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RE-EVALUATING THE POSITION OF IRAYA AMONG PHILIPPINE LANGUAGES[1]

Lawrence A. Reid
University of Hawai'i
National Museum of the Philippines
reid@hawaii.edu

Abstract

Iraya (iry) of Mindoro has been grouped with Central Luzon languages primarily because of a shared sound change, but many questions remain because of the unique features of the language and because of the unusual phenotypic features of the people. This paper claims that Iraya people are descendants of Negrito groups that fully occupied Mindoro before the arrival of Austronesian-speaking peoples, and Iraya are the last remaining such group in Mindoro. The phenotypic features of Iraya are the result of inter-marriage with in-migrating groups from areas to the south who eventually forced their retrenchment into the most northerly mountains of the island. The unusual linguistic features of Iraya are considered to be a combination of language contact with other Philippine languages, and possibly also with languages from outside the Philippines.

Keywords: Negritos, language contact, Mangyan, Mindoro, Iraya
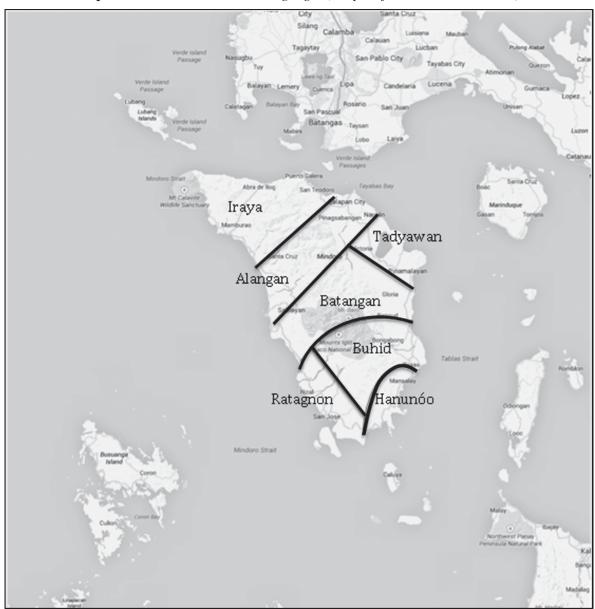**ISO 639-3 codes:** iry

1 Introduction

Iraya is one of the more than 150 Malayo-Polynesian (MP) languages spoken in the Philippines. It is spoken by an estimated 5000 of the older Iraya population on the island of Mindoro, the 7th largest island in the Philippines.[2] There are at least seven mutually unintelligible languages spoken on the island, of which Iraya is the most northerly and is adjacent across the strait from the Batangas area of Luzon, south of Manila, where Tagalog is the main language (see Map 1). The indigenous languages of Mindoro and their cultures are often referred to as Mangyan. Various articles have appeared dealing with these languages. Tweddell (1958) primarily deals with the phonology and morphology of Iraya. Zorc (1974) is an extensive discussion of the relationships between the various languages of Mindoro, dealing with a wide selection of data (summarized below in sec. 3). Barbian (1977) provides additional data to those already available. Although language contact is a prominent explanation of some of the variability that occurs, this paper is the first that proposes a prehistoric scenario that

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[1] This article is a revised version of presentations that were made in several venues, "*Baa, Baa, Black Sheep*: Features distinguishing Iraya from most other Philippine languages," to Minpaku Linguistics Circle, Osaka, Japan, Sept. 7, 2014; and to Welcome Meeting, Institute for the Study of Languages and Cultures of Asia and Africa (ILCAA), Tokyo University of Foreign Studies, Sept. 10, 2014; 'Identifying prehistoric population trajectories: Who influenced Iraya?' to Migrations and Transfers in Prehistory: Asian and Oceanic Ethnolinguistic Phylogeography, University of Bern, Switzerland, July 28-30, 2014; and 'Re-evaluating the position of Iraya among Philippine languages' to the 13th International Conference on Austronesian Linguistics, Academia Sinica, Taiwan, July 18-23, 2015. I wish to thank all who commented on each of the presentations, and for comments subsequently received by email from Alexander Adelaar, Anthony Jukes, Hsiu-chuan Liao, and Richard McGinn, all of which have contributed valuable information, but not all of which is reflected in the present article. I am, as always, finally responsible for the present version.

[2] Lewis et al. (2016) give a population figure of 10,000, which is a rough estimate done by the Overseas Missionary Fellowship (OMF) in 1991. This figure apparently consists of all who consider themselves to be part of the Iraya cultural group, most of whom no longer speak the Iraya language. The estimate given here is possibly inflated.

accounts for some of the variability and the geographic location of some of these groups, particularly Iraya.

Iraya ('person' in the Iraya language) is derived from Proto-Malayo-Polynesian (PMP) *ʔi- 'person from' + *daya 'interior, upland' (Blust & Trussel Ongoing), and is distinctly different in a number of features from the other languages of Mindoro, and of the Philippines. These features include different pronominal forms and functions, several changes in the structure of noun phrases, changes in the patterns of verb structures, changes in word order and other sentential features not commonly found in other Philippine languages. Iraya itself is dialectally diverse, with populations in two provinces, Occidental Mindoro and Oriental Mindoro. The data given in this paper, unless otherwise noted, is from three periods of fieldwork in Oriental Mindoro. In November, 2013, with Avelino Pampilo (45?) and Mariano Garcia (60?) in Talipanan, White Beach, Puerto Galera, and in June-July and November, 2014, with Islas Malinaw (70?) and Elma Malinaw (35?) in Da Pirmida, Baclayan, Puerto Galera. Several hundred lexical items, and a corresponding list of sentences were elicited and recorded. Each assistant likewise recorded one or more narrative texts, which were transcribed and translated. All sound files and transcribed data have been deposited with The Mangyan Heritage Center, Calapan City, Oriental Mindoro, Philippines.

Map 1: *Mindoro Island and its languages (adapted from Barbian 1977:16)*

The question being asked in this paper is to what extent these features are retentions of earlier Philippine languages, the result of innovations that are unique to Iraya, or are developments that are the result of contact diffusion. One factor that needs to be considered is that Iraya people have phenotypical features that distinguish them from other Philippine groups. They typically have wavy to curly hair, a feature found to a more pronounced degree in Negrito populations of the Philippines, suggesting that these were also a Negrito group that has been heavily influenced by in-migration and intermarriage with non-Negrito groups. Tweddell (1958:2) noted the Negrito-like features of Iraya people. He also referred to Beyer (1921) who classified them as 'Sakai', his supposed second group of immigrants into the Philippines following 'Java man'. The Negrito connection is supported by HUGO (2009, Fig. 1) which reports on a genetic analysis of ancestral alleles of 75 populations. A maximum likelihood tree shows Iraya grouped with Mamanwa, Agta, Aeta (i.e., Ayta) and Ati populations, groups that self-identify as Negrito.

The general claim being made is that evidence suggests that like all surrounding areas of the Philippines, Mindoro was widely occupied by groups of Negrito people, before MP-speaking peoples arrived. The first contact in Mindoro with MP speakers was probably with people from the Batangas area where they had learned and were speaking an early version of what has now developed into the Central Luzon group of languages, so that all of Mindoro was initially occupied by speakers of a language that carried the features of Central Luzon languages. Subsequently migrants from the western Visayas to the south-east of Mindoro and from Palawan to the south-west intermarried with the local Negritos.

Over several thousand years, in-migration has resulted in a forced retrenchment of Negritos to the most northerly mountainous areas of the island. In-migration is still happening, with Tagalog being the language primarily spoken in lowland areas in the north of Mindoro, and by the younger generations of Iraya people. Ilokano is spoken in some communities in the coastal areas of Occidental Mindoro, while in the southeast, the major lowland language is a Central Bisayan language (Romblomanon) spoken in Tablas and other islands to the east. Ratagnon in the south of the island is one of the three dialects of Cuyunon, a West Bisayan language spoken directly to the south in the Semirara group of islands (Zorc 1974:561, see also Hammarström et al. 2016).

While features of their original MP language are still found in some of the southern group (see sec. 4), the southern Mangyan languages are now classified as part of the Greater Central Philippine subgroup (Blust 1991). Only the three languages in the north of the island, Iraya, Alangan and Tadyawan, are considered to be related to the Central Luzon subgroup of Philippine languages, and only Iraya people still appear to be phylogenetically distinct from other groups in the island.

This paper is organized as follows. Section 2 outlines some of the features which distinguish Iraya from most other languages of the Philippines. Section 3 provides information about the position of Iraya and the other northern languages of Mindoro based on lexical data and application of the comparative method. Section 4 considers various factors that suggest contact diffusion into Iraya and its related languages. Section 5 discusses the claim that the Iraya people are Negrito people that have been forced by in-migrating people into the most northerly mountains of Mindoro. The final section provides a summary of the issues discussed in the paper.

2 About the Iraya language

Iraya is unique in many ways among the languages of the Philippines. This section discusses first the pronouns, then features of noun phrases and verbal structures which are unusual for Philippine languages.

2.1 Personal pronouns

The features that distinguish Iraya personal pronouns from most other Philippine languages include the following: a) loss of case distinctions in non-singular forms; b) presence of dual pronouns for all non-singular forms, only one of which is inherited; c) the extension of earlier Set 2 forms for Set 1 functions in dual and plural forms; d) unique Set 2 forms; e) their position. All core personal pronouns are fronted before their verb or noun head.

Table 1 presents the two sets of Iraya personal pronouns used in texts and elicited materials (Reid 2013a). Case marking appears only in the three singular forms. These distinguish between Set 1, whose functions include Nominative (of actor voice and non-actor voice constructions), Topic and nominal Predicate, and Set 2, whose functions include Genitive (possessor in a noun phrase, as well agent of non-actor voice constructions) and Oblique, in which case the personal pronoun is preceded by the form *sa* 'locative, oblique'. All non-singular personal pronouns have a single form for each of the functions that are distinguished by the singular forms. Set 1 forms are disyllabic (CV.CV), while Set 2 forms alternate between a disyllabic form, and a reduced monosyllabic (CVC) form. Only one of the plural Set 2 forms has a reduced CVC form.

