Numeral classifiers and the noun morphology of Idu

[DRAFT CIRCULATED FOR COMMENT]

Roger Blench
McDonald Institute for Archaeological Research
University of Cambridge
Correspondence to:
8, Guest Road
Cambridge CB1 2AL
United Kingdom
Voice/ Ans (00-44)-(0)1223-560687
Mobile worldwide (00-44)-(0)7847-495590
E-mail rogerblench@yahoo.co.uk
http://www.rogerblench.info/RBOP.htm

This printout: Roing, November 6, 2018

TABLE OF CONTENTS

TABLES

ABSTRACT

The paper describes the nominal morphology of Idu, a minority language of northeast Arunachal Pradesh. Idu number mrking is usually extremely reduced, with a plural suffix following a head noun, which can be omitted where plurality can be inferred from other syntactic elements. However, it does have a system of numeral classifiers, which strongly reflect plants, animals and shape. These are applied to certain classes of entity, although not human beings. The evidence of historical morphology points strongly to their having been a more extensive system in the past, as fossil elements in body parts, for example, points to the presence of a former classifier which is no longer productive. Similarly, there examples of stacked classifiers, where a former morphological element becomes incorporated in the stem an innovative classifier applied. The paper presents examples of the use of individual classifiers and considers briefly the relationship of Idu to classifiers in neighbouring languages.

Keywords; Idu; noun morphology; Arunachal Pradesh

1. Introduction

1.1 Residual noun morphology in East Asian languages

Apart from Austronesian, none of the characteristic language phyla of East Asia have functional noun morphology. Plurals, case, semantics, are all marked by clitics separate from the noun they qualify. Yet there is every reason to think that some type of noun classification system must have operated in the past (Blench 2015). The characteristic 'sesquisyllabic' structure, where the stem is preceded by one or more segments which are not part of the root, is found in Austroasiatic, Sino-Tibetan, Hmong-Mien and parts of Daic. These affixes appear to have semantic correlates, sometimes confined to a single language, but in the case of s- and k- for animals, found widely across the region (Smith 1975). Hmong-Mien in particular seems to have had some type of noun-class system (Ratliff 2010) and Daic obligatory nominal classifiers (for discussion in Lao see Enfield 2007).

The principal device for marking semantics in East Asian nouns is the numeral classifier (Adams 1989) a word or morpheme which accompanies number marking in nouns. The etymologies of classifiers may be semantically transparent, but in some cases their origin is not easy to discern, either because they are archaisms or borrowed. However, there are also what Enfield (2007) calls 'class terms' which occur with well-defined semantic classes such as fruit or fish, obligatory accompaniments to nouns, usually etymologically transparent.

Common sources of lexical change in East Asian languages is both the substitution of affixes and their incorporation into the stem. This is very similar to processes of 'affix renewal' in African languages, where the (bound) noun class markers become fused with the stem and a new marker is added in front of the frozen affix (see, for example Childs 1983). In East Asia, various classes of number and collective markers can be incorporated into the stem and new markers adopted to fill the vacant slot.

Arunachal Pradesh in NE India is home to a variety of languages usually classified as 'North Assam' and claimed for Tibeto-Burman. Whether this classification is valid is subject to doubt (Blench & Post 2013) but typologically they are similar to their Tibeto-Burman neighbours. Two languages, Idu and Tawrã, constitute a subgroup known as 'Mishmic'. A third language, Kman, is often grouped with the Mishmi, but this is a cultural classification; despite being rather similar typologically to Idu and Tawrã, it has almost no common lexicon.

Not all the languages of this region have numeral classifiers, but these are extremely salient in the Tani languages, which dominate the central Arunachal Pradesh. Only the Tani language, Galo, has been the subject of a full length grammatical description (Post 2007) but Tani languages show a profusion of numeral classifiers. Idu and Tawrã have much more restricted systems synchronically, but there is abundant evidence for a richer system in the past. A language such as Idu has not only numeral classifiers, but also what appear to be frozen CV- prefixes on nouns with semantic correlates. Moreover, many noun stems which are no longer required to take a numeral classifier synchronically show evidence of what appears to be incorporated former classifiers.

