprehensive listing of reflexes of PPh *maR- in Philippine (and Formosan) languages.

4.2.3 Lexical

There is a small body of lexical items found in the Alta languages that appear to have cognates only in the South-Central Cordilleran languages (see Table 19). I reconstruct the protoforms of this set of lexical items to a parent language called Meso-Cordilleran, which split into two branches: the South-Central Cordilleran group and the Alta group (see Figure 1).¹³ The evidence for this subgrouping, rather than one in which the Alta languages form a coordinate branch with the Central and Southern Cordilleran languages is based on lexical as well as morphological facts, and is presented in the following section.

[Table 19 about here](#)

[Figure 1 about here](#)

4.3 Alta as a first order subgroup of Meso-Cordilleran

Evidence has already been presented (Table 3) which suggests that Northern and Southern Alta may form a single subgroup. In this section, evidence will be presented which suggests that the South-Central Cordilleran languages form a subgroup separate from the Alta languages, in that they share innovations that are not also shared by the Alta languages.

4.3.1 Lexical

There are a number of shared lexical innovations that are widely distributed throughout the Central and Southern Cordilleran languages and which need to be reconstructed to the parent of this family. There are other forms (such as ‘coconut’ and ‘dream’) which have a [g] reflex of *R and are found in all Central and Southern Cordilleran languages, which appear therefore to be very early borrowings into this group. Table 20 presents a number of such forms found only in these languages. For these forms, either or both Northern and Southern Alta retain reflexes of older, reconstructed forms.

¹³ Editors’ note: See Himes (1998) for the most recent subgrouping of Southern Cordilleran languages.

[Table 20 about here](#)

4.3.2 Morphological

Innovations in the form of pronouns, as well as in the verbal morphology of Proto-South-Central Cordilleran, which are not shared by either of the Alta languages, are further evidence that these languages are not part of the South-Central Cordilleran group itself but are coordinate with this group within Meso-Cordilleran. Table 21 presents a reconstruction of Proto-Alta nominative pronouns. Because of some differences between the forms of Northern Alta pronouns as recorded by Vanoverbergh (1937) and myself, both sets are included in the chart. The Northern Alta dual and inclusive plural forms as recorded by me, show evidence of influence from Ilongot, the language spoken in their immediate geographic vicinity. Both of these forms exhibit a long [e:]. In Ilongot, the second plural pronominal formative *-key* (from earlier *-kayu*), has become part of the nominative prefixing element in both the dual and inclusive plural forms, thus *siakkey* ‘2P’, *siakkeyta* ‘1,2S’ and *siakkeysi* ‘1,2P’.

[Table 21 about here](#)

Table 22 compares Proto-Alta forms with those reconstructed for Proto-Southern Cordilleran, Proto-Central Cordilleran and Proto-Cordilleran. See Reid (1979) and Tharp (1974) for evidence for these reconstructions. There are at least six different innovations in the reconstructed forms which seem to indicate that the Proto-Alta pronouns did not develop from either the Proto-Central or Proto-Southern Cordilleran forms.

[Table 22 about here](#)

In the first singular form (1s), Northern Alta shows a different pattern of reduction of the protoform than does either Southern or Central Cordilleran. Southern Alta 1s (also 2P) could indicate a closer relationship with Southern Cordilleran. However considering the other facts which would be counter-evidence to such a relationship, it is more likely that these forms are borrowed

from a Southern Cordilleran language, or from Ilokano (*siak* ‘1s’, *sikayu/dakayu* ‘2p’), or considering the irregular (for Southern Cordilleran) shift of [s] to [t] as the initial consonant of all but the third person pronouns, they may have been borrowed from one of the Cagayan valley languages, such as Itawis, where this is a regular development in the language.

Neither Alta language shares in the loss of final *-w* from the second person singular (2s) form, as have all Central and Southern Cordilleran languages.

1. Northern Alta does not share in the complete loss of the penultimate syllable *-mu-* from the second person plural form as have all Central and Southern Cordilleran languages. Alta instead lost the final three segments of the original pronoun.
2. Neither Alta language shares in either of the innovations that occurred in the pronominal formatives marking 1st person inclusive plural. In Southern Cordilleran the original form **-kitam* became *-kitayu*, in Central Cordilleran it became *-taku*. In Alta the form is *-tam*, a reflex of the form reconstructed for Proto-Cordilleran.
3. There is also an innovation that took place in the genitive pronoun set of Southern Cordilleran languages that is not shared by either Alta language. In the Southern Cordilleran languages, the 3rd person singular (3s) genitive pronoun **-na* is replaced by *-tu*. Alta retains *-na*, the form which is reconstructed for Proto-Cordilleran.
4. Alta is also different from the South-Central Cordilleran languages, in that its locative personal pronouns are prefixed with *di-*, like the Dumagat languages already described, rather than with a reflex of **kani-*. Ivatan is possibly the only non-Negrito language in the north of the Philippines that has locative personal pronouns prefixed with *di-*.

It seems likely then that Alta has retained a number of pronominal features, present in Proto-Cordilleran and presumably also present therefore in Proto-Meso-Cordilleran which were lost in the South-Central Cordilleran branch of the family.