Following the paradigmatic structure of most Austronesian languages, Iraya maintains a distinction between an inclusive 1st person plural form ('we all') and an exclusive 1st person plural form ('we but not you'). However, Iraya is unique among Philippine languages in having dual forms for each of the corresponding plural forms. The only dual form which is inherited is *kita* '1st person inclusive dual, we-two' (Reid 2009, 2016). Each of the other forms is uniquely formed (for Philippine languages) with an ending derived from the Iraya form *darawá ~ darwa* 'two'. A similar paradigmatic structure is found in some languages in Borneo, such as Brunei Dusun (Table 2) with case distinctions maintained only in the singular forms (Lobel 2013:146). Brunei Dusun is distinct from Iraya, however, in maintaining distinct forms for genitive and oblique cases, while Iraya maintains the distinction only with the oblique marker *sa*. Brunei Dusun has reformed all its dual and plural forms so they are not directly comparable with the corresponding Iraya personal pronoun forms.

Comparison of the singular forms and the corresponding plural forms in 2nd and 3rd persons, suggests that Set 2 plural forms have taken over the function of Set 1 forms. Set 2 singular forms in 2nd and 3rd persons each has a first syllable *ku-* whose source is unknown. It is possible that these forms are a remnant of the *ku(n)-* initial oblique forms found among the Sambalic group of Central Luzon languages. The 1st person inclusive plural personal pronoun is a direct reflex of PMP *=tamu.

A full discussion of the development of Iraya pronouns is not possible in this paper because of space constraints, but it is clear that they are a combination of inherited forms, forms that have been borrowed from neighboring languages, and innovated forms. One of the innovations is unique among Philippine languages, *naʔay ~ nay* 'I, my', which is clearly a semantic shift from a demonstrative 'this one' that occurs (probably independently) in a number of Philippine languages, including Bontok, a Central Cordilleran language of Northern Luzon.

Finally, most Philippine languages have a set of enclitic genitive pronouns, although some languages can optionally replace them with Locative or Possessive forms before the head word. In Iraya (as in almost all Mangyan languages), there are no basic enclitic forms, although Hanunó'o has a full set of innovated forms built on the genitive personal marker *ni-* (Zorc 1974:571). The data show fixed positions for Set 2 (genitive) Iraya pronouns before a verb when actor, and when functioning as a nominal possessor, before a head noun. All Set 2 pronouns obligatorily occur before the form with which they are in construction. This is true also for all the example data in Tweddell (1958:48–49). When Set 2 pronouns function as Locatives preceded by Iry. *sa*, they may optionally occur after a verb. Tweddell (1958) provides examples of Set 1 pronouns, some of which precede the verb, ex. (1)–(2), and others which follow the verb, ex. (3), where *ʔiya* occurs at the end of the sentence. However, in none of the narrative texts that I recorded does a core pronoun follow the verb, ex. (4), nor in elicited data, given in response to Tagalog sentences, where pronouns followed the verb, ex. (5)–(6).

(1) Iry. *ʔaku ʔagtalima.*
          NOM.1SG remember
          'I remember'.

(2) Iry. *ʔiya ʔagtukawanan sa naʔay naʔapun.*
          NOM.3SG speaking LOC GEN.1SG yesterday
          'He was speaking to me yesterday'.

(3) Iry.   *kumu=ʔani*   *tabuyun*   *sa*   *naʔay*   *ʔiya.*
             GEN.2SG=now   give   LOC   GEN.1SG   NOM.3SG
             'You give him to me'.

(4) Iry.   *ʔaku*   *nagmunaʔan,*   *ʔaku*   *tuwaʔ*   *ʔagpamataw,*   *ʔaku*   *ba*   *nay*
             NOM.1SG before   NOM.1SG here   live   NOM.1SG   BA   GEN.1SG

             kalkan   *sa*   *tambuʔ*   *kayu.*
             sleep.place   LOC   top   tree
             'Before, I used to live here, and my sleeping place was in the top of a tree'.

(5) Iry.   *kawu*   *nay*   *malyag.*
             NOM.2SG   GEN.1SG   like
             'I like you'.

(6) Iry.   *kawu*   *tuwaʔ*   *tumuŋkaʔ.*
             NOM.2SG   here   sit
             'You sit here'.

Table 1*: Iraya personal pronouns (Reid 2016)*

		Set 1 (Nom/Top/Prd)	Set 2 (Gen/(Loc/Obl))
1	Singular	*ʔaku*	*(sa) naʔay ~ nay*
2	Singular	*kawu*	*(sa) kumu ~ kum*
3	Singular	*ʔi:ya*	*(sa) kunin ~ kun*
1 (excl.)	Dual	*(sa) kidawa*	
1 (incl.)	Dual	*(sa) kita*	
2	Dual	*(sa) kandawa*	
3	Dual	*(sa) sidawa*	
1 (excl.)	Plural	*(sa) yamən ~ yam*	
1 (incl.)	Plural	*(sa) tamu*	
2	Plural	*(sa) kuyu*	
3	Plural	*(sa) kura*	

Table 2: Brunei Dusun personal pronouns (adapted from Lobel 2013:147)

		Nominative	**Genitive**	**Oblique**
1	Singular	*kujiʔ*	*ku, jaiʔ*	*jaiʔ*
2	Singular	*ikow, =kow*	*mu*	*ijun*
3	Singular	*iyo*	*yo, ʔo, o*	*diso*
1 (excl.)	Dual	indoʔ		
1 (incl.)	Dual	dodoʔ		
2	Dual	mundoʔ		
3	Dual	yodoʔ		
1 (excl.)	Plural	jamiʔ		
1 (incl.)	Plural	jatiʔ		
2	Plural	muyun		
3	Plural	soro		

2.2 Noun phrases

The structure of Iraya noun phrases is likewise unique among Philippine languages. Iraya noun phrases are not marked for case, neither do they distinguish personal from non-personal nouns, discussed in sec. 2.2.1. A gender system has developed for personal nouns, to distinguish between masculine and feminine names, see sec. 2.2.2. A subordinating ligature has also generally been lost, examined in sec. 2.2.3, and optional unique forms for marking noun phrases have developed, discussed in sec. 2.2.4.

2.2.1 Loss of noun phrase marking for case and personal nouns

PMP is reconstructed as having a variety of forms that introduced noun phrases, referred to by a wide range of labels, commonly referred to as determiners, case markers, or nominal specifiers (Reid 2002:296–297). Their functions range from marking case, such as nominative/absolutive, genitive/ergative, oblique, and locative to specifying features of the following head noun, whether or not it was definite, or specific; whether or not it was a common noun or a personal noun, and in the latter case, whether it included more than the person named, forming a comitative noun phrase. The loss of formal marking of noun phrases is found throughout the Mangyan languages of Mindoro to one degree or another. In Alangan, a language geographically adjacent to Iraya, and subgrouped with it, personal nouns are always unmarked if singular (7)–(8), but require a preceding *kura* '3rd person plural' if the form is comitative, regardless of the case, see ex. (9)–(10). Nominative common nouns are preceded by the marker *in*, as in ex. (8) and (10) (with equivalent Tagalog sentences, provided by Dimaano 2005, for comparison).

(7) Tag. *dumating si Gloria kagabi*.[3]
      Aln. *rumateng ∅ Gloria kapuni*
          arrived Gloria last.night
          'Gloria arrived last night'. (Dimaano 2005, ex. 64)

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[3] Literal and free translations here and elsewhere are modified from the sources given to conform to Leipzig glossing rules, and for consistency.

(8) Tag. *ipinadala*   *ni*   *Vivian*   *ang*   *sulat.*
     Aln. *piyababa*   ∅   *Vivian*   *in*   *surat.*
           sent   Vivian   SPCF   letter
           'Vivian sent the letter'. (Dimaano 2005, ex. 65)

(9) Tag. *umalis*   *sina*   *Aniway*   *at*   *Oliver*   *sa*   *paaralan.*
     Aln. *pumanaw* *kura*   *Aniway*   *usai*   *Oliver*   *sa*   *iskul.*
           leave   3PL   Aniway   with   Oliver   LOC   school
           'Aniway and Oliver left the school'. (Dimaano 2005, ex. 66)

(10) Tag. *binasa*   *nina*   *Carlo*   *at*   *Martin*   *ang*   *sulat.*
     Aln. *biyasa*   *kura*   *Carlo*   *at*   *Martin*   *in*   *surat.*
           read   3PL   Carlo   and   Martin   SPCF   letter
           'Carlo and Martin read the letter'. (Dimaano 2005, ex. 67)

In Iraya, as well as in Alangan (ex. 11) and other Mangyan languages, genitive and oblique common nouns are unmarked, as noted by Zorc (1974:577) and Barbian (1997:97).

(11) Tag. *bumili*   *ako*   *ng*   *bago=ng*   *sasakyan.*
     Aln. *agbili*   *aku*   ∅   *bayu pag*   *pagsakayan.*
           buy   NOM.1SG OBL   new LIG   car
           'I bought a new car'. (Dimaano 2005, ex. 59)

As Zorc (1974:577) notes, this is only significant in contrast with all of the Central Philippine languages outside of Mindoro, where some kind of oblique marker is obligatory, such as Tag. *ng* /naŋ/, Ceb. *ʔug*, Kin. *kang*, Kuy. *iʔ*, Pal-Abr. *it*, Agy-Kal. *ta*, Bik. *nin*, Hil. *sing*, etc. Such markers are also obligatory in North Luzon and Central Luzon languages, such as Ilk. *ti*, Bon. *ʔas*, Kpm. *king*, *keng*, etc.

Iraya has none of these case-markers. The case of a noun phrase is identified only by its position relative to the predicate, and by pragmatic considerations. There is also no marking distinction in Iraya between common and personal nouns, such as is found for example in Tag. *ang/si* and *ng/ni*.