Given that the languages of this region have significant indicators of a functional nominal morphology diachronically, and yet are barely described, providing a detailed account may well throw light on broader linguistic processes in the region. This paper[1] describes Idu numeral classifiers, semantic correlates of CV-nominal prefixes, and attempts to disentangle residual nominal markers from stems, with a view to illuminating both part of the history of the language and more general regional processes. §

---

[1] The fieldwork on which this paper is based was undertaken in Arunachal Pradesh in February-March 2015, December-January 2015-2016, January-February 2017, January-March and October 2018. I am most grateful for Dr. Mite Linggi and the Idu Language Development Committee for working with me on transcriptions and interviews.

1.2 The Idu language

The Idu live principally in Dibang and Upper Dibang Valley Districts of Arunachal Pradesh with some settlements in Lohit and E Siang. However, the 'Upper' Idu live towards the Tibetan border and there are some villages in China (Sun 1983). The Idu are known as 'Luoba/Lhoba' in China (Sun et al. 1980). The Idu language and the related Tawrã [=Taraon] are usually referred to by the term 'Mishmi', although the origin of this term is obscure.

The literature on these languages is fairly weak. The most detailed descriptions are in Chinese, and not very accessible (Sun et al. 1983a,b; Sun 1999; Ouyang 1985). The transcriptions are phonetic, leading to a profusion of tone marks, notated with Chinese-style numerical superscripts. Words are broken up into single syllables, making it difficult to establish the phonological word. From the Indian side (where the majority of the population lives) there are the 'practical' handbooks of Jatan Pulu (1978) and Jimi Pulu (2002a,b). The transcriptions and glosses are strongly influenced by Hindi and do not conform to modern linguistic standards.

A new phonology has been prepared in consultation with the Idu language committee project for a practical orthography. In the transcriptions in this paper, phonetic characters have their IPA values, except;

j	is written as	y
h	following any consonant	aspiration
/ə̣/	is retracted schwa	ə̲
long vowels	are written as	doubled vowel

Idu has three level tones, marked as follows;

High-	´
Mid	¯
Low	`

A macron (¯) over a vowel is thus mid-tone and not length. Nasalisation is common in Idu and marked over the vowel in combination with tone.

2. Number marking on Idu nouns

Synchronically, as with most neighbouring languages, Idu no longer has any type of functional noun morphology. Number is not marked morphologically in Idu and wherever it is obvious from the context not marked at all. With unqualified nouns, there are several forms meaning 'many' which followed the noun. For persons, these are;

àlòmbrò	persons
àɽū	crowd, herd
(n)do	things, inanimates

Thus;

man	men
īmú	īmú àlòmbrò *or*
	īmú àɽū

For animals and objects, usually only *àɽū* is used. Where a noun ends in a vowel, *àɽū* assimilates to it;

sá àɽū→sáɽū   mithuns

For inanimates, *tándò* 'many' is used'

àlàprā tándò   many stones

For things found in groups an occasional singulative is recorded;

louse   trùùŋgù   lice   trǔǔ̀

-gù may be an incorporated former numeral classifier or indeed an allomorph of (-ŋ)gò.

3. Idu numeral classifiers

3.1 The shape of Idu nouns

The most characteristic shape of Idu nouns is CV(N)CV, with an optional V- prefix. A small subset of nouns are VCV, which has almost certain arisen through deletion of C_1 of the original stem. In some cases this can be demonstrated, as the more conservative Hill dialects, conserve C_1. For example, *āmbá* 'jungle' is *kāmbá* in Hill dialects. A rare structure, such as *èùná* 'face' (VVCV) arises from deletion of C_1 of the stem with conservation of the V- prefix.

3.2 Idu numeral classifiers

Idu, like Tawrã and Kman, has a restricted number of numeral classifiers, obligatory markers when qualifying nouns with numerals. The system can be described as residual, since many nouns, including most animates, no longer have classifiers. Idu is similar to Tawrã and Kman, but quite different from the neighbouring Tani languages, where classifiers are very numerous (Post 2007). Idu mixes bound and free classifiers; free classifiers can also be moved about to suggest the shape of an entity which does not take an obligatory classifier. To this extent, classifiers are something like the affixes in noun-class languages, such Niger-Congo. A noun may 'normally' take a certain prefix, but this can be altered to suggest a specific feature. Thus animals in folk-tales in Niger-Congo languages often take a human prefix, instead of their usually assigned segment.