Finally, there was one other morphological development that apparently took place in Proto-South-Central Cordilleran (as well as in a number of other languages of the Philippines), that did not take place in Proto-Alta, that is the reduction of the full forms of actor-focus, perfective aspect forms. As can be seen in Table 23, infixing *-in-* (shown as *<in>* in the table), following the initial consonant of the actor-focus prefix forms, formed the perfective aspect of these forms. In languages throughout the Philippines, the resulting forms were reduced in various ways (Reid 1987:50). In relatively few languages, most of them Negrito languages, the forms are retained without reduction.

[Table 23 about here](#)

5. Conclusion

In summary, the evidence as presented above quite clearly supports the following hypotheses regarding the Alta.

1. Northern and Southern Alta are distinct and only distantly related languages.
2. The Alta languages are only distantly related to all other Philippine languages.
3. The closest genetic relationships of the Alta languages are with the South-Central Cordilleran languages.
4. The degree of relationship with the South-Central Cordilleran languages, although clearly established, is remote. The parents of the two subgroups, Proto-Alta and Proto-South-Central Cordilleran were sister languages, daughters of a Proto-Meso-Cordilleran.
5. There has been considerable interaction over long periods of time with other language groups. This is especially clear with regards to the Northern Alta and Casiguran Dumagat, although the evidence shows previously unrecognized lexical links between all of the Negrito languages of Northern Luzon.

The result of research to date on the Alta languages, as described in this paper, have a direct bearing on the on-going problem of when and how Negritos of the Philippines came to be speaking Austronesian languages. Evidence continues to accumulate that the kind of symbiotic relationships that exist today between Negrito bands and the non-Negrito groups with whom they live in geographical contiguity are not recent but have lasted for literally thousands of years.

Although it is not possible to date the dispersal of the Proto-South-Central Cordilleran speaking community, it is clear that it must have taken place thousands of years ago. The period must be long enough for the considerable morphological, syntactic, and lexical divergence to have developed that we find today between such daughter languages as say Kalinga and Ilongot, or Bontok and Pangasinan. Yet it was well prior to the beginning of this dispersal that the ancestors of the Alta were interacting with them in a way which resulted in the replacement of whatever they originally spoke with the Austronesian language of their neighbors. For further discussion see Reid (1987) and Headland and Reid (1989 and 1991).

Although the ranges of the two Alta languages are today geographically contiguous, it is clear that this has not always been the case. Their great dissi-

milarity suggests that the two groups must have had little contact with each other for a great period of time. Perhaps Blumentritt was right after all and that northwestern Nueva Vizcaya, along the Agno River valley and close to what is today the homeland of the Isinai and the Ifugao, was really where the Northern Alta used to live. Perhaps the move south and east, which brought them back into contact with the Southern Alta, was relatively recent. The lexical evidence which might support such a hypothesis is discussed in Reid (1989).

Abbreviations

The following abbreviations of language names are used in the text and tables.

ALTN	Northern Alta
ALTS	Southern Alta
BAL	Balangaw
BON	Bontok
CCO	Central Cordilleran
DGTC	Casiguran Dumagat (Agta)
IBL	Inibaloi
IFG	Ifugao
ILK	Ilokano
ILT	Ilongot
ISI	Isinai
ITG	Itneg
IWK	I-wak
KNK	Kankanay
KLA	Kalinga
KLNKY	Kallahan
NUCO	Nuclear Cordilleran
PAN	Proto-Austronesian
PBKL	Proto-Bikol
PCO	Proto-Cordilleran
PMCO	Proto-Meso-Cordilleran
PNG	Pangasinan
PPH	Proto-Philippines
P-SCCO	Proto-South-Central Cordilleran
SCO	Southern Cordilleran

References

- Blust, Robert. 1981. Variation in retention rate among Austronesian languages. Unpublished paper presented to the Third International Conference on Austronesian Linguistics, Bali, Indonesia.
- Conant, Carlos Everett. 1911. The RGH law in Philippine languages. *Journal of the American Oriental Society* 31:70-85.
- Fox, Robert B. 1956. Ditayilin Alta word list. Unpublished manuscript.
- Fox, Robert B., and Elizabeth H. Flory. 1974. *The Filipino people*. Manila: National Museum of the Philippines.
- Garvan, John M. 1963. *The Negritos of the Philippines*, ed. by Hermann Hochegger. Horn-Wien: Verlag Ferdinand Berger.
- Headland, Thomas N. 1975. Report of Eastern Luzon language survey. *Philippine Journal of Linguistics* 6:47-54.
- Headland, Thomas N., and Janet D. Headland. 1974. *A Dumagat (Casiguran)-English dictionary*. Pacific Linguistics C-28. Canberra: The Australian National University.
- Headland, Thomas N., and Lawrence A. Reid. 1989. Hunter-gatherers and their neighbors from prehistory to the present. *Current Anthropology* 30(1):43-66.
- Headland, Thomas N., and Lawrence A. Reid. 1991. Holocene foragers and interethnic trade: a critique of the myth of isolated independent hunter-gatherers. *Between bands and states*, ed. by Susan A. Gregg, 333-340. Carbondale: Southern Illinois University Press.
- Himes, Ronald. 1988. Central Cordilleran, Philippines, cognate sets 1-574. Online database in The Pacific and Asian Language Archives, University of Hawai'i.
- Himes, Ronald. 1988. The Southern Cordilleran group of Philippine languages. *Oceanic Linguistics* 37(1):120-177.
- Liao, Hsiu-chuan. 2004. Transitivity and ergativity in Formosan and Philippine languages. Ph.D. dissertation, University of Hawai'i.
- Madrid, Helen. 1980. Four discourse genre in Amganad Ifugao. *Studies in Philippine Linguistics* 4(1):101-143.
- McFarland, Curtis D. 1977. *Northern Philippine linguistic geography*. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.