2.2.2 Development of gender distinctions for personal names

While there is no distinct marking for common vs. personal nouns in Iraya, the language distinguishes between masculine and feminine nouns, by introducing masculine names with *laki* 'male' (12), and feminine nouns with *baʔi* 'female'. The same forms can be used for all core arguments; there is no distinctive nominative and genitive marking, whereas locative phrases can be optionally preceded by *sa*. Ex. (12)–(13) are both possessive constructions where the possessor is optionally marked as a locative NP. These gender specifiers can be replaced by the form *kuyay* 'old person' (14), or in the case of comitative nouns by *kura* '3ʳᵈ person plural pronoun' (13). In texts, where gender identification is already known, either by prior reference or general knowledge, a personal noun is optionally introduced by one of the nominal specifiers, typically *ʔag*, ex. (15).

(12) Iry. **laki**   *Pedro*   *tiyaʔ.*
           male   Pedro   this.one
           'This is Pedro's'.

(13) Iry.   *sa*   **kura**   *Pedro*   *tiyaʔ.*
                LOC   3PL   Pedro   this.one
            'This belongs to Pedro and others'.

(14) Iry.   *taŋuna, nay   apuʔ*   **kuyay** *marʔet* *ba* *maki* *kamutiyan.*
                before   GEN.1SG grandfather old   Mar-et   BA   exist   camote.field
            'Before, my grandfather Mar-et had a sweet potato field'.

(15) Iry.   **ʔag**   *manhuŋ*   *ba*   *ʔilukub=ani.*
                SPCF   Manhung   BA   fall.down=already
            'Manhung fell down'.

2.2.3 Loss of subordinating ligatures

A characteristic feature of Philippine languages, and one that is reconstructed to PMP, is the presence of a subordinating linker, commonly referred to as a 'ligature' between head nouns and their modifiers, whether nominal, adjectival, demonstrative, or full relative clauses. The same subordinating ligature is typically used also before verbal complements or other subordinate structures. In many Mangyan languages the form of the ligature to mark subordinate structures is *pag* (see ex. (11) above) and examples given in Zorc (1974:576). These also include examples from Iraya, but the text and elicited data I obtained from Iraya have no instances of *pag* as a subordinating ligature, ex. (16). While other Mangyan languages use *pag* between an adjectival form and a noun, Iraya has extended the ligature *ka* to link not only numeral constructions (as do many other Philippine languages), but uses it also to link an adjectival form and a noun, as in (17)–(18). But this is only when the noun follows the adjectival form. There is no ligature when the word order is reversed, with the noun first, as in ex. (19)–(21). The only remnant of *pag* is found as an enclitic *=g* (replacing a final glottal stop) between a demonstrative and a following noun, ex. (22).

(16) Tag.   *ang*   *naghuhuni=ng alamid*
        Iry.   *ʔag*   *magbəʔət*   *barungiʔ*
                SPCF   noisy=LIG   civet.cat
            'the noisy civet cat'

(17) Han.   *mayad*   *pag*   *balay*
        Buh.   *kafiʔaʔun* *fag*   *balay*[4]
        Tdy.   *maganda*   *pag*   *balay*
        Aln.   *magalen*   *pag*   *balay*
        Iry.   *piya*   *ka*   *balay*
                beautiful   LIG   *house*
            'beautiful house' (Zorc 1974, ex. 1–5).

(18) Iry.   *maraw* *[saʔi* **ka** *ʔaldaw]* *ba* *batay* *mamahuy* *ʔag* *nay*   *apuʔ*
                and.then one   LIG   day   BA   future   visit   SPCF GEN.1SG grandfather

                sa   *kun*   *kamutiyan.*
                LOC   GEN.3SG   sweet.potato.field
            'Then one day my grandfather was going to visit his sweet potato field'.

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[4] Transcription modified to substitute letter *q* with *ʔ*.

(19) Iry. *lakul* **ka** *dalan* ~ *dalan* *lakul*
            big LIG trail   trail big
      'a wide trail'

(20) Iry. *piya* **ka** *daraga* ~ *daraga* *piya*
            beautiful LIG young.lady   young.lady beautiful
      'a beautiful young lady'

(21) Iry. *kum* *tayʔən* *[da* *kum* *galanit* *raŋas]*.
            GEN.2SG sew SPCF GEN.2SG clothes torn
      'Sew your torn clothes'.

(22) Iry. *tiya=***g** *ʔiruʔ* *tiyaʔ*
            this.one=LIG dog this.one
      'this dog'

2.2.4 Unique marking of noun phrases

Iraya utilizes two monosyllabic forms which optionally introduce noun phrases. One is *ʔag*, the other is *da*. Neither form marks case, as either can introduce both nominative, genitive and predicative NPs. They possibly mark specificity or definiteness in combination with other factors which are currently undetermined. Tweddell (1958:65) gives precisely the same definition for both, 'a, the, the one who, that which', noting that *ʔag* is more specific, while *da* is more general. The form *ʔag* commonly introduces a topicalized NP in which case the head noun is definite, whether a common noun or a personal noun, as in ex. (15) above, and it can also introduce a nominative NP at the end of a sentence, as in (23). Ex. (24) shows *ʔag* marking an indefinite oblique NP in an actor voice construction.

(23) Iry. *maki ʔaŋani gulat* *sa* *kunin* *suʔut* *[**ʔag*** *nay* *kaka]*.
            EXIST surely injured LOC GEN.3SG chest SPCF GEN.1SG brother
      'My brother had a bad injury in his chest'.

(24) Iry. *yamən* *tanguna,* *ʔaku* *ba* *badyaʔ* *ʔuŋaʔ* *dapu,* *yamən*
            1PL.EX before NOM.1SG BA still child still 1PL.EX

            nagpanawən *[**ʔag*** *ʔuway,* *ʔuway* *lakul]*.
            AV.make SPCF rattan rattan big
      'What we did before, when I was still a young child, we were working with rattan, big rattan'.

The form *da* can introduce a nominative NP, as in (21) above, and commonly introduces NPs which follow a predicate demonstrative *naba* 'that (near)', referring to a story just told, as in (25)–(26), an environment where *ʔag* can also be found, (27). Ex. (28) illustrates repeated, explanatory nominative phrases, marked by *da*, following *naba*.

(25) Iry. *naba* **da** *panultulun* *nay* *apuʔ.*
            that SPCF story GEN.1SG grandfather
      'That is the story of my grandfather'.

(26) Iry.   *naba*   ***da***   *naʔay*   *kadanásan*
            that   SPCF   GEN.1SG   experience
            'That was my experience'.

(27) Iry.   *naba*   *mana*   ***ʔag***   *balay...*
            that   surely   SPCF   house
            'That was certainly a house…'

(28) Iry.   *naba*   *mana*   *ba*   ***da***   *kura*   *pamaŋən,*   ***da***   *kura*   *pamaŋən,*
            that   surely   BA   SPCF   3PL   food   SPCF   3PL   food

            da   *paskəd*   *ba*   *labəy.*
            SPCF   called   BA   yam
            'That must be their food, their food, which is called yam'.

Language assistants commonly translate *ʔag* as Tag. *ang,* however its probable source is *pag,* a form which as noted above, commonly occurs as a ligature in other Mangyan languages, but in Iraya that no longer has a *pag* ligature, the form has been reanalyzed as a nominal specifier with loss of the initial consonant.

One further function of *ʔag* is to mark a temporal phrase, ex. (29).

(29) Iry.   *[ʔag ʔaku   ba ʔibun dapu] ba yamən ba sataʔ   daku sa   yam   pamatawan.*
            SPCF NOM.1SG BA young still   BA 1PL.EX BA there.far very   LOC 1PL.EX home
            'When I was still young, our home was in a very far place'. (IM Text 1)

While common nouns in Philippine languages are generally not marked for plurality, a variety of pluralizing forms (apart from reduplication) are found. The common pluralizer in Tagalog and other Central Philippine languages is *mga* /maŋa/, and is borrowed widely into Mangyan languages, including Iraya. But in Iraya it is replacing an earlier common noun pluralizer *pad,* whose source is unknown, ex. (30)–(31).

(30) Iry.   *ʔag ʔanubliŋ kay ba magsələd sa   **pad** lubut, lubut ʔoroŋ...*
            SPCF blowflies also BA entered LOC   PL hole hole   nose
            'The blowflies also entered into the holes, the holes of my nose..'.

(31) Iry.   *daʔ   **pad**   kayu   lakul   ba   makaya nagpaŋatigluʔ...*
            and   PL   tree   big   BA   seem   breaking
            'and the big trees seemed to be breaking…'

2.3 Other structural features

One of the unique features of Iraya is the frequency of occurrence of a monosyllabic form *ba*, discussed in detail in sec. 2.3.1. The other unusual feature of Iraya is the use of perfective forms of the verb to mark potential or future forms, explained in sec. 2.3.2.

2.3.1 BA

The form /ba/ is probably the most frequently occurring monosyllabic form in the language, and yet its functions still remain unclear. In one Iraya text, *ba* occurs 75 times in 116 sentences, sometimes as many as four times in a single sentence. Tweddell (1958:67) labels Iry. *ba* as a 'copulative particle'. When asked what the equivalent form in Tagalog is, language assistants typically say Tag. *ay*, which is the form that marks an inverted construction in Tagalog (Schachter and Otanes 1972:485 et seq.), where some nominal form or adverb which occurs after the verb in unmarked constructions is fronted

and linked to the verb by the form *ay* (or *=y* following a vowel). An inverted construction in Tagalog primarily has the purpose of creating a formal structure, commonly used in writing and formal speeches, but less frequently in informal situations. While Iry. *ba* is commonly found (optionally) between an NP and a following verb (32), there is no indication that the construction is anything other than a normal construction, making it appear as a copula. However, it has a much wider function, as Tweddell (1958:67) noted, 'it [*ba*] may also indicate syntactical juncture points'. These include the following: between a contrastive topicalized NP and a verb (33); between fronted locative and time phrases and a predicate (34)–(35); between a conditional clause, and its apodosis (36); between a quotation formula and a direct quote (37); between conjoined sentences (38); between a verb and its verbal complement clause (39); and between a noun and a following relative clause (40).