Partial lists of Idu numeral classifiers are given in Pulu (1978) and Pulu (2002), but a more complete version is shown in Table 1;

Table 1. Idu numeral classifiers

Form	Applied to	Shape or class
ā̠l̠à	cloth, paper, planks	flat rectangular objects
(-m)bǒ̀	trees, plants, main trunk of anything	trunk (trees, body)
bá	mithuns	*sà bá 'sò* three mithuns
brā	potatoes, beads, oranges, stones	small round things
brū	maize, bananas, small branch of a tree, usually cylindrical	cylindrical long objects
(-n)do	bamboo clusters, houses, hunted deer, pig carcasses	?
(-ŋ)gō	fish, rats	
(-ŋ)gò	fish, rats	
ná	specific leaves, some types of paper	
ph(r)á	small packets (such as cigarettes)	small solid rectangular objects
pò	packets, *léképò* necklace	medium solid rectangular objects
pǒ̀	bundles (firewood, hay), playing cards	large solid rectangular objects
prā	leaves, paper, flat things	flat objects
pū	elephants, chickens, wild birds, cucumbers[2], papayas, pumpkins	large and medium round and oval things
-to ~ tõ	single bamboo plant, reeds with cylindrical stem, sugar-cane	giant grasses

---

[2] Local cucumbers are short and ovoidal, unlike the European cucumber, hence they fall into this class

The bound classifiers –(n)do and –to are underspecified for tone, and vary in accordance with the stem tone of the noun they qualify.

Examples of each of these in use are as follows;

āl̩à flat rectangular objects

Applies to; cloth, paper

    tapuhũ   āl̩à   nyì
    cloth   clf.   two
    two cloths

The following is a striking example of how classifiers can become stacked as they become unproductive by being bound to a stem.

    ādzōprā   ná   āl̩à   màŋá
    paper   piece   clf.   five
    five pieces of paper

prā is a standalone classifier for flat things, but has been lexicalised to create a noun for 'paper'. Meanwhile, the classifier *ná*, also applied to leaves and paper, has been re-analysed as a noun signifying 'piece'. Hence the whole collation still requires another classifier, and *āl̩à* is applied.

(-m)bɒ̌ trunk, main stem of s.t.

Applies to; large standing plants;

    āsīmbɒ̌   kàprì
    tree.clf   four
    four trees

or;

    ājīmbɒ̌   kàprì
    banana plant.clf   four
    four banana plants

However, it can also be adapted for the trunk of a human body. For example;

    ésámbɒ̌   anus plus trunk

brā small round things

Applied to potatoes, beads, oranges, stones. A potentially irregular object, such as a stone, can trigger other classifiers if its shape warrants them.

    gèsì   brā   (khə̀)gə̀
    potato   clf.   one
    one potato

In the following example, the root for 'stone' is ál̩V-;

    ã̄l̩āphrá   brā   màŋá

    stone   clf.   five
    five (round) stones

This can be seen other lexemes;

    áló.ũ̄ũ̄   sandstone
    ã̄lōhrū   pebble

The *–phrá* element is almost certainly an allomorph of *phá*, the classifier for small solid objects, which has been incorporated into the stem.

brū cylindrical long objects

Applies to; maize, bananas, small branches of a tree

    àmbó   brū   gə̀
    maize   clf.   one
    one cob of maize

or;

    àjì   brū   gə̀
    banana   clf.   one
    one banana

(-n)**do** semantics unclear

Applies to; bamboo clusters, houses, hunted deer, pig carcasses

    aŋgədo   màŋá
    bamboo.clf   five
    five bamboo plants

    õ.ndo   màŋá
    house.clf five
    five houses

From the classifier alone, a listener will know the deer are dead in the following example;

    manjo   do   màŋá
    deer   clf.   five
    five [dead] deer

(-ŋ)**go** has two allomorphs, (-ŋ)**gō** and (-ŋ)**gò**. The mid-tone form marks single entities, while the low-tone version indicates the same things in bundles or piles;

    āŋá   ŋgō   gə̀
    fish   clf.   one
    one fish

but;

    āŋá   ŋgò   màŋá
    fish   clf.   five
    five bundles of fish

This would almost certainly indicate bundles of smoked or dried fish as they are sold in the market. If the speaker wanted to distinguish the number of fish in a bundle, the following construction would be used.