- Panganiban, José Villa. 1972. *Diksyunaryo-Tesaurus Pilipino-Ingles*. Quezon City: Manlapaz Publishing Co.
- Petro, Wesley. 1974. Kabuluwan Alta word list. Unpublished manuscript.
- Reed, William Allan. 1904. *Negritos of Zambales*. Department of the Interior Ethnological Survey Publications Vol. 2, Part 1. Manila: Bureau of Public Printing.
- Reid, Lawrence A., ed. 1971. *Philippine minor languages: Word lists and phonologies*. Oceanic Linguistics Special Publication No. 8. Honolulu: University of Hawai'i Press.
- Reid, Lawrence A. 1973. The problem *R and *l reflexes in Kankanay. *Parangal kay Cecilio Lopez: Essays in honor of Cecilio Lopez on his seventy-fifth birthday*, ed. by Andrew Gonzalez, F.S.C., 51-63. Philippine Journal of Linguistics Special Monograph Issue No. 4. Quezon City: Linguistic Society of the Philippines.
- Reid, Lawrence A. 1974. The Central Cordilleran subgroup of Philippine languages. *Oceanic Linguistics* 13:511-560.
- Reid, Lawrence A. 1979. Towards a reconstruction of the pronominal systems of Proto-Cordilleran, Philippines. *South-East Asian Linguistic Studies* 3:259-275. Pacific Linguistics C-45. Canberra: The Australian National University.
- Reid, Lawrence A. 1987. The early switch hypothesis: Linguistic evidence for contact between Negritos and Austronesians. *Man and Culture in Oceania* 3, Special Issue:41-59.
- Reid, Lawrence A. 1988. Cordilleran cognate sets. Online database in The Pacific and Asian Language Archives, University of Hawai'i.
- Reid, Lawrence A. 1989. Unraveling the linguistic histories of Philippine Negritos. Paper presented to the Symposium on Contact-induced Language Change, Australian National University, Canberra.
- Reid, Lawrence A. 1990. The search for original Negrito: Negrito languages as creolized Austronesian. Paper presented to the 14th Congress of the Indo-Pacific Prehistory Association, Yogyakarta, Indonesia.
- Tharp, James A. 1974. The Northern Cordilleran subgroup of Philippine languages. *University of Hawaii Working Papers in Linguistics* 6(6):53-114.
- Vanoverbergh, Morice. 1937. *Some undescribed languages of Luzon*. Nijmegen: Dekker and van de Vegt N.V.

- Vanoverbergh, Morice. 1956. *Iloko-English dictionary*. Translated, augmented and revised from Rev. André Carro's *Vocabulario Iloco-Español*. Baguio City: Catholic Press.
- Worcestor, Dean C. 1906. The non-Christian tribes of Northern Luzon. *The Philippine Journal of Science* 8(1):791-864.
- Wurm, S. A., and B. Wilson. 1975. *English finderlist of reconstructions in Austronesian languages (post-Brandstetter)*. Pacific Linguistics C-33. Canberra: The Australian National University.
- Yamada, Yukihiro, and Shigeru Tsuchida. 1983. *Philippine languages* (second edition). Asian and African Grammatical Manual No. 15b. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.
- Zorc, R. David. 1985. The genetic relationships of Philippine languages. Paper read at the Fourth International Conference on Austronesian Linguistics. Suva, Fiji. [Published as: The genetic relationships of Philippine languages. *FOCAL II: Papers from the Fourth International Conference on Austronesian Linguistics* ed. by Paul Geraghty, Lois Carrington, and S. A. Wurm. Pacific Linguistics C-94, 147-173. Canberra: Department of Linguistics, Research School of Pacific Studies, The Australian National University]