(32)   Iry.   *[nay   takər]* ***ba*** *tinapuŋan=ani limatək.*
             GEN.1SG leg   BA stuck=already   leech
             'My legs were already stuck with leeches'.

(33)   Iry.   *[ʔiya   kay]   **ba**, makita kun   ʔawak   laki manhuŋ   kay.*
             TOP.3SG also   BA painful GEN.3SG   back   male Manhung again
             'As for him, Manhung's back was painful again'.

(34)   Iry.   *daʔ [sa təbtəban kamutiyan] **ba** maki ʔalugʔugan.*
             and   LOC side   camote.field BA exist   stream
             'and beside the field there was a stream'.

(35)   Iry.   *maraw   [saʔi   ka   ʔaldaw] **ba**   batay mamahuy ʔag nay   apuʔ*
             and.then one   LIG   day   BA   future visit   SPCF GEN.1SG grandfather

             sa   kun   kamutiyan.
             LOC   GEN.3SG   sweet.potato.field
             'Then one day my grandfather was going to visit his sweet potato field'.

(36)   Iry.   *[nu binərya] **ba** batay pabali   sa   tamu.*
             if   call   BA future come.near LOC   1PL.IN
             'If you call it, it will come near to us'.

(37)   Iry.   *[ʔamba kunu nay   ʔapuʔ]   **ba** "ʔayaw=ani kawu   batay ʔaŋgat*
             said   RPRT GEN.1SG grandfather BA do.not=now NOM.2SG future accompany

             sa   naʔay   panawən maʔudan.
             LOC GEN.1SG   because   raining
             'My grandfather said, "Don't come with me because it is raining."'

(38)   Iry.   *[yamən ba sataʔ magpamataw] **ba** [ʔiya   ginhawa   gidtəʔ].*
             1PL.EX BA there lived   BA NOM.3SG comfortable really
             'We lived there and it was really comfortable'.

(39) Iry. *maŋʔu ʔag nay   kaka,   [nay   sinərəy] ba [maki ʔaŋani gulat*
      shout   the GEN.1SG brother   GEN.1SG notice   BA exist surely   injured

      sa   kunin   suʔut ʔag   nay   kaka].
      LOC GEN.3SG chest SPCF GEN.1SG brother
      'My brother shouted, and I noticed that my brother's chest was badly injured'.

(40) Iry. *nay   sinərəyan [ʔag yamən mana balay] ba [rininas=ani]...*
      GEN.1SG saw   SPCF 1PL.EX also   house BA destroyed=now
      'I saw our house that was destroyed'. or 'I saw our house and it was already destroyed'.

Possible sources of Iry. *ba* will be considered in sec. 4.3.2 below.

2.3.2 Paradigmatic features of verbs
One of the most striking features of Iraya verbs is the use of originally perfective forms for future or potential activity, but preceded by an auxiliary verb, Iry. *(ba)tay* (noted also by Zorc 1974:574). Many Philippine languages generally reflect the PMP infix *<in> 'perfective', marking action that is completed, forming a past–non-past system in PMP. Central Philippine languages have combined the infix with a reflex of PMP *CVC- 'imperfective' reduplication to mark present, imperfective actions, forming a begun–non-begun system. Iraya retains PMP *<in> to mark completed actions, or past tense, but uses it also for future forms, forming a present–non-present system.

Elicited Iraya transitive (patient voice) constructions (41)–(43), with Tagalog equivalents for comparison (44)–(46), illustrate this paradigmatic shift (a morphological analysis of the verbs is given in line 2 of the examples). The same non-present form of the patient voice verb, Iry. *ʔininəm*, is used for both future and past events.

(41) Iry. *nay   ʔinəmən ʔag sapaʔ   ŋuna.*
                     ʔinəm-ən
      GEN.1SG drink-PV   SPCF water   now
      'I'm drinking the water now'.

(42) Iry. *nay   ʔininəm   ʔag   sapaʔ   ʔaray   ʔumaga.*
                     ʔ<in>inəm
      GEN.1SG <NPRST>drink   SPCF   water   today   morning
      'I drank the water this morning'.

(43) Iry. *nay   batay   ʔininəm   ʔag   sapaʔ   girabas.*
                             ʔ<in>inəm
      GEN.1SG FUT   <NPRST>drink   SPCF   water   tomorrow
      'I'll drink the water tomorrow'.

(44) Tag. *Iniinom   ko   ang   tubig   ngayon.*
            C<in>V:-ʔinom
      NPAST-drink   GEN.1SG SPCF   water   now
      'I'm drinking the water now'.

(45) Tag. *Ininom   ko   ang   tubig   kaninang umaga.*
            ʔ<in>inom
      <PAST>drink   GEN.1SG SPCF   water   before   morning
      'I drank the water this morning'.

(46)   Tag.   *Iinomin   ko   ang   tubig   bukas.*
           CV:-ʔinom-in
           NPAST-drink-PV   GEN.1SG SPCF   water   tomorrow
           'I'll drink the water tomorrow'.

The same system is found also with Iraya intransitive constructions. Exs (47)–(49) are extended intransitive (actor voice) construction with an indefinite oblique NP. The same non-present form of the actor voice verb, Iry. *minəm*, is used for both future as well as past events.

(47)   Iry.   *ʔaku   ʔagʔinəm   sapaʔ   ŋuna.*
                          ʔagʔinəm
           NOM.1SG   AV-drink   water   now
           'I'm drinking water now'.

(48)   Iry.   *ʔaku   minəm   sapaʔ   ʔaray   ʔumaga.*
                     m-inəm
           NOM.1SG NPRST-drink   water   before   morning
           'I drank water this morning'.

(49)   Iry.   *ʔaku   batay   minəm   sapaʔ   girabas.*
                                m-inəm
           NOM.1SG   FUT   NPRST-drink   water   tomorrow
           'I'll drink water tomorrow'.

Text analysis shows that the Iraya infix *<in>* is no longer functioning as a perfective infix. Imperative forms of transitive verbs require the infix, as in (50). The same forms of the verb occur also with perfective forms (51).

(50)   Iry.   **li**n**aŋkəb** *ʔag   balay,   pad bintanaʔ daʔ   pagsakbawan ba   laŋkəb,*
           NPRST.close SPCF   house   PL   window   and   door   BA   close

           *kuyu   ba   ʔayaw   batay   **m**amatpaʔ.*
           2PL   BA   do.not   FUT   NPRST.watch
           'Close the house, the windows and doors and when closed, don't look'.

(51)   Iry.   **si**n**iwaŋ**   *ʔag   bintanaʔ daʔ   **m**amatpaʔ.*
           NPRST.open   SPCF   window   and   NPRST.watch
           'She opened the window and watched'.

There are, however, multiple examples of verbs, that do not fit this pattern, and either reflect an earlier system, or conform to patterns of other languages, with which Iraya is in contact now or in the past. PMP (and earlier stages of Austronesian languages) is noted for verbal forms which are distinguished by what has been referred to as voice (Wouk & Ross 2002), by which the semantic role of the grammatical subject is referenced in the verb. Two major syntactic patterns are associated with the four or more voices. The different intransitive constructions are labelled actor voice, while transitive constructions are labeled undergoer or non-actor voice. Zorc (1974:578) notes a reduction of the three undergoer voices to one in the three northern languages of Mindoro, Iraya, Alangan, and

Tadyawan.[5] All undergoer voice verbs in these three languages are affixed with a reflex of PMP *-en, although because of assimilation to the last vowel of the root, may appear as *-in*, *-ən*, *-an*, or *-un*. Zorc (ibid.) notes that, despite three examples in Tweddell's Iraya grammar (1958:101) and the widespread use of such verbs in other languages of the Philippines, he was unable to elicit 'portative' verbs, such as *give*, *sell*, *throw*, *plant*, etc., with an *ʔi-* prefix in any of the three northern languages of Mindoro, Iraya, Alangan, and Tadyawan. In the text data I recorded, there is only one example of such a verb, and it is a frozen form, prefixed with an actor voice *ʔag-*.

(52)　Iry.　　*maki　ʔiraya　sataʔ　ʔagʔilukub.*
　　　　　　　exist　person　there　lie.down
　　　　　　　'There was a person lying down there'.

Another interesting fact about Iraya verb forms, is that reduplication is no longer productive. While some Iraya verbs retain a reflex of PMP *CVC- 'imperfective action', the forms are frozen. The form commonly used in Iraya to form imperfective or continuative action verbs, is a suffix *-an*, which can be doubled as *-anan* to form repetitive action verbs, as in the elicited data of two actor voice verbs *ʔinəm* 'drink' and *tiŋaraʔ* 'look up' in Table 3.

Table 3: Iraya verb forms

	Indicative	**Continuative**	**Repetitive**	**Infinitive**
Present	*magʔinəm* 'drink'	*magʔinəman*	*magʔinəmanan*	*minəm*
Past	*minəm*	*minəman*	*minəmanan*	
Future	*batay minəm*	*batay minəman*	*batay minəmanan*	
Present	*magtiŋaraʔ* 'look up'	*magtiŋaraʔan*	*magtiŋaraʔanan*	*tumiŋaraʔ*
Past	*tumiŋaraʔ*	*tumiŋaraʔan*	*tumiŋaraʔanan*	
Future	*batay tumiŋaraʔ*	*batay tumiŋaraʔan*	*batay tumiŋaraʔanan*	

3 Position of the Northern Mindoro languages

Zorc (1974) must be credited for first noting that the Northern Mindoro languages have a number of /y/ reflexes of PMP forms with *R, a development found in the Central Luzon languages as well as the Bashiic languages in the far north of the Philippines. Table 4 provides a short list of some of the forms provided by Zorc (1974) and Barbian (1977), which show such reflexes.

