

CLASSIFICATION: Social: Anthropology

TITLE: Kusunda: an Indo-Pacific language in Nepal

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MANUSCRIPT INFORMATION: 11 pages

WORD AND CHARACTER COUNTS: Words in Abstract: 130; Characters in paper: 34,247

ABSTRACT: The Kusunda people of central Nepal have long been regarded as a relic tribe of South Asia. They are, or were until recently, semi-nomadic hunter-gatherers, living in jungles and forests, with a language that shows no similarities to surrounding languages. They are often described as shorter and darker than neighboring tribes. Our research indicates that the Kusunda language is a member of the Indo-Pacific family. This is a surprising finding inasmuch as the Indo-Pacific family is located on New Guinea and surrounding islands, making Kusunda the first Indo-Pacific language ever found on the Asian mainland. The possibility that Kusunda is a remnant of the migration that led to the initial peopling of New Guinea and Australia warrants further investigation from both a linguistic and genetic perspective.

The Kusunda people of central Nepal are one of the few “relic” tribes found on the Indian subcontinent (the Nahali of India and the Veddas of Sri Lanka are two others). They first appeared in the ethnographic literature in 1848, when they were described by Hodgson as follows: “Amid the dense forests of the central region of Népal, to the westward of the great valley, dwell, in scanty numbers and nearly in a state of nature, two broken tribes having no apparent affinity with the civilized races of that country, and seeming like the fragments of an earlier population” (1). The Kusunda were one of these “broken tribes”; the Chepang were the other. Hodgson went on to show, however, that the Chepang were, on linguistic grounds, closely related to the Lhopa of Bhutan and must be presumed to have split off from this group and moved west at some time in the past. Hodgson had been unable to obtain any data on the Kusunda language so nothing could be said of their possible affinity with other groups. Nine years later Hodgson published an article that contained the first linguistic data on the Kusunda language (2), as well as data on other Nepalese languages, but he offered no specific discussion of Kusunda even though his data showed quite clearly that the Kusunda language bore virtually no resemblances to any of the other languages he examined. No further information on Kusunda appeared for more than a century until Reinhard and Toba (3) offered a brief description of the language that provided some additional data. The final source on Kusunda appeared in an article by Reinhard in 1976 (4), but there is very little additional information that is not already found in Reinhard and Toba (3).

Although Hodgson had predicted in 1848 the demise of the Kusunda in a few generations, a few Kusunda have managed to survive to the present day. They were until recently semi-nomadic hunter-gatherers living in jungles and forests, and indeed their name for themselves is ‘people of the forest.’ They are often described as short in stature and with a darker skin color than surrounding tribes. Today the few remaining Kusunda have intermarried with neighboring tribes, drifted apart, and the language has been moribund for decades, though a few elderly speakers with some knowledge of the language still survive. The Kusunda language is a linguistic isolate, with no clear genetic connections to any other language or language family (4, 5). Curiously, however, it has often been misclassified as a Tibeto-Burman language for purely accidental reasons. Hodgson’s original description of the Kusunda language (2) also included vocabularies of various Indic and Tibeto-Burman languages. In 1909 Grierson classified Kusunda as a Tibeto-Burman language (6), like their immediate neighbors, the Chepang, who were also forest dwellers and who do speak a Tibeto-Burman language. Later scholars often assumed, without looking at the data collected by Hodgson, that Kusunda was a Tibeto-Burman language. Kusunda was essentially classified on the basis of its neighbor’s language, not its own, and this error perpetuated itself like a scribal error in a medieval manuscript (7, 8, 9).