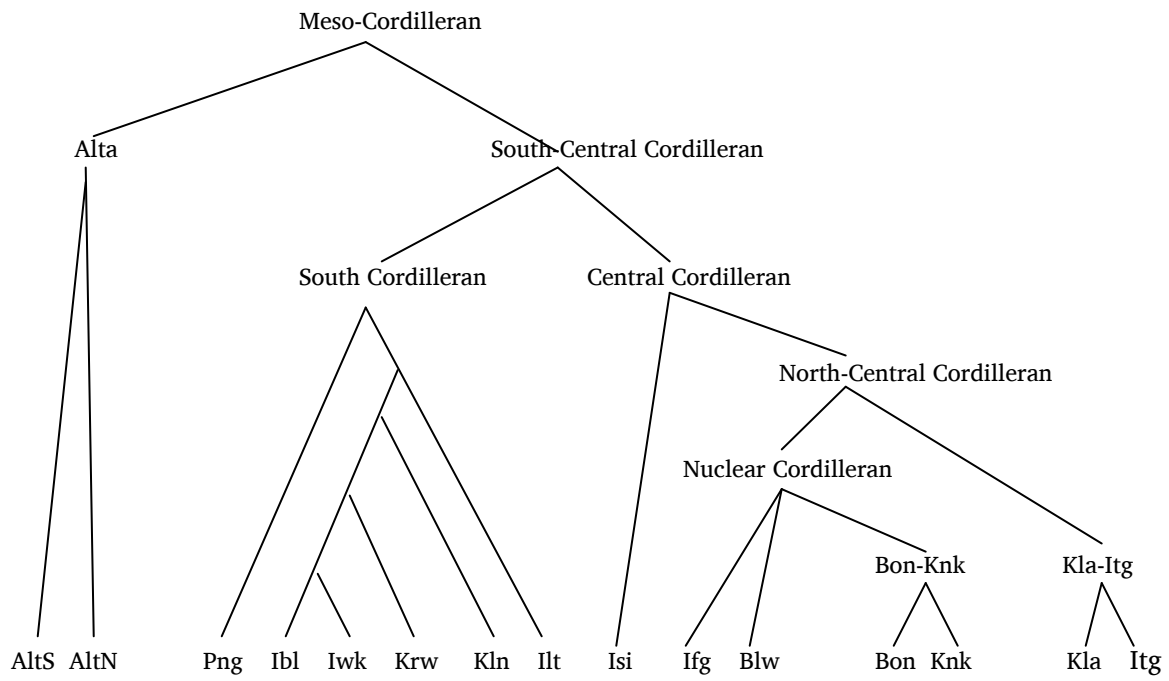


Figure 1

Table 1. Unique forms—Southern Alta

Gloss	ALTS	Gloss	ALTS
accompany	ka:kaylan	light (weight)	lalamaʔan
ant	ʔilóm ¹	long (object)	ʔasat ²
anus	sulá	long (time)	motweliʔ
bad	moddit	moon	gimataʔ
betel leaf	sakudut	mother	tidna
big	demantaʔ	noisy	motnow
black	litob	nose	ʔa:ŋut
blow	ʔimmuswaʔ	old (woman)	gupad
boil	pa:saʔ	palm (of hand)	la:paʔ ³
bolo	ba:kal	path, trail	sabeŋ
bright	laway	pestle	lobbok
broken	mapsal	pretty	tampaʔ
bury (dead)	la:beʔ	pull	ʔiyutdun
butterfly	malawák	pus	kulapus
buttocks	timoy	put, place	ʔibnomu
call	kula:witan/géwyan	quarrel	tulud
carabao	ʔuddu:ŋan	question	ʔiŋat
carried by current	ʔawas	rain	dudsuʔ
carry, bring	tawidon	red	seŋlaʔ
charcoal	ʔusáŋ ⁴	remember	kaydimtan
cheat	demut	revolve	puleŋpuleŋ
collapse	gusseŋ	ringworm	luknis
cook rice	salan ⁵	roof	ʔaklop
cooked rice	ʔinsalan	rope	koddoŋ ⁶
cooking pot	ʔo:gin	round	tiblog
correct	ʔakudul	run	kaldit
cover	suklub	sand	gebun
crawl	ʔalagan	scratch	gigiyan
crow	te:wak	seashore	gebun
cut off	tagtabun	see	panla:win

¹ Cf. PBKL *sirim, ALTN ʔigim, Bontok of Betwagan ʔogim ‘ant’.

² Apparently from PPH *hataas, with metathesis.

³ Possibly a backform from a borrowed *lapan* < *dapan (C).

⁴ Cf. PPH *qusiŋ ‘charcoal’; Tagalog. *usan* ‘droppings of a candle’.

⁵ Tagalog *nakasalang* ‘currently on the stove or in the progress of cooking’ (Panganiban 1972).

⁶ Ilokano *keddéŋ* ‘a kind of tree..., its bark is used for making bands to tie bundles of *palay*’ (Vanoverbergh 1956). Cf. Kalinga of Madukayan *kiddoŋ* ‘rope’.

dark	litob	seed (of fruit)	budakna
day	kasiŋtan	seek	lawáy
deep	ta:naw	self	tudiakna
deep sea	paldu:wa ni wagot	sheath for bolo	kala:ben
depart	ʔakaŋ	short (person)	yopyop
different	kalád	shoulder	so:boŋan
dig	tapul	sit	laŋád
dirt in eye	buteŋ	snake	maysaʔ
dry	lumbeg	soft	lopoy
earthquake	tontandug i gebun	sole	lapa ⁷
east	ʔoptakan nu sinág	soot	ʔu:saŋ
ember	ʔu:saŋ	speak	laŋnuʔ
escort	kuloy	spit	tigpa
face	koddop	stab	taka:din
fall	pagpag	stand	piyad
fast	gilíng	stone	deʔnap
father	tidemak	stove	ʔapo:yan
female	bekus ⁸	straight	to:neŋ
fetch water	saluki	sweat	ʔuʔʔalibosan
few	di untik	tail	lambuŋ
finger nail	lunuʔ	think	ʔoddimton
foot	lapa ni tikud	tired	saʔul
friend	ko:yug ⁹	typhoon	be:luʔ
fruit	bu:dak no labet	ugly	moddit
g-string	gi:nat	unmarried girl	mahonaʔ
grass	kaloŋo:san	vegetable	laŋguk
hard	ʔa:gut	wait	tawon
harelip	ʔa:pareŋas	walk	ʔakaŋ
hearth	du:tung	wall	sagboŋ
horn	begwiʔ	warm by fire	ʔiliad
hungry	kopposan	wash clothes	taptapan
kiss	ʔo:sengan	waterfall	ta:bi
know (a fact)	ʔono:loŋkud	weep	kukbiʔ
know (a person)	ʔullupaʔan	white	puklaw
land, soil	du:pit	wide	layát
leaf	ʔa:gidna	widow	na:dit
learn	gewyan	wind	kabuán