*Table 4: Some Northern Mindoro forms showing /y/ reflex of PMP *R*

	Gloss	**PMP**	**Iraya**	**Alangan**	**Tadyawan**
1	heavy	*beRqat	*ma-biyat*	*ma-biyat*	*ma-byat*
2	night	*Rabiqi	*yabiʔ*	*yabiʔ*	----
3	rib	*tageRaŋ	*tagyaŋ*	*tagyaŋ*	*tadyaŋ*
4	bite	*kaRat	*kayat*	*kayat*	*kayat*
5	earth	*daRaq	----	*diyaʔ*	*diyaʔ*
6	fire, embers	*baRaq	*bayaʔ*	*bayaʔ*	*baya*
9	hear	*deŋeR	*ka-riŋəy*	*ka-rəŋəy*	*-liŋy-an*
10	loincloth	*baqaR	*baʔay*	*baʔay*	*baʔay*
11	neck	*liqeR	*ləʔəy*	*ləʔuy*	----
12	new	*baqeRu	*bayu*	*bayuʔ*	----
13	satisfied	*besuR	*ʔa-bsuyan*	----	*ma-gsuy*
14	tail	*ʔikuR	*ʔikuy*	*ʔikuy*	*ʔikuy*
15	vein	*ʔuRat	*ʔəyat*	*ʔuyat*	*ʔiyat*
16	blood	*daRaq	*dayaʔ*	*dayaʔ*	----

5　The undergoer voices are labeled by Zorc (1974:577–578) direct passive; instrumental or associative passive, or 'portative'; and local/referential passive, or 'ablative'. In more recent publications, these three undergoer voices are labeled patient voice (with a reflex of PMP *-en /-ən/); locative voice (with a reflex of PMP *-an); and 'instrumental' or 'conveyance voice' (with a reflex of PMP *ʔi-).

There are several other possible innovations which link the Northern Mindoro languages with Central Luzon languages. Zorc (1974) cites two demonstrative innovations that are possibly shared between Iraya and the Central Luzon languages. He states:

> The use of *ti as a base denoting nearness (rather than remoteness, as in Palawanic and SM [Southern Mindoro]) is, to my knowledge, only found in Pampango *iti* 'this', *keti* 'here', Sambal *bayti* 'here', and--if cognate--Iraya *tiyaʔ* 'this'. Likewise, the use of *ta as a base denoting remoteness is only found in Pampango *ita* 'that', *keta* 'there', and Iraya *nataʔ* 'that', *sataʔ* 'there'. (Zorc 1974:589)

Zorc (1974) suggests certain pronominal innovations which are possibly shared between Iraya and the Central Luzon languages, e.g., *ʔi:ya* '3SG' and *tamu* '1PL.IN'; he also notes a connection between Iraya and Bashiic languages with the pronoun *yamən* '1PL.EX'. Although these are interesting, they are probably retentions and cannot be considered evidence for subgrouping, since they occur in a number of other Philippine languages in different subgroups. The possible genetic relationship between the Northern Mangyan languages and the Central Luzon languages has also been carefully examined by Himes (2012:528-530). He concludes that the evidence for a Central Luzon–Northern Mangyan link is not overwhelming, but is probably sufficient to justify a closer relationship between these two microgroups than that enjoyed by either of them with other Philippine groups (Himes 2012:530).

But there is a pronominal innovation in Central Luzon languages not discussed by Zorc (1974), Barbian (1977), nor by Himes (2012) that appears to be shared by at least one of the Northern Mindoro languages. Some Central Luzon languages show an irregular development of PMP *kami 'NOM.1PL.EX', PMP *kamuyu 'NOM.2PL', and PCLuz *námen 'GEN.1PL.EX'. These languages show the medial *m in these forms becoming a semivowel, either /y/ or /w/, depending on the vowel that follows, as in Table 5. Other Central Luzon languages, and alternate forms in the same languages maintain, or have restored the medial nasal, possibly as a result of the influence of languages such as Ilokano or Tagalog.

Table 5: Some Central Luzon reflexes of PMP pronouns

	Botolan Sambal	Kakilingan Sambal	Ayta Mag-anchi	Kapampangan
*kami 'NOM.1PL.EX'	*kayi*	*kay*	*kay*	*ké*
*kamuyu 'NOM.2PL'	*kawo*	*kaw*	*kaw*	*kó*
*námen 'GEN.1PL.EX'	*na:wən*	---	---	---

This pronominal innovation is possibly shared with Tadyawan, which maintains a medial semivowel in *tawa* '2PL', although the initial consonant and final vowel have changed, probably by analogy, as in the following possible sequence of events.

kamu[yu] 'NOM.2PL' > **kawu (intervocalic *m > *w*)
**kawu > ***kawa (analogy with *-a* final pronouns, e.g., *tama* '1PL.IN', *ta* '1DL.IN')
***kawa > *tawa* (analogy with *t-* initial pronouns, e.g., *tama* '1PL.IN', *ta* '1DL.IN', and to avoid homophony with *kawa* '2SG' < PMP *ka<u>ʔu</u> '2SG')

Zorc (1974:592) likewise posits a number of lexical items which are shared between Kapampangan and Iraya, as shown in Table 6. Himes (2012:530) also suggests a number of other lexical and semantic innovations that are shared between Central Luzon languages and Northern Mangyan languages.

***Table 6:** Some shared lexical items between Kapampangan and Iraya*

	Gloss	Kapampangan	Iraya
1	see	*akit, ikit*	*ʔakit-an*
2	wait	*panáy-an*	*panyaʔ-an*
3	cold	*ma-rimla*	*ma-dimla*
4	needle	*ka-rayum*	*ka-dayum*

4 Contact diffusion into Mindoro languages

This section presents evidence for long periods of contact diffusion into Mindoro languages, with particular reference to Iraya and the northern languages of the island. Sec. 4.1 repeats evidence from irregular sound change first reported by Zorc (1974) and discussed also by Barbian (1977), showing that even though the northern languages seem to subgroup with Central Luzon languages because of *R > /y/, the evidence is not strong. Sec. 4.2 presents evidence from verb morphology, that appears to link Iraya with Negrito languages of Luzon, and sec. 4.3 provides evidence from various syntactic features of Iraya and other Mindoro languages that suggest contact diffusion from various West Bisayan and Palawanic languages.

4.1 Evidence from sound change

The main problem with most of the evidence given in sec. 3 that suggests a genetic connection between the Central Luzon and Northern Mindoro languages, is that various features are also shared with the Southern Mindoro languages, which supposedly group with other Greater Central Philippine languages. Zorc (1974:588) notes this, calling the evidence for the grouping of the Northern Mindoro languages with Central Luzon languages weak, but noting that there are more examples of a /y/ reflex of PMP *R in the northern languages than in the southern languages, and conversely there are more /g/ reflexes of PMP *R in the southern languages than the north. Examples of PMP *R > /g/ in northern Mindoro languages include forms translated as 'coconut', 'lime', 'milled rice', 'northwest wind', 'molar', 'root', etc. He similarly notes that most of the shared lexical items between Iraya and Kapampangan, are also found in various other languages in Mindoro, and there are some which are shared only with the southern languages.

Hanunó'o, the largest Mangyan language in the south shares many of its distinctive features with languages in Palawan, and there are forms in the northern Mangyan languages which suggest influence from Palawan. In Kalamianen, one of the languages in the north of Palawan, the reflex of PMP *R is /l/, so that the reflex of PMP *maRsi- 'simultaneous/concomitant aspect' (see Liao 2011) is /malsi-/. From this we can see that the Alangan form ***malsiyataŋ*** 'hold one another' probably originated from there, while the reflex of PMP *taR- 'relationship between two people' is /tal-/, with an apparent borrowing in Iraya ***tal***yayaw 'husband and wife' (see Blust 2003 for reconstructions of these prefixes). The expected /y/ reflex of PMP *R is found in Alangan ***tay**ʔariʔan* and Tadyawan ***tay**ʔaliʔan* 'sibling'.)

What is very clear is that there has been considerable movement of people speaking a variety of languages into Mindoro. This is evident from the verbal systems of Mangyan languages. In sec. 4.2 below, data suggesting contact diffusion into the southern Mangyan languages, probably from a Palawanic language is first presented, and then data suggesting contact diffusion into Iraya possibly from Northeast Luzon Negrito languages is discussed.

4.2 Evidence from verb morphology

Zorc (1974:591) discusses the relationship between the southern languages, Hanunó'o and Buhid, and the Palawan languages, noting that their verbal systems share an important innovation. He notes that in non-actor voice constructions (Zorc's "passives"), progressive verbs are affixed with *pag--ən, a form, he claims, which does not occur in any other "Meso-Philippine" language. He suggests the source of the innovation, as follows.

[This] is apparently based on the analogy whereby the *pag- abstract prefix (used in temporal constructions) is generalized to a durative function, filling in the paradigm: *mag-* (future), *nag-* (past), *pag-* (progressive). Northern Tagbanwa has precisely this system in the active. This *pag-* (progressive) then was used independently in the passives of these Pal and SM languages, alongside the *-en (future). (Zorc 1974:591)

The linguistic connection between Hanunó'o and Buhid, and the Palawanic languages, is also clear from Zorc's lexicostatistical analyses, which show consistently higher scores with languages in Palawan than with any of the northern Mangyan languages (Zorc 1974:585).