ŋgò   gə   ma   ŋgō   màŋá
clf.   one   DET   clf.   five
bundle of five fish

ph(r)á small solid rectangular objects

Applies to; small packets (such as cigarettes)

In this example, the hearer would infer from the classifier that packs rather than individual cigarettes were being referred to;

sīgērē   phá   sǒ
cigarette   clf.   three
three packs of cigarettes

pò medium solid rectangular objects

Applies to; packets, *léképò* necklace

àtā   pò   nyì
food   clf.   two
two packets of food

In this example, the necklace *léképò* has already incorporated the *pò* classifier once, but apparently it has so far been lexicalised that the classifier is repeated.

léképò   pò   nyì
necklace   clf.   two
two necklaces

pǒ solid rectangular objects

Applies to; bundles (firewood, hay), playing cards

ākō   pǒ   nyì
hay   clf.   two
two bundles of hay

In this example, the hearer can infer that packs of cards are being referenced, not individual cards;

tas   pǒ   nyì
cards   clf.   two
two packs of cards

It is quite surprising that a pack of cigarettes and playing cards have different classifiers, as they are approximately the same shape and size. Evidently, the loose nature of the cards, more similar to hay, influences the choice.

prā flat objects

Applies to; leaves, paper, flat things

Although the classifier *ná* clearly derives from *ná* 'leaf', synchronically 'leaf' takes another classifier.

> ná prā tàhrò
> leaf clf. six
> six leaves

In the following example, as with the necklace *léképò*, the word *āsīprā* has already incorporated the *prā* classifier once.

> āsīprā prā màŋá
> plank clf. five
> five planks

pū large and medium round and oval things

Applies to; elephants, chickens, wild birds, cucumbers[3], papayas, pumpkins

> ātā pū màŋá
> elephant clf. five
> five elephants

> ànjìpū pū gɜ̀
> cucumber clf. one
> one cucumber

-to ~ tõ giant grasses

Applies to; single bamboo plant, reeds with cylindrical stem, sugar-cane

Nearly all the bamboos and canes have classifiers incorporated into the stem.

> āngētȭ tȭ khrìnī
> bamboo clf. nine
> nine bamboo plants

> rùpòtȭ tõ màŋá
> sugar-cane clf. five
> five sugar-cane plants

4. Stacked classifiers: bamboo and cane

Bamboos and canes are highly salient in Idu culture as they are throughout the region. As a consequence, bamboo has two distinct classifiers, *do* for clusters of bamboo and *to ~tõ* for the single plant. However, *-to* has also become incorporated in the roots for bamboo and cane and thereby provided an empty slot for a new classifier. Thus it is possible to say;

> āngētȭ to khrìnì
> bamboo plant CLF nine

The classifier is thus repeated. Equally possible is;

---

[3] Local cucumbers are short and ovoidal, unlike the European cucumber, hence they fall into this class

āngētǭ	do	khrìnì
bamboo plant	CLF	nine

which would imply clusters of bamboo. The *dõ* may well simply be an allomorph of *tõ*. Table 2 shows all the bamboos and canes so far enumerated for Idu with the *-tõ* suffix. It is plausible that the names of bamboos without the suffix are borrowings from Assamese or other regional languages.

Table 2. Bamboos and canes with incorporated -to

Gloss	Idu
bamboo I	āngētǭ, māngētǭ
bamboo II	ārhútǫ́
Apatani bamboo	ābrátǫ́
bamboo III	hīcítǫ́
bamboo IV	brádūtǭ̀
bamboo V	ìlìtǭ
bamboo VI	kālītǭ
bamboo VII	àpàtǭ
bamboo VIII	mānútǫ́
bamboo VIII	àpítǫ́
bamboo IX	bàndātǭ
cane I	lákātǭ
cane II	àɽùtǭ̀
cane III	èlàshòtǭ̀
cane IV	lākàmbòtǭ̀
cane V	ēɽātǭ

5. Other inferred classifiers: body parts, small animals

If this analysis is correct, then Idu assigns classifiers by perceived shape rather than semantic unity. Body parts no longer take obligatory classifiers, but there is strong evidence that this was formerly the case. The great majority of body parts incorporate suffixes which correspond to functioning classifiers. The nouns shown in Table 3 all incorporate the element *pra*, *bra* or *bru* in the stem. The shape correspondences are not perfect but indicate a general matching.