⁷ Possibly a backform from a borrowed *lapan* < *dapan (C).

⁸ Cf. PCo *bakus ‘old woman’.

⁹ Ilokano *kúyog* ‘to accompany..., to consort with’ (Vanoverbergh 1956).

lie down	mayton	wood, tree	labét
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**Table 2. Unique forms—
Northern Alta**

Gloss	ALTN	Gloss	ALTN
abaca	ʔadutay	know (a fact)	ʔannul
accompany	ʔe:lan	know (a person)	ʔannul
afternoon	pulab	lake	biniŋ
all	ʔalán	lazy	bi:ʔit
ant	ʔigim(?)	leave behind	ma:walaʔ
arcca nut	butág	lie down	ʔidsaŋ
ashamed	ʔama:mis	light (weight)	lagdin
bat	ʔalapnit	lobster	pada:ŋas
betel leaf	litlit	long (object)	laʔʔaw
blind	bulát	look out (window)	la:way
body	ʔabdiʔ	molar tooth	paŋá
bright	siglat	morning	papaʔʔas
bumble bee	sadúl	mountain	modón
call	ngoʔ	mouth	tu:bil
carry, bring	ʔadin	near	biʔin
climb	ʔaʔbaŋ	old (object)	diddiyan
collapse	míbwil	pig	dabúy
cook	sina	pregnant	to:yod
cook rice	sina	pus	ʔaná
cough	ʔugʔug	quarrel	ʔitaw
crush ice	sindit	raincloud	sidim
cut off	ʔito:lin	red	silit
deep	disalad	request	ʔagdid
deep sea	biŋli	revolve	li:pun ¹⁰
depart	ʔigʔaŋ	rice husk	napis
dirt in eye	bulát	seashore	ʔabbatu:wan
dirty	diplit ¹¹	skinny	magón ¹²
do, make	ga:gawiʔ	sleepy	ʔappulid
drip	tigdu	soft	lamnin
eel	ʔigdit	smooth	kislap
ember	paŋpaŋ	speak	pu:lun
escort	togin	stand	payun
fart	ʔuyiŋ	straight	tuldog

¹⁰ Possible metathesis of ALTS *puleŋ* ‘revolve’.

¹¹ Cf. NuC *diplit* ‘dirty’.

¹² Cf. ALTS *maʔabuŋ* ‘skinny’

fat (adj)	tabdi	strong	ʔildiŋ
fat, grease	tabdi	summit	taʔpo
female	dibdi	surprised	linid
fetch water	taʔyuj	tall, high	taŋjal
few	baʔík/baʔiʔ	throat	ʔatlinan
fragrant	mislob	ugly	duʔis
fruit	ʔiyán	wait	tanúd
hear	tebáŋ	waterfall	tagpo
heel	tudtud	wear clothes	so:ʔip
hide	so:miʔ	weep	siyaʔ
hit, strike	puʔna	wet	lipit
hoarse	pagiʔ	wind	pagúd
incorrect	li: ʔiná	wrap	pusu:tan
kick	tidiyaʔ	write	batiʔ ¹³
kiss	ʔalúb		

¹³ Cf. PPH *batek ‘tattoo’.

**Table 3. Uniquely shared lexical items—
Northern and Southern Alta**

Gloss	ALTS	ALTN
carry on shoulder	bitlay	bitlayin
flood	dakol	da:ʔil
friend	ko:yug	kuyug
hot (weather), fever	mopnaŋ	panaŋ ¹⁴
know how	muŋnul	mannul
lost	minaybut	ʔi:but
love	ʔobbudin	budin
mud	lu:tit	lutít
night	dalam	dalam
sleep	pulád	po:líd
sweet	la:nis	la:nis

**Table 4. Uniquely shared lexical forms—
Northern and Southern Alta with Casiguran Dumagat (Agta)**

Gloss	ALTS	ALTN	DGTC
flesh	pi:las	pilas	pilas
forehead	koddop	ʔidip	kidəp
pubic hair	sabút	sabút	sabut
repeat	luwayun	luwa:yin	huwayən
thigh	pokol	puʔil	pukəl

¹⁴ Cf. P-SCCo *pitaŋ ‘hot, fever’.