Iraya, although no longer considering themselves to be a Negrito group, has been shown to have been such a group before intermarriage with non-Negrito people (HUGO 2009, Fig. 1). It has been noted before that Negrito peoples of the Philippines not only maintained intermittent connections with non-Negrito peoples from whom they learned their Malayo-Polynesian languages, but also maintained on-going connections with other Negrito groups with whom they may have inter-married (Reid 1994b). It is therefore significant that the unusual verbal features of Iraya, in which apparently completive aspect (past tense) forms are also used for potential aspect (future tense), appear to be shared with other Negrito groups, such as Alabat Agta (AGT.AL), Manide (MND), Rinconada Agta (AGT.RN), and Umiray Dumaget (DGT.UM), although the overall verbal system of these languages is quite different from Iraya (see Lobel 2010 for a discussion of the morphology of these languages). Each of these Negrito languages has future forms which appear to have developed from a perfective form, with an infix *<in>, either PMP *m<in>aR- in actor voice verbs, or PMP *p<in>aR- in non-actor voice verbs, as in Table 6. In Alabat Agta, *nag-* shows the loss of the first two phonemes of the reconstructed actor voice, perfective aspect form, a common development in many Philippine languages, including Ilokano, Tagalog, Bikol and Cebuano. In the non-actor voice, the presence of an *i-* vowel in Alabat Agta and Manide signals the earlier presence of the infix *<in>*. Rinconada Agta with non-perfective (future tense) actor-voice *mig-* has the same form that is used in Kapampangan for some perfective actor voice verbs, as in (53).

Lobel (2010:496) in discussing these forms notes that the origin of the prefix *pig-* is unknown, but also occurs as a past and present prefix in a number of Bikol languages and dialects. He suggests the possibility that *mig-* and *pig-* are from earlier *magi- and *pagi- with hypothetical vowel metathesis or right-to-left raising, an explanation which ignores the fact that Kapampangan also uses *mig-*, and that perfective forms have apparently developed as future forms in these languages, as also in Iraya.

(53) Kpm. ***mig***salúd ka palá king girípu.
      bathed NOM.2SG surely LOC faucet
      'So, you took a bath at the faucet'. (Mirikitani 1972:103)

Table 6: Some future tense forms in Negrito languages (from Lobel 2010:496)

	Actor voice	Non-actor voice
AGT.AL	*nag-*	*pig-*
MND	*nig-*	*ig-/pig-*
AGT.RN	*mig*	---
DGT.UM	*nV-*	---

4.3 Evidence from syntax

4.3.1 Nominal specifiers

Another feature that connects Iraya and Negrito languages, such as Manide, Alabat Agta and Umiray Dumaget, is that all of these languages, apparently unique among Philippine languages, use the same nominal specifier (or 'determiner') for common and personal nouns, as discussed above in sec. 2.2.2, a fact that Lobel (2010) was apparently unaware of. He states, "… in fact, Umiray Dumaget is the

only other Philippine language known to use the same set of case markers for common nouns and personal names, yet the Umiray Dumaget forms are largely different from the Manide and Inagta." (Lobel 2010:498).

While Manide, Alabat Agta and Umiray Dumaget maintain nominal specifiers that indicate the case of the noun phrase,[6] and Iraya no longer uses nominal specifiers to mark case, it is striking that one of the Iraya specifiers, *da* (discussed above in sec. 2.2.4), is cognate with the oblique (locative) forms of the Luzon Negrito languages. These are cited by Lobel (2010:498), and are cognate with Iry. *da* given that the forms cited by Lobel all show regular low-vowel raising following a voiced obstruent, so that *da > MND, DGT.UM *di*, AGT.AL *de*. This supports Liao (2015, 2016), that claims that Proto-Northern Luzon locative personal pronouns (which includes the Negrito languages of Northeast Luzon) were all marked by an initial *da-, which was a locative nominal specifier in Proto-Northern Luzon that was reflected as *di* or *de* in some Northeastern Luzon Negrito languages.

Only Iraya among the Mindoro languages uses *da* as a nominal specifier, probably as a result of contact with Negrito languages of Northeast Luzon. However, the other nominal specifier in Iraya, *ag*, is evidence of contact with Central Philippine languages. As noted above, North Mindoro languages use /pag-/ as a nominal specifier in noun phrases (Iraya has reduced it to /ʔag/). Alangan marks agentive noun phrases with a reflex of the old agentive personal noun marker *ni plus /pag/, as Aln. *ni pag* N (Iraya has lost a reflex of *ni). This is an innovation probably based on the nominalizing function of /pag-/ in Central Philippine languages, such as Akl. /**pag**-káʔon/ 'food' (from /káʔon/ 'eat'), /**pag**-ʔabót/ 'arrival' (from /ʔabót/ 'arrive'). In addition, the use of *pag-* to introduce a temporal clause, as in (29) is clearly a borrowing of a common dependent clause morpheme in Central Philippine languages, such as Aklanon temporal verbs, e.g., Akl /**pag**-ʔabót nána/ 'when he arrived'. Zorc (1974:591) suggests that this is also the source of the Mindoro languages that have replaced an inherited ligature between a head and its modifier with *pag-*, as shown above in (17).

4.3.2 Other syntactic features

In sec. 2.3.1 above, the ubiquitous Iraya morpheme *ba* was introduced. The source of this morpheme is still unclear. Blust and Trussel (Ongoing) reconstruct six different *ba forms for PMP, noting that at least one (PMP *ba₁ 'conjunction: or, if, perhaps, because') has a range of functions, "many of them introduc[ing] an element of doubt, qualification or negation." Blust and Trussel give the source of the Tagalog interrogative marker *ba*, with its dialectal variant *baga*, as PMP *ba₅ 'post verbal interrogative particle'. However, its optional use in Tagalog sentences that are already marked as questions, either by intonation, or by the presence of interrogative words such as Tag. *saan* 'where', *sino* 'who', and *ilan* 'how many' (Schachter and Otanes 1972:424), implies that it is not an interrogative marker as such but a reflex of *baga, a doublet of Blust's PMP *bajaq₂ 'tell, inform; ask, inquire', as in (54)–(55).

(54)   Tag.   *Aalis   ka   na   (ba)?*[7]
               leaving   NOM.2SG   now   ASK
               'Are you leaving now?' (Schachter and Otanes 1972:424)

(55)   Tag.   *Saan   ka   (ba)   nakatira?*
               where   NOM.2SG   ASK   live
               'Where do you live?' (Schachter and Otanes 1972:424)

It is clear from the examples given in sec. 2.3.1 above, that Iraya does not use *ba* with any of the senses given for Blust and Trussel's reconstructions of PMP *ba, and is never an interrogative marker but rather, if indeed it is a reflex of a PMP form, is a shortened form of either PMP *bajaq or *baga

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[6]   MND, AGT.AL *hu*, DGT.UM *i* 'nominative noun'; MND *nu,* AGT.AL *nu*, DGT.UM *ni* 'genitive noun'; MND *di*, AGT.AL *de*, DGT.UM *di* 'oblique noun'.

[7] Interlinear translations are not provided by Schachter and Otanes. They are provided here by me.

'tell, inform' with the sense bleached until it has become simply a pause marker at syntactic boundaries, including a conjunction, which links Blust and Trussel's PMP *ba$_1$ and *ba$_5$ that must ultimately also be developments of PMP *bajaq$_2$ 'tell, inform; ask, inquire'.

(56) Iry. *[yamən ba sataʔ magpamataw]* **ba** *[ʔiya   ginhawa   gidtəʔ].*
                1PL.EX BA there lived   BA NOM.3SG comfortable really
                'We lived there and it was really comfortable'.

Iraya has also been affected by Tagalog in-migrants into Mindoro, with multiple Tagalog lexical items now commonly being used, and younger generations only speaking the language. One Tagalog form that appears as a common syntactic feature in Iraya is Tag. *batay* 'based on or upon' (Komisyon sa Wikang Filipino 2000). In Iraya, this form is an auxiliary verb which precedes future tense verbs, as in Table 2, and is part of the aspectual system of the language.

4.3.3 Possible influence of non-Philippine languages

Other speculations about possible sources of various features of the Mindoro languages exist. Iraya oral literature is full of stories about interaction with Chinese visitors and Muslim raiders. With reference to possible Chinese influence. Limahong, also known as Lim Ah Hong, or Lin Tao Kien was a Chinese pirate who invaded the northern islands of the Philippines and tried to seize the City of Manila from the Spanish occupiers in 1574. One of his safe harbors was Batangas with its deep waters. Lim Ah Hong is reported to have taken a Filipina wife but as a Chinese Warlord was allowed as many concubines as he could afford, thus, it is said, "he populated the province of Batangas with his wife and countless concubines; who gave forth progeny, of whom we are the direct descendants."[8] The fact that Batangas is within a short sailing distance of northern Mindoro, the area where Iraya is located, and the fact that local stories tell of the visits of Chinese 'businessmen' who required Iraya leaders to change their names to Manhong and Masahod (the first possibly in local imitation of Limahong), suggests that the Chinese had at least considerable social influence (Banaag 2014). Did the Chinese language that must have been spoken by some of the 'businessmen' influence Iraya word order, in which pronouns always precede their head nouns? And did the Mandarin Chinese /ba-/ (tone 3) construction which occurred between a subject and a fronted object (Sun 2008), re-inforce the use of *ba* in Iraya? These possible influences are speculative, but given Chinese social influence and probable intermarriage with Iraya women, they cannot be ignored.

Another possible external source is Muslim slave raiders, who over several hundred years devastated local communities (Warren 2007). Iraya oral literature is replete with such events that affected local people. The stories suggest that Muslim communities existed in Mindoro and were growing rice. One of the local heroes was killed by a Muslim wielding his rice-pounding pestle (Banaag 2014). At least two so-called 'pirate' Muslim communities existed in Mindoro, one at Pinamalayan on the east coast, and one at Mamburao on the west coast, from whence they raided to Luzon and other islands (Gardner und.). The question is what language were the raiders using, and did it affect in any way the Mangyan languages? Possibly hundreds of people were taken as slaves from the various language communities in Mindoro and transported to areas south, such as Sulu, Borneo and other areas. Did some of them ever return after being emancipated after having learned the language where they were taken?