We have discovered evidence that the Kusunda language is in fact a member of the Indo-Pacific family of languages (10). The Indo-Pacific family historically occupied a vast area from the Andaman Islands in the Indian Ocean to the Solomon Islands in the Pacific. Today most Indo-Pacific languages are found on New Guinea, where there are over 700 surviving languages. Most of the western languages have disappeared as a consequence of the Austronesian expansion, but several ancient branches have survived on the Andaman Islands, the North Moluccas (North Halmahera and its smaller neighbors) and the lesser Sundas (Timor, Alor, and Pantar). East of New Guinea, Indo-Pacific languages survive on New Britain, New Ireland, the Solomon Islands, Rossel Island, and the Santa Cruz Islands. They were also spoken in Tasmania until 1876. The distribution of Kusunda and the Indo-Pacific family is shown in Figure 1. Though it is not possible with present evidence to demonstrate conclusively the direction of the migration that separated Kusunda from the other Indo-Pacific languages, it would seem at least plausible that Kusunda is a remnant of the original migration to New Guinea and Australia rather than a backtracking to Nepal from the region where other Indo-Pacific languages are currently spoken.

[Figure 1]

Recently, two molecular genetic studies (11, 12) have found that the Andamanese belong to mtDNA haplogroup M, which is also found in East Asia and South Asia and has been interpreted as “a genetic indicator of the migration of modern *Homo sapiens* from eastern Africa toward Southeast Asia, Australia, and Oceania” (11). In addition, the Andamanese belong to the Asia-specific Y chromosome haplogroup D (11). Thangaraj et al. conclude that “the presence of a hitherto unidentified subset of the mtDNA Asian haplogroup M, and the Asian-specific Y chromosome D, is consistent with the view that the Andamanese are the descendants of Palaeolithic peoples who might have been widely dispersed in Asia in the past” (11). If molecular genetic evidence can be obtained from the few remaining Kusunda, it will be interesting to see if it supports the conclusions we have arrived at on the basis of their language.

Grammatical Evidence

Linguistic evidence on Kusunda is sparse, limited to just three sources (2, 3, 4), and there are some discrepancies between Hodgson’s nineteenth-century data and late twentieth-century recordings of Reinhard and Toba (3, 4). For example, Hodgson, using a simple English orthography, represents the Kusunda affricates as *ch* and *j*, indicating that he heard them as palatal: [č] and [j]. Reinhard and Toba, however, represent the affricates as [ts] and [dz] and state explicitly that they are alveolar, not palatal. In this article

the source of each Kusunda form is identified as follows. Words from Reinhard and Toba (3) are taken as the default; words from Hodgson (2) are followed by (H), and words from Reinhard (4) are followed by (R). Sources for the other Indo-Pacific languages mentioned in this paper are given in the Appendix, which may be found on the PNAS web site, www.pnas.org.

Within this relatively small and imperfect corpus there is both grammatical and lexical evidence pointing toward an Indo-Pacific affinity. The strongest piece of evidence is a pronominal pattern found in the independent pronouns—involving five different parameters—that is widespread in Indo-Pacific and also found in Kusunda in precisely the same form. These five defining features are: (1) a first-person pronoun based on *t*, (2) a second-person pronoun based on *n* or *ŋ*, (3) a third-person pronoun based on *g* or *k*, (4) a vowel alternation in the first- and second-person pronouns in which *u* occurs in subject forms and *i* in possessive (or oblique) forms, and (5) a possessive suffix *-yi* found on all three personal pronouns. It is significant that four of these five defining features have to do with the first- and second-person singular pronouns, which are known to be among the most stable elements of language over time (13). Indeed, it is such pronouns that have often been the first evidence for very ancient families such as Eurasiatic and Amerind.

In his original article defining the Indo-Pacific family Greenberg posited two basic pronominal patterns, *n/k* ‘I/you’ and *t/ŋ ~ n* ‘I/you,’ and he suggested that the second set originally had a possessive function (10). However, subsequent research has cast doubt on the antiquity of second-person *k*, whose distribution is largely confined to New Guinea itself. In any event it is the second pattern that Kusunda shares with Indo-Pacific. One finds both *ŋi* and *ni* as the second-person pronoun and Greenberg surmised that *ŋi* had been the original form and had changed to *ni* in some languages as a simple sound change and in others had changed to *ni* by analogy with the very widespread *na* ‘I’ of the first pronominal pattern. Greenberg did not notice, however, in his pioneering paper either the vowel alternation or the possessive suffix *-yi*. Table 1 shows the first-, second-, and third-person pronouns for Kusunda and selected Indo-Pacific languages.