Table 3. bra, pra and bru morphemes in Idu body parts

CLF	Shape class	Gloss	Idu
bra	round things	breast	nòbrà
		eye	èlòmbrá
		hair	thòmbrá
		neck	sèmbrá
		heart	àpròbrà
		nipple	nòsìbrà
		tear	ìbrìbrà
pra	flat things	foot	prà èprà
		forehead	àpràhà
		jaw	àɽàprà
		spleen	ìlìprá
		skin	kòprà
bru	cylindrical things	lip	ìnùbrù
		tooth	tàmbrò
		rib	shùbrù

8

It is reasonable to ask whether these are allomorphs of one another or distinct former classifiers. Their semantic unity is somewhat weak. *bra* synchronically refers to spherical objects such as potatoes. Most of the nouns incorporating *bra* could be described as round in some way, so it is likely that this was previously a more inclusive classifier which took in all types of round objects, excluding those not perceived as spherical over time.

pra is more difficult to account for, since the synchronic classifier is characteristic for flat objects (perhaps for squashed frogs?) and the body parts do not seem to fit this classification. *pra* means 'leg' in current speech, so it is possible there was simply a classifier referring to body parts which has been dropped.

bru/bro presently is used with long round or curved objects, such bananas or maize cobs. It is not too much of a stretch to include ribs and teeth in such a category, and it is likely *bru* formerly had more extended semantics.

There is also evidence for a former classifier *bu*, an allomorph of *pu* for round things, applied to small animals (Table 4).

Table 4. Evidence for a former *bu* classifier in Idu

Idu	Gloss	Comment
àndīmbū	dung beetle	
āpīmbú	mole, white-tailed	*Parascaptor leucura*
āɽèmbù	snakehead	
bāmbū	golden jackal	*Canis aureus*
ícīmbù	turtle	
ŋwōbū	Indian mottled eel	*Anguilla bengalensis, Monopterus cuchia*
tàbù	snake	

6. Comparison with Tawrã classifier use

Both the other two Mishmi peoples have classifier systems with considerable typological similarities to Idu. Table 5 summarises the Tawrã system of numeral classifiers;

Table 5. Numeral classifiers in Tawrã

Tawrã	Semantic cluster	Example
brā	small spherical objects	álù brá hàlàŋ *ten potatoes* plá brá kàyìŋ *two pebbles*
bríl	thin tree, posts, cylindrical, long	màsàŋ bríl gè *one* [thin] *tree* tábáw bríl káprèy *four snakes*
brū	long thin objects, tree, banana, pen, spear	bɨʤìg brú káprèy *four bananas* tàpà brú táhrò *six spears*
dő	buildings, large man-made structures	àŋ dő táhrò *six houses*
hàd⁽?⁾ùm	large trees, bushes, clusters of bamboo	màsàŋ hàd⁽?⁾ùm kàsàŋ *three trees* hàbà hàd⁽?⁾ùm kàsàŋ *three clusters of bamboo*
ná	thin flat objects, cloth, paper, leaf	tákò ná k.ɲàŋ *nine papers* kàzìm ná gè *one cloth* tàtyàŋ ná máɲà *five leaves*
pla	circular flat objects, long sharp objects, banknote, plank	bèlà plá gè *a dish* tárá plá wễ *seven knives,* pőy plá hàlàŋ *ten rupees,* másáŋ plá hàlàŋ *ten planks*
pùm	large round/square ? hollow objects, box, elephant, bird	káprá pùm k.ɲàŋ *nine pumpkins,* pyá pùm màɲà *five birds* tameyŋ pum llim *eight elephants*
tí	openings	khàlàŋ tí kàsàŋ *three doors*
táŋ	animals except elephant not fish, insects or birds	àsà táŋ káyìŋ *two mithuns* tadáb táŋ táhrò *six falcons*

Of these, the following appear to be not only virtually segmentally identical, but also to encompass the same semantic fields (Table 6);

Table 6. Tawrã numeral classifiers segmentally cognate with Idu

Tawrã	Semantics	Includes	Idu
brā	small spherical objects	potatoes, pebbles	brā
brū	long thin objects	tree, banana, pen, spear	brū
ná	thin flat objects	cloth, paper, leaf	ná
pùm	large round/square ? hollow objects	box, elephant, bird	pū

The distinctive feature of Idu in relation to its neighbour, Tawrã, is the way it incorporates classifiers into nominal stems and then renews them. For example, the citation forms for 'banana' are as follows;

English	Tawrã	Idu
banana	bɨdʒìg	àjì.brū

Both languages have a classifier *brū* for tubular or cylindrical things. However, in Tawrã the classifier is only cited when required in an expression of number. In Idu it is conjoined with the noun-stem when cited in isolation. Analogous examples are given in Table 7;