One of the unique features of Iraya is the use of *laki* as a marker of male personal names, and *ba'i* as a marker of female personal names as described in sec. 2.2.2. To my knowledge, there are no MP languages that currently use such forms, but several South-East Sulawesi languages, including Buton and Bugis use *La-* and *Wa-* as prefixes for men and women respectively, e.g., *I La Galigo* is a character in a Bugis story cycle of the same name, and internet sources tell of folk heroes in South Sulawesi languages whose names carry such gender identifying forms, e.g., *Lakipadada*,[9] a supposed

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8   http://www.watawat.net/limahong_the_pirate_and_his_kingdom.html, accessed Aug. 31, 2016.
9   http://dorogoblog.blogspot.jp/2008/06/adventures-of-lakipadada-as-told-by.html, accessed Aug. 31, 2016.

ancestor for the major South Sulawesi kingdoms and *Lakilaponto* of Muna fame,[10] whose wives and female children carry a *Wa-* prefix (Anthony Jukes pers. comm.). Although these prefixes are said to be of Arabic origin,[11] they are more likely to be shortened forms of *laki* and *ba'i*, with the latter undergoing a *b > /w/ shift, found in some forms in Javanese and Malay, as well as in Maranao of the Philippines (Blust 2009 [2013]:680). Significantly, several of the Muslim South Sulawesi groups, including Buton and Bugis are known to have gone on far-flung slaving raids, and are possibly the source of the prefixes which precede Iraya names today.

5 The retrenchment of Iraya

The foregoing sections have outlined the unusual features of Iraya and some of the other languages of Mindoro. This section is a speculative account of supposed events, long before the arrival of speakers of MP languages in the Philippines and subsequently, which attempts to provide an explanation for the current situation among the Mangyan peoples of Mindoro.

The presence of multiple bands of Negritos throughout the Philippines is well-documented (Reid 1994a, 2013b). Many of these peoples still retain their identity as Negritos, distinct from the MP populations that surround them, while others have lost their identity and consider themselves to be part of one of the MP groups with whom they have intermarried. There is only one remaining group in Mindanao, for example, that still considers themselves to be a Negrito group, that is the Mamanwa of north-east Mindanao. But the physical features of many Manobo groups in Mindanao suggest that they were also Negritos in the past, but have lost their identity. This is true not only of the Ata Manobo, who retain a form of the name that many other Negrito groups use, but also of other Manobo groups as well, as seen in HUGO (2009, Fig. 1), where a sample of 10 Manobo show clear Negrito alleles. The current distribution of Negritos in the Philippines shows bands of Negritos spread from the north of the Philippines down through the Sierra Madre along the east coast of Luzon, and into mountainous areas in the south of Luzon. In the west of Luzon there are multiple bands of Negritos in the Zambales Mountains. South of Luzon the islands of Negros and Panay have a number of bands, see Reid (2013b, Fig. 1). It is assumed that prior to the spread of MP people in the Philippines, Negrito bands occupied river valleys and lowland areas where food was plentiful, and their present locations in mountainous areas is the result of their being forced to move from their favored locations by the activities of the incoming MP people, who deforested the areas and farmed them. It is assumed that prior to the incoming MP population, Mindoro was just like Negros and Panay, widely occupied by Negrito bands who exploited the river valleys and coastal areas of the island. Palawan was probably also the home of numerous Negrito bands, of whom only the Batak still identify as Negrito.

We do not know what languages Negritos were using prior to the arrival of MP people. Given the extreme length of time that Negritos were present in the Philippines, possibly more than 50,000 years, we must assume that they were speaking a wide range of mutually unintelligible languages, although evidence suggests that Negrito groups interacted with one another, and may have exchanged wives. Negrito groups across wide areas of northern Luzon and associated with different MP subgroups share some lexical items not found to date in MP languages (Reid 1994b). What is clear, is that groups of Negritos interacted with the MP people, eventually giving up their languages for the one that was spoken by the MP group that was in their vicinity.

While at present Tagalog people occupy the area of Batangas and the provinces north, this area was originally settled by the ancestors of Kapampangan peoples who were forced to retreat into Central Luzon as Tagalog people moved north from the Bisayan area (Zorc 1993, Reid 2013b:347). So it is not surprising that Iraya people who live across the channel from Batangas show a sound change and other features that link them with Central Luzon languages. One must assume also that it was not simply the ancestors of the group known today as Iraya that was in contact with the residents of the Batangas area, but that the newly acquired language spread across the island among other groups of Negritos, that have long since been replaced or intermarried with other ancestral MP groups

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[10] https://id.wikipedia.org/wiki/Lakilaponto, accessed Aug. 31, 2016.
[11] http://www.timur-angin.com/2010/06/punahnya-nama-la-dan-wa-di-masyarakat.html, accessed Aug. 31, 2016.

who moved into the island. Given this scenario, the features of Central Luzon languages which are spread today across the island, such as PMP *R > *y*, are remnants, or substratal effects of the languages originally spoken in these areas.

All the southern languages of Mindoro are now considered to be part of Blust's (1991) Greater Central Philippine languages, along with Central Philippine languages (such as Tagalog, Bikol and Cebuano), Palawanic, Danao, Manobo, Subanen, and the Gorontalo-Mongondoic languages of north Sulawesi, all of which show the sound change PMP *R > *g*. But the probable movement of peoples from Palawan north into Mindoro is suggested, because of the linguistic features that the southern Mindoro languages share with languages in Palawan, as outlined above in sec. 4.2. It is also clear from shared cultural features between southern Mindoro languages and Palawan. It is well known that Hanunóo and the language to its immediate north, Buhid, have adopted a form of the traditional Indic script and use it today to write traditional poetry. Since this writing system was not found in any of the West Bisayan languages but was common in Palawanic languages, we must assume that it was brought into southern Mindoro by in-migrants from Palawan.

Just as Negrito groups in Luzon were forced from their preferred habitats in coastal areas and river valleys into less hospitable mountainous areas, it is assumed the same happened in Mindoro, with incoming peoples from Palawan and West Bisayan languages taking over areas originally occupied by Negrito peoples, who were gradually forced into mountainous areas. Has intermarriage between incoming MP people and Negrito people gradually erased the Negrito phenotype in the speakers of each of the southern Mindoro languages, or were the Negrito peoples gradually forced to move north, until only the Iraya are left, entrenched in the most northerly mountains of Mindoro? Even among the three northern languages, which supposedly share sound correspondences and other features with Central Luzon languages, it is only speakers of Iraya who still maintain some of the Negrito phenotypical features, while most speakers of the other two languages with which it apparently groups, Alangan and Tadyawan, no longer have Negrito features.

This scenario is primarily based on what is known about the distribution of Negrito groups and the fact that features of Central Luzon languages are found not only in the northern group of languages, but also in the southern group. It is also based on what seems to be a movement of peoples from Palawan into Mindoro in the far past, and in more recent times from some of the West Bisayan languages, with which Datagnon in the south of Mindoro is closely related.

The scenario outlined above is supported by genetic studies, not only the fact that Iraya carry Negrito genes (HUGO 2009), but also by Delfin et al. (2011). The latter paper, while lacking a balanced set of Philippine ethnolinguistic samples, does have samples from several of the Mangyan languages of Mindoro, specifically Iraya and Tadyawan of the northern group, and Hanunóo and Tawbuid (Buhid) of the southern group. The paper discusses two old Y-chromosome haplogroups which Negrito groups share. These are K-M9, which all Negrito groups that were sampled carry, and C-RPS4Y that is also carried by Agta (not specified), Ati and Mamanwa. Delfin et al. (2011:227) claim that haplogroup K-M9 is distributed among nine ethnolinguistic groups (including all Negrito groups sampled and three non-Negrito groups), and for the most part tend to involve groups that are geographically close, including Mamanwa and adjacent groups Surigaonon and Manobo (non-specific as to which of the many Manobo groups, but could include Ata Manobo whose name signals the possibility of Negrito origin), suggesting cross-group intermarriage. Of particular interest in this paper is that another clear grouping is between the Aeta (Ayta) of Zambal and Bataan (not specific which of the five Negrito groups were sampled), all of which are Central Luzon languages, and Hanunuo (Hanunó'o). These languages share Y-SNP frequency groupings of K-M9 as follows: Aeta Zambal 1.00, Aeta Bataan 0.87, and Hanunuo 0.67. Iraya has a K-M9 frequency of 0.25 (Delfin et al. 2011:226 Table 1). Tadyawan seems to be a different story in that samples from this group carried no specifically Negrito haplogroup, but had the haplogroup O-M110 at a frequency of 1.00. This is a widespread haplogroup among Philippine ethnolinguistic groups and "has a clear Taiwan-specific origin" (Delfin et al. 2011:229). This suggests that Tadyawan represents a non-Negrito group that moved into Mindoro and learned the local language without intermarriage with Negrito groups.

6 Conclusion

Zorc (1974:594) in his excellent analysis of the relationships of Mangyan languages, makes the following comment, "While some of the evidence discussed herein is suggestive, none of it is ineluctable. Most of the features discussed are spread in one way or another throughout the Palawan-Mindoro-Pampango area." These are the facts that stimulated the present enquiry, and form the basis of the scenario outlined in this article.

This article primarily focuses upon Iraya, one of the three North Mindoro languages, a language spoken by people who identify themselves as one of the mountain peoples of the country, generally referred to as Mangyan, but whose phenotypic features are somewhat unique among Filipino people. Modern genetic testing of Iraya shows that they share a significant proportion of ancestral alleles with Negrito peoples of the Philippines. Their language as described above shows a number of unusual features, such as a pronominal system which is unique among Philippine languages, with a complete set of dual pronouns, including 1st person inclusive and exclusive dual pronouns. The pronominal system also retains case-marking distinctions only in the three singular forms, with all non-singular forms having only a single form, which appears to be originally based on an oblique or locative form. The pronominal system is also different from most other Philippine languages in that the singular genitive forms no longer reflect PMP enclitic forms. All pronouns precede their head nouns or verbs. Iraya is also distinct from other Philippine languages in that it uses historically perfective forms for future, creating a present–non-present tense, a feature reminiscent of similar morphology in some Negrito languages of Luzon. The language is also different from other Philippine languages in having lost case-marking on nominal specifiers, although at least one of the two forms currently used to introduce noun phrases appears to be a reflex of an old locative marker *da, found also among some Negrito languages of Luzon. Iraya is unique among Philippine languages in having names preceded by /laki/ 'male' or /baʔi/ 'female'.