In Kusunda the vowel alternation has only been preserved in the second person, having been eliminated through analogy in the first-person form. Furthermore, first-person **t-* has been palatalized to *ch-* (H), *ts-*, or *tsh-* (R) under the influence of the following *-i*. Such a sound change is extremely common in the world’s languages and in the present case we can be sure that the original consonant was *t-* because *t-* has been preserved in both the object form *ton* ‘me’ and in first-person plural *to-ʔi* ‘we’ (*-ʔi* is a plural suffix). These forms also show the original *-o* vowel, which was eliminated in the first-person singular subject form. In addition to the independent pronouns, the consonantal base also indicates the verbal subject: Kusunda *t-*

Table 1. An Indo-Pacific Pronominal Pattern

	Kusunda	Juwoi	Bo	Galela	Seget	Karon Dori	Kuot	Savo- savo	Bunak
I	chi (H) tsi tshi (R)	tui	tu-la	to	tet	tuo	-tuo		ne-
my	chí-yi (H)	tii-ye	ti-e	ji ‘me’					n-ie
you	nu (H) nu nu (R)	ɲui	ɲu-la	no	nen	nuo	-nuo	no	e-
your	ní-yí (H)	ɲii-ye		ni ‘thee’					Ø-ie
he/she	gida (H) git	kite	kitɛ		gao			go	gi
his/hers	gida-yí (H) gidi								g-ie

‘I,’ *n-* ‘you,’ *g-* ‘he,’ Bea *d-* ‘I,’ *ɲ-* ‘you,’ Onge *ɲ-* ‘you,’ *g-* ‘he,’ West Makien *tV-* ‘I,’ *nV* ‘you,’ and Brat *t-* ‘I,’ *n-* ‘you.’

The other Indo-Pacific languages in Table 1 have preserved different portions of the original system. It is best preserved in the Andaman Islands (Juwoi, Bo) and North Halmahera (Galela), whereas in Western New Guinea (Seget, Karon Dori), New Britain (Kuot), and the Solomon Islands (Savosavo) only the consonants are preserved, in some cases only partially. The final language in Table 1, Bunak, is spoken on Timor and obviously does not preserve either the first-person *t* or second-person *ɲ/n*; it does, however, preserve third-person *gi* and the possessive suffix is attached to all three pronouns, just as in Kusunda.

Certainly this unique pronominal pattern shared by Kusunda and Indo-Pacific languages cannot be a case of accidental convergence since the probability that Kusunda could have independently invented this intricate pattern is vanishingly small. Borrowing is equally unlikely since there is no evidence that Kusunda has ever been in contact with any Indo-Pacific language.

Two other grammatical formatives shared by Kusunda and Indo-Pacific are demonstrative pronouns based on *t* and *n*:

THIS: Kusunda *ta* (H) ‘this,’ *yit* ‘that’ = Indo-Pacific: Puchikwar *ite*, Juwoi *ete*, Abui *i(t)-do*, Konda *ete*, Itik *ide*, Biaka *te?* ‘this, he,’ Kwomtari *itə* ‘he,’ Timbe *idâ* ‘this, that,’ Selepet *eda*, Marind *iti-*, Minanibai *eti* ‘he,’ Humene *ida*.

THAT: Kusunda *na* ‘this’ = Indo-Pacific: West Makian *ne* ‘this,’ Abun *ne* ‘that (specific), the, he,’ (mo-)ne ‘there,’ Brat *no*, Tabla *na* ‘this,’ Sentani *nie*, Urama *na*, Tate *ne*, Dimir *ne-t* ‘this.’

Lexical Evidence

Complementing the grammatical evidence are a number of lexical similarities that also point to an Indo-Pacific affinity. Some of the most convincing are given below. We do not give here either all of the supporting etymologies, nor do we give all of the supporting forms for each etymology. Rather we have chosen for each etymology a sample of the forms from different regions of the Indo-Pacific family. The meaning of each form is the same as the head meaning unless specified otherwise.