**Table 5. Unique forms—Northern Alta shared
with Casiguran Dumagat (Agta)**

Gloss	ALTN	DGTC
boil	labut	ləbut
burn (restart fire)	tamu?	tamo
fast	báʔsig	baksəg
forget	liʔsap	leksap
hard	miʔtog	kətog
house lizard	taktak	taktak
intoxicated (dizzy)	linúg	linug
left over	buwáy	buhay
locust	pissal	pəsah
odor	ʔalúb	ʔahob
put, place	ʔidton	dəton
rat	ʔuyiŋ	kuyəŋ
root	lanút	lanot
run	gi:nang	ginan
scratch	gusgus	gusgus
seek	ʔali:yu?	ʔahayok
sew	dalúp	dahop/darop
small (archaic)	baʔik	bəlek
tear	piʔnat	pəknet
true	talúd	tahod
vein	li:tid	litid

**Table 6. Unique forms—Southern Alta shared
with Casiguran Dumagat (Agta)**

Gloss	ALTs	DGTC
molar tooth	buŋŋal	bəŋal
summit	taltay	taytay
wave	tagbok	tagmək

**Table 7. Uniquely shared lexical forms—
Alta, Casiguran Dumagat, Arta, and Agta**

Gloss	ALTS	ALTN	DGTC	Arta	Agta
rattan	latti?	la:ti		lati	
river	wagot	wagit		wagat	
water	wagot	wagit		wagat	
cold (weather)	dognin	dɪŋŋin	dəgnin	dagnin	
fly, to	ʔigbol	ʔibbil	ʔegbəh	umbir	ʔimubəh ¹⁵
request	ʔagidun	ʔagdid	ʔeged	magida	
pity	kalbi?	ʔalbi	kagbi	pagarbian ¹⁶	
foot		tiʔid	tikəd	tiyad	
afraid		maʔantiŋ	ʔanterŋ	magantiŋ	
horn, tusk		sa:du?	saduk/saŋho	saŋro	
sit		ʔitnud	ʔiknod	tuttud	tuttud
slice		gilgil	gəlgəl	galgal	
throw away		ʔibut	ʔibut	ibut	
thin	la:pis		lapes	lagpis	lapit ¹⁷

¹⁵ Possibly from a PPH *i()bəR.

¹⁶ Apparently from a PPH *kaRbi.

¹⁷ PPH *s become *t* in Central Cagayan Agta.

**Table 8. *l* reflexes of *R
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
answer	tabbalon		*təbaR (R)
awaken		limiyá	*Rəmiya (R)
bathe		di:lus	*diRus (D)
bite	kalaton	ʔala:tin	*kaRaC (Dy)
blood	daláʔ		*daRaQ (Dy)
breast	lasát	lasát	*Ra:sat (R)
chin	sollaŋ		*səRaŋ (R)
coconut		niyul	*ñiuR (Dy)
cough	ʔekol		*qi:kəR (R)
dream	nanalaynup	tale:nip	*taRa-qinəp (Z)
drive away	tabul		*tabuR (D)
g-string		ba:l	*baSaR (B)
hear	doŋlon		*DəŋəR (Dy)
heavy	dalmot	dilmit	*daRmət (R)
left (hand)		ʔawili	*qa-wiRi (R)
lie		bo:til	*butiR (R) ¹⁸
lime		ʔapúl	*qapuR (Z)
lip	bibil	bibíl	*bibiR (D)
new	beloʔ	ba:lu	*baqəRuʔ (Dy)
person	ʔalta	ʔalta	*qaRtaq (R)
rib	taglaŋ	taglaŋ	*tagRaŋ (R)
root	lamutna		*Ramut (Z)
sated	mubsul	basúl	*be[s]uR (D)
sea		dalat	*DaRat (Z)
sharpen		ʔubu:lan	*qubuR (R)
sibling	tulaŋ		*tuRaŋ (B)
sweat		le:ŋit	*Ringət (Z)
thorn	duli		*[dD]uRi (D)
true	ʔakudul		*qa-kuduR (R)
wash	ʔulasan	ʔu:las	*quRas (D)

¹⁸ Cf. Proto-Western Bisayan (Zorc) *butig, Bikol (Iriga, Baao [Camarines Sur]) *butíḡ* ‘lie’.

**Table 9. *g* and *y* reflexes of *R
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
ashes		dapog	*dapuR (B)
rice	bigas	biges	*bəRas (D)
sail	layág	la:yag	*layaR (D)
stair	ʔagdan	hagdin	*ha-RəZan (Z)
rice straw	deya:miʔ	daya:mi	*ZəRami(h) (Dy)

**Table 10. Reflexes of *j
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
floor		ʔasa:gan	*qasaj-an (R)
rice (plant)		pagi	*pa:jəy (C)
charcoal		ʔudín	*qujín (B)
dry		maddi	*maja (D)
dry in sun	bílad	bílad	*bilaj
gall	ʔapdu	ʔapduʔ	*qapəju(S) (B)
hand		damit	*ja:mət (R)
name	ɣadon	ɣaddin	*ɣ-ajan (Z) ¹⁹
weave (cloth)		laddi	*laja (D)

¹⁹ Himes (pers. comm.) notes that the Alta forms, with Isinai *ɣaron* and Ilongot *ɣadin*, imply a PMCo *ɣadən, a doublet with PMCo *ɣadan ‘name’.