As examination of the features that distinguish Iraya and its related languages suggests multiple sources. Some are shared with Central Luzon languages. Others are probably the result of language contact. Some are not shared by any other Philippine language and are innovations. But as Zorc (ibid) noted, most of the features are shared throughout the Mindoro languages, and even into Palawan. Various historic and prehistoric events are responsible for this. Two historic events are considered as possibly resulting in language change. The possible influence of Chinese contacts, and the possible result of slave-raiding, with communities of individuals involved in slave-raiding establishing at least temporary communities in Mindoro.

The major influence however was prehistoric. Prior to the spread of MP people through the Philippines, it is assumed that Mindoro, like other parts of the Philippines was occupied by bands of Negritos deriving their livelihood from the ocean and rivers, and by exploiting easily accessible forest foods. Following the spread of MP through the Philippines, things changed. Contact with MP people was first through the ancestors of Central Luzon languages which at that time occupied Batangas and other areas of southern Luzon, prior to the move of the ancestors of Tagalog north from their homeland areas of northern Mindanao and Marinduque. Subsequently, as MP people expanded and needed new lands for farming, an influx of peoples from the western areas of the Bisayas and from Palawan moved into the country either intermarrying with Negritos and/or gradually forcing Negrito bands from the areas where they lived and into the mountains.

Over thousands of years, language contact has resulted in ancestral Central Luzon features being gradually lost and the languages in the south of the country becoming more like Palawan languages, and those in the north retaining more of their original features. This has matched the phenotypical features of Mangyan people, with those in the south more closely matching MP people, while only Iraya in the far north of the island retaining physical features that resemble those of Negritos.

Abbreviations

Abr	Aborlan Tagbanwa	Kpm	Kapampangan
Agt	Agta	Kuy	Kuyunon
Agy	Agutaynen	LIG	Ligature
Al	Alabat	LOC	Locative
Aln	Alangan	Mnd	Manide
AV	Actor voice	NOM	Nominative
Bik	Bikol	NPAST	Non-past
Bon	Bontok	NPRST	Non-present
Ceb	Cebuano	OBL	Oblique
DET	Determiner	Pal	Palawan
Dgt	Dumaget	PL	Plural
EX	Exclusive	PMP	Proto-Malayo-Polynesian
FUT	Future	PRD	Predicate
GEN	Genitive	PV	Patient voice
Hil	Hiligaynon	Rn	Rinconada
Ilk	Ilokano	SG	Singular
Iry	Iraya	SPCF	Specifier
Kal	Kalamian	Tag	Tagalog
Kin	Kinaray-a	Um	Umiray

References

Banaag, Leo. 2014. Ang kasaysayan ng tribong Mangyan Iraya [The history of the Mangyan Iraya tribe]. Unpublished document, with English translation by Lawrence A. Reid, 5pp.

Barbian, Karl-Joseph. 1977. The Mangyan languages of Mindoro: A comparative study of vocabulary, phonology, and morphology. M.A. thesis, University of San Carlos, Philippines.

Beyer, Otley H. 1921. The non-Christian people of the Philippines. In *Census of the Philippine Islands (Manila 1918) vol. 2 (separate from the Census)*, 907–957. Manila: Bureau of Printing.

Blust, Robert. 1991. The Greater Central Philippine hypothesis. *Oceanic Linguistics* 30(2):73–129.

Blust, Robert. 2003. Three notes on early Austronesian morphology. *Oceanic Linguistics* 42:432–478.

Blust, Robert. 2009 [2013]. *Austronesian languages*. Canberra: Pacific Linguistics. [2013 revised edition on-line at: http://pacling.anu.edu.au/materials/Blust2013Austronesian.pdf]

Blust Robert & Stephen Trussel. Ongoing. Austronesian comparative dictionary, web edition www.trussel2.com/ACD.

Delfin, Frederick, Jazelyn M. Salvador, Gayvelline C. Calacal, Henry B. Perdigon, Kristina A. Tabbada, Lilian P. Villamor, Saturnina C. Halos, Ellen Gunnarsdoóttir, Sean Myles, David A. Hughes, Shuhua Xu, Li Jin, Oscar Lao, Manfred Kayser, Matthew E. Hurles, Mark Stoneking & Maria Corazon A. De Ungria. 2011. The Y-chromosome landscape of the Philippines: Extensive heterogeneity and varying genetic affinities of Negrito and non-Negrito groups. *European Journal of Human Genetics* 19:224–230.

Dimaano, Gina M. 2005. A brief grammatical sketch of the Alangan language. LIN 626P term paper, De La Salle University, Manila, the Philippines.

Gardner, Fletcher. und. Lingualization, an unusual mutation in Mangyan. Unpublished paper presented to the Faculty of Literature and Politics, Taihoku Imperial University, Taihoku, Formosa.

Hammarström, Harald & Robert Forkel, & Martin Haspelmath, & Sebastian Bank. 2016. Glottolog 2.7. Jena: Max Planck Institute for the Science of Human History. (Available online at http://glottolog.org, Accessed on 2016-08-06.)

Himes, Ronald. 2012. The Central Luzon group of languages. *Oceanic Linguistics* 51(2):490-537.

HUGO Pan-Asian SNP Consortium. 2009. Mapping human diversity in Asia. *Science* 326, 1541. DOI: 10.1126/science.1177074.

Komisyon sa Wikang Filipino. 2000. *Diksyunaryo Filipino-English*. 2nd edition. Manila: Komisyon sa Wikang Filipino.

Lewis, M. Paul, Gary F. Simons, and Charles D. Fennig (eds.). 2016. *Ethnologue: Languages of the World, Nineteenth edition*. Dallas, Texas: SIL International. Online version: http://www.ethnologue.com.

Liao, Hsiu-chuan. 2011. On the reconstruction of Proto-Malayo-Polynesian *si- 'simultaneous/concomitant aspect', paper read at the 20th International Conference on Historical Linguistics (ICHL2011), National Museum of Ethnology (MINPAKU), Osaka, Japan, July 25-30, 2011.

Liao, Hsiu-chuan. 2015. To raise or to front?: puzzles in the development of vowels in Ilongot, paper read at the 13th International Conference on Austronesian Linguistics (13-ICAL), Academia Sinica, Taiwan, July 18-23, 2015.

Liao, Hsiu-chuan. 2016. Reconstructing Proto-Northern Luzon locative personal pronouns, paper read at the 26th Annual Meeting of the Southeast Asian Linguistics Society (SEALS 26), Century Park Hotel, Manila, the Philippines, May 26-28, 2016.

Lobel, Jason W. 2010. Manide: An undescribed Philippine language. *Oceanic Linguistics* 49(2):478–510.

Lobel, Jason W. 2013. Philippine and North Borneo languages: Issues in description, subgrouping, and reconstruction. Ph.D. Dissertation, University of Hawai'i.

Mirikitani, Leatrice T. 1972. *Kapampangan syntax*. Oceanic linguistics Special Publication 10. Honolulu: University Press of Hawai'i.

Reid, Lawrence A. 1994a. Unraveling the linguistic histories of Philippine Negritos. In *Language contact and change in the Austronesian world*, ed. by T. E. Dutton and D. T. Tryon, 443–475. Berlin: Mouton de Gruyter.

Reid, Lawrence A. 1994b. Possible non-Austronesian lexical elements in Philippine Negrito languages. *Oceanic Linguistics* 33(1):37-72.

Reid, Lawrence A. 2002. Determiners, nouns, or what? Problems in the analysis of some commonly occurring forms in Philippine languages. *Oceanic Linguistics* 41(2):295-309.

Reid, Lawrence A. 2009. The reconstruction of a dual pronoun to Proto Malayo-Polynesian. In *Discovering History through Language: Papers in Honour of Malcolm Ross* (=Pacific Linguistics 605), ed. by Bethwyn Evans, 461–477. Canberra: Pacific Linguistics.

Reid, Lawrence A. 2013a. Iraya field notes.

Reid, Lawrence A. 2013b. Who are the Philippine Negritos? Evidence from language. In *Human Biology* 85 Issue 1, chapter 15 (on-line at http://digitalcommons.wayne.edu/humbiol/vol85/iss1/.

Reid, Lawrence A. 2016. Accounting for variability in Malayo-Polynesian pronouns: Paradigmatic instability or drift? *Journal of Historical Linguistics* 6(2):130-164.

Schachter, Paul & Fe T. Otanes. 1972. *Tagalog reference grammar*. Berkeley, Los Angeles, and London: University of California Press.

Sun, C. 2008. The theory of subjectification and the study on the Contemporary Chinese *ba*-construction. In *Contemporary linguistic theories and related studies on Chinese*, ed. by Y. Shen & S. Feng, 375–393. Beijing: Commercial Press.

Tweddell, Colin E. 1958. The Iraya (Mangyan) language of Mindoro, Philippines: Phonology and morphology. Ph.D. dissertation, University of Washington, Seattle.

Warren, James F. 2007. The Port of Jolo and the Sulu Zone slave trade: An 1845 report. *The Journal of Sophia Asian Studies* 25:303–322.

Wouk, Fay & Malcolm Ross (eds). 2002. *The history and typology of Western Austronesian Voice Systems*. Canberra: Pacific Linguistics, Australian National University.

Zorc, R. David. 1974. Internal and external relationships of the Mangyan languages. (Papers of the First International Conference on Comparative Austronesian Linguistics, vol. 1). *Oceanic Linguistics* 13 (1/2):561–600.

Zorc, R. David. 1993. The prehistory and origin of the Tagalog people. In *Language—a doorway between human cultures: Tributes to Dr. Otto Chr. Dahl on his ninetieth birthday*, ed. by Ø. Dahl, 201–211. Oslo: Novus.