BREAST Kusunda *ambu* = Indo-Pacific: Sawuy *a:m*, Korowai *am*, Wambon *om*, Ivori *aamugo?*, Gogodala *omo*, Gaima *omo* ‘milk,’ Waia *amo*, Gibaio *a:mo:*, Wabuda *amo*, Tebera *ami*, Ekagi *ama*, Chimbu *amu-na*, Wahgi *am*, Purari *ame*, Yekora *ami*, Yoda *amu*, Koita *amu*, Neme *yama*, Morawa *ama*, Arawum *ammu*, Usu *amu-*, Kamba *auma*, Biyom *ami*, Katiati *ama*, Musak *amu*, Tani *ame*, Wanembre *emi*.

DAYLIGHT Kusunda *jina* *ikya* (H) ‘light’ = Indo-Pacific: Onge *eke* ‘sun,’ *ekue* ‘day, today,’ Momuna *iki* ~ *iki* ‘sun,’ Tabla *yakau* ‘morning,’ Tofamna *yaku* ‘sun,’ Fas *yəkəvə* ‘sun,’ Bisorio *yagi* ‘sun,’ Enga *yanjama* ‘morning,’ Tunjuamu *yagu* ‘day,’ Gidra *yuge-bibese* (-*bibese* ‘day’).

DOG Kusunda *agai* (H), *agəi* = Indo-Pacific: Woisika *wəŋgu*, Sentani *yoku*, Grand Valley Dani *yekke* ~ *yege*, South Ngalik *yeyge*, Aghu *yanji*, Kaeti *aŋga*, Yelmek *agoa*, Noraia *aga*, Gidra *yauga*, Siroi *age*.

EARTH/GROUND Kusunda *doma* (H) ‘earth,’ *tumái* (H) ‘below’ = Indo-Pacific: Tobelo *timi* ‘underneath,’ Kwesten *tum*, Mombum *tumor*, Dibiri *toma*, Grand Valley Dani *tom* ~ *dom*, Ngalik *dom*, Fasu *tomo* ‘underneath,’ Sene *dome* ‘underneath,’ Gende *teme* ‘underneath,’ Yeletnye *tyami*.

EGG Kusunda *gwá* ~ *góä* (H), *goa* = Indo-Pacific: Onge *gwagane* ‘turtle egg,’ Tanglupui *kwa* ‘fruit,’ Bunak *otel go* ‘fruit’ (*otel* ‘tree’), Kampong Baru *uku*, Inanwatan *goʔu*, Solowat *gu* ~ *go*, Eritai *oko*, Waritai *ko*, Asmat *oka*, Denta *kuku*, Sangke *kwe-kwe*, Sko *ku*, Ngala *gwi*, Moni *ugwa* ~ *ua* ‘fruit,’ Oksapmin *gwe* ‘egg, seed,’ Menya *qwi*, Amele *wagbo*, Atemptle *aku*.

EYE Kusunda *chining* (H), *ta-inin*, *iniŋ* (R) = Indo-Pacific: Warapu *ini*, Oirata *ina*, Woisika *-eŋ*, Kui *-en*, Abui *-eŋ*, Yahadian *ni*, Mor *na(-)na*, West Kewa *ini*, Koiari *ni* ‘eye, face,’ Magi *ini*, Morara *niʔi*, Yabura *niʔaba*, Yareba *niapa*.

FATHER₁ Kusunda *məm* ‘older brother,’ *məm* (R) ‘older brother, father’s sister’s older son, mother’s sister’s older son’ = Indo-Pacific: Abui *mama*, Moi *-mam-*, Arandai *mame*, Eipo *mam* ‘mother’s brother,’

Demta *mami*, Manambu *mam* ‘older brother,’ Angoram *mam*, Korowai *mom* ‘mother’s brother,’ Huli *mama* ‘grandfather,’ Kobon *mam* ‘brother,’ Kate *mama?*-, Kwale *mama*, Pulabu *mama*, Saep *mam*, Jilim *momo*, Bongu *mem*, Kare *momo*-, Sihan