**Table 11. Reflexes of *k
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPh, PCo
brain	ʔotok	ʔutiʔ	*qutək (Dy)
bird	manuk	manuʔ	*manuk (D)
catch (thief)	dekpon	diʔip	*dakəp (D)
child, young	ʔanáʔk	ʔanaʔ	*anak (Dy)
crack	buttak	mabtaʔ	*bəTak (Dy)
hair	buk	buʔ	*buSək (B)

**Table 12. Reflexes of *V?V
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
dream	nanalaynup	tale:nip	*taRa-qinəp (Z)
hair	buk	bu?	*buSək (B)
knee	bul	bul	*buqəl (C)
ripe		lo:m	*luqum (R)
star	bitun	bito:n	*bituqən (Z)
unripe, raw		ma:ta	*ma-ʔə:ta (R)
winnow	taʔop	ta:pan	*tahəp (H)

**Table 13. Reflexes of *e
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
answer	təbbalon		*təbaR (R)
awaken		limiyá	*Rəmiya (R)
back (of person)	ʔoddog		*ʔədəg (R)
big		diʔil	*dakəlaq (Z)
borrow	ʔodde:mun	ʔidam	*hədam (R)
blanket		ʔulis	*ʔuləs (R)
brain	ʔotok	ʔutiʔ	*qutək (Dy)
brave		miŋil	*ʔi:ŋəl (R)
breathe		ʔaŋis	*ʔa:ŋəs (R)
catch (thief)	dekpon	diʔip	*dakəp (D)
chin	sollaŋ		*səRaŋ (R)
cloud	ʔolop		*qu:ləp (R)
cockroach		ʔipis	*[ʔipəs (Dy)
cough	ʔekol		*ʔi:kəR (R)
crack	buttak	mabtaʔ	*bəTak (Dy)
crush ice	koddison		*kədit (R)
deaf	təllək		*tələk (R)
deaf		tuliŋ	*tuləŋ (H)
earthquake		yigyig	*yəgyəg (R)
fart	ʔutto:tan		*ətut (D)
full	punno	mapnu	*pənuq (D)
give	ʔatod	ʔa:tid	*ʔa-təd (R)

hand		damit	*ja:mət (R)
heavy	dalmot	dilmit	*daRmət (R)
hold		gimgim	*gəmgəm (D)
itchy	getol	gitil	*gatəl (Z)
leech		lima:ti?	*limatək (D)
left over	tudde?		*təda[?] (R)
mat		?abi?	*qabək (R)
neck (back of)	toŋŋod		*təŋəd (R)
old (person)		ta?im	*takəm (R)
plant	tanom	tanim	*tanəm (D)
pound (rice)		libi?	*ləbək (Z)
roof		?atip	*qatəp (Dy)
sharp		ta:dim	*taZəm (Dy)
split	buttakon		*bəTak (D)
squeeze		pispis	*pəspəs (F)
stick (v)	nakadkut		*dəkət (D)
stick (v)		?ip?it	*pəkət (R)
suck	sopsopon	sipsip	*səpsəp (D)
sweat		le:ŋit	*Riŋət (Z)
swell		lumtig	*lətəg (R)
tie in a bundle	bekos		*bakəs (B)
tooth	ŋi:pon	nigpin	*(ŋ)ipən (C)

**Table 14. Reflexes of *a
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
abaca	?abeka		()abaka (Z)
answer	(tobbalon)		*təbaR (R)
awaken	(baŋon)		*baŋun (D)
butterfly		(?ale:baŋbaŋ)	*alibaŋbaŋ (Z)
fat, grease	tabe?		*tabaq (Z)
female	bekus		*bakəs (H) ²⁰
fence	bekod		*bakəd (R)
frog		(ba?ba?)	*bakkak (H)
house	beli	bili	*balay (D)
oppose		la:ban	*laban (Z)
pay	beya:den	(baya:dan)	*bayaD (Dy)
pig	be:boy		*babuy (D)

²⁰ PCo (Himes) *bakəs ‘old woman’.

provisions	(balun)	balún	*ba:lun (R)
stone		(batú)	*batu (D)
swell	lombeg		*ləbag (Z)
tie in a bundle	bekos		*bakəs (B)
water jar	(balaŋa)	bíngá	*b/al/aŋa (D)
wet	bisa?		*basəq (D)
g-string		ba:l	*baSaR (B)
new	belo?	ba:lu	*baqəRu? (Dy)
arrive	dundetoŋ	(dating)	*datəŋ (Z)
big		dí?il	*dakəlaq (Z)
blood	(dalá?)		*daRaŋ (Dy)
borrow	?odde:mun	?idam	*hədam (R)
broken	sede?	si:da	*ciDa (D)
catch (thief)	dekpon	dí?ip	*dakəp (D)
hammock		?inda:yun	*qVn-da:yun (R)
hand		damit	*ja:mət (R)
heavy	(dalmot)	dilmit	*daRmət (R)
kick	(tindakan)		*tinzak (D)
left over	tudde?		*təda[q] (R)
near	?adeni?		*qada-ni (R)
old (object)	deden		*daqan (D)
pay	beya:den	baya:dan	*bayaD-an (Dy)
shrimp		?udaŋ	*quDaŋ (Dy)
itchy	getol	gitil	*gatəl (Z)
do, make	ge:wan		*gawa[] (D)
floor		?asa:gan	*qasaj-an (R)
to rub	gimsun		*gaməs (R)