Table 7. Idu-Tawra cognates showing classifier incorporation

Gloss	Tawra	Idu	Comment
cabbage	góbì	kòbé.pǜ	Idu incorporates the classifier *pǜ* for round things. The cabbage is an introduced vegetable, so these forms are quite recent in origin.
cucumber	màgìŋ	ānjí.pǜ	Idu incorporates the classifier *pǜ* for round things.
eggplant	phòdù	p(r)àdībrū	Idu incorporates the classifier *brū* for cylindrical things.
onion	pəlù	èlōmprá	Idu incorporates the classifier *prā* for flat, rounded things. Perhaps this refers to the layers of the onion
paddy, rice	ké	kə̀brā	Idu incorporates the classifier *brā* for small cylindrical things.
ginger	àdzìŋ	ànjítà	? Was there a former classifier *ta*
millet	áyò	yàmbā	? Was there a former classifier *(m)ba*. Foxtail millet is *yà* so this looks like a + classifier. cf. èbà + numeral suffix 's.t. flat'

7. Conclusions

Idu has no bound nominal morphology synchronically, and a small array of numeral classifiers. However, several segments incorporated into nouns suggest they were former classifiers, in other words the set was formerly significantly larger. For example, body parts show In the case of bamboos, the classifiers have become stacked, a 'live' classifier following an unproductive one. Fossil classifiers include *brū*, for long tubular objects, *bra* for round things, and *pra* for flat things, which are incorporated into some body parts but are 'live' elsewhere in the lexicon. The existence of another classifier, *-bu* for small animals, can also be inferred from the synchronic lexicon.

Comparison with Tawrã, the closest relative of Idu, shows that at least four morphemes show close semantic and segmental matches between the two languages. Moreover, nouns that in Idu have an incorporated classifier exist as a bare stem in Tawrã. All of this points to a rich system of categorisation of nouns, probably combining elements of noun classes and numeral classifiers, which has broken down and been partly renewed. Erosion seems to be taking place more rapidly in Idu than Tawrã, with more classifier morphemes becoming bound to stems.

Bibliography

Adams, Karen Lee 1989. *Systems of numeral classification in the Mon-Khmer, Nicobarese and Aslian subfamilies of Austroasiatic*. Canberra: Pacific Linguistics.

Blench, Roger M. 2015. The origins of nominal affixes in MSEA languages: convergence, contact and some African parallels. In: *Mainland Southeast Asian Languages: The State of the Art*. N.J. Enfield and Bernard Comrie eds. 558-585. Pacific Linguistics. Berlin/Boston: Mouton de Gruyter.

Campbell, G. 1874. *Specimens of Languages of India: Including Those of the Aboriginal Tribes of Bengal, the Central Provinces, and the Eastern Frontier*. Calcutta: Printed at the Bengal secretariat Press.

Childs, Tucker 1983. Noun class affix renewal in Southern West Atlantic. In: *Current Approaches to African Linguistics Volume 2*, eds. J. Kaye et al. 17-29. Dordrecht: Foris Publications.

Costello, Nancy 1998. Affixes in Katu of the Lao P.D.R. *Mon-Khmer Studies Journal*, 28: 31-42.

DeLancey, Scott 1986. Toward a history of Tai classifier systems. In: *Noun classes and categorization*. Craig, C.G. (Ed.). 437-452. Amsterdam: John Benjamins.

Enfield, N.J. 2007. *A grammar of Lao*. Berlin/New York: De Gruyter.

Konow, Sten 1902. Note on the languages spoken between the Assam Valley and Tibet. *The Journal of the Royal Asiatic Society of Great Britain and Ireland*, *1902*: 127-137.

Mills, J.P. 1952. The Mishmis of the Lohit Valley, Assam. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 82(1):1-12.

Post, M.W. 2007. *A grammar of Galo*. Ph.D. RCLT, La Trobe University, Bundoora.

Pulu, Jatan 1978. *Idu phrase-book*. Shillong: Arunachal Pradesh Directorate of Research.

Pulu, Jimi 2002a. *Idu Mishmi proverbs and sayings*. Itanagar: Arunachal Pradesh Directorate of Research.

Pulu, Jimi 2002b. *A handbook on Idu Mishmi language*. Itanagar: Arunachal Pradesh Directorate of Research.

Ratliff, Martha 2010. *Hmong-Mien language history*. Canberra: Pacific Linguistics.

Robinson, W. 1856. Notes on the languages spoken by the Mi-Shmis. *Journal of the Asiatic Society of Bengal*, 24: 307-324.

Smith, Kenneth D. 1975. The velar animal prefix in Vietnam languages. *Linguistics of the Tibeto-Burman Area* 2. 1-18.