**Table 15. Reflexes of diphthongs
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
kill	papatin	mati	*patay (D)
die	mamate?	pumpati	*patay (D)
house	beli	bili	*balay (D)
rice (plant)		pagi	*pa:jəy (C)
old man	lakí?		*lákay (Z)
soup	sabu?	(sabáw)	*sabaw (Z)
chest		pagu	*pa:gəw (R)

**Table 16. Possibly borrowed diphthongs
in Northern and Southern Alta**

Gloss	ALTS	ALTN	PAN, PPH, PCo
termite	?a:nay	?anáy	*?anay (D)
alive	bilay	bilay	*bilay (R)
housefly	laŋáw	laŋaw	*laŋaw (Dy)
steal		ta:?aw	*takaw (D)
float	lultaw		*lətaw (Z)
look out (window)	do:ŋaw		*duŋaw (Z)

Table 17. Northern Alta *man- verbs

Gloss	ALTN	Gloss	ALTN
to cook	minsina	to swim	minlaŋúy
to dance	minsayáw	to vomit	min?o:ta
to pound (rice)	minlibi?	to wait	mintanúd
to sell	mintinda	to wash clothes	minlabá
to swallow	minlu:nu?	to wash face	minhila:mus
to sweep	minwalís	to weave (cloth)	minladdi

Table 18. Southern Alta *man– verbs

Gloss	ALTS	Gloss	ALTS
to bathe	mandi:moy	to lean	monsadig
to change clothes	mambeyu?	to hit, strike	mun?e:suntuk
to cook rice	mansalaŋ	to quarrel	muntulud
to pound (rice)	manlobbok	to squat	muntiŋkayad
to wait	mantawon	to play	munna:yam
to winnow	manta?op	to steal	munnakaw
to plant	magtanom	to sing	mogkanta
to dance	magsayaw	to oppose	mogbe:dilan
to wash face	maghilamus		
to wash hands	maghisáw		

**Table 19. Exclusively shared innovations—
Alta with South-Central Cordilleran**

Gloss	ALTS	ALTN	PMCo
blow		sibu?	*si?buk (R)
chest		pagu	*pa:gəw (R)
dark		misdim	*sədəm (R)
drip	tudtud		*tədtəd (R)
fall		ti?nag	*tək[nd]ag (R)
lacking salt		lamsit	*lamsit (R)
monkey		bula:ŋan	*bulaŋan (R) ²¹
sand		buwɨd	*buwəd (R) ²²
sour	lamsit		*lamsit (R)
thunder		?idul	*kidul (R)
wrap	buŋnun		*buŋun (R)

²¹ Himes (pers. comm.) notes that this reconstruction, alongside ILK *burangen* ‘old, male monkey’ suggest a doublet PCo *buRaŋən ~ *buRaŋan, with a semantic innovation having taken place in either Ilokano or Proto-Meso-Cordilleran.

²² Cognates only in Southern Cordilleran: PNG *buwir*; ILTK, KLNKY *buwid* ‘sand’.

**Table 20. South-Central Cordilleran Innovations
not shared with Alta**

Gloss	P-SCCo	ALTS	ALTN	PPH
bathe	*ʔemes		di:lus	*diRus
bone	*tuqɲal	tulaŋ	tulaŋ	*tuqlaŋ
coconut	*niyug		niyul	*ñiuR
dream	*tagaʔinep	talaynup	tale:nip	*taRa-qinəp
knee	*pu:weg	bul	bul	*buqəl
see	*ʔi:la	ʔinta		*kita

Table 21. Reconstruction of Proto-Alta Nominative Pronouns

	ALTS	ALTN (R)	ALTN (V)	Proto-Alta
1s	tiyak	siʔin	siyin	*siyakən
2s	tekaw	siʔaw	siaw	*sikaw
1,2s	tekita	siʔe:ta	siita	*sikita
3s	siya	siya	sia	*siya
1P	tekami	siʔami	si-ami	*sikami
2P	tekayu	siʔam	si-am	*sikamyu
1,2P	tekitam	siʔe:tam	siitam	*sikitam
3P	side	siddi	siddi	*sida

Table 22. Comparison of Proto-Alta with reconstructed Cordilleran Nominative pronouns

	Proto-Alta	Proto-SCo	Proto-CCo	Proto-Co
1s	*siyakən	*siyak	*sakən	*siyakən
2s	*sikaw	*siʔika	*sikʔa	*siʔikaw
1,2s	*sikita	*siʔikita	*daʔita	*siʔikita
3s	*siya	*siya	*siya	*siya
1P	*sikami	*siʔikami	*dakami	*siʔikami
2P	*sikamyu	*siʔikayu	*dakayu	*siʔikamuyu
1,2P	*sikitam	*siʔikitayu	*dataku	*siʔikitam
3P	*sida	*siʔida	*daʔida	*siʔida

Table 23. Reduction of Actor Focus-Perfective Aspect in South-Central Cordilleran

Proto-Co	Proto-Alta	Proto-SCCo
*m < in > aR–	*m < in > an–	* < n > an–
*m < in > aN–	*m < in > aN–	* < n > aN–
*m < in > a–	*m < in > a–	* < n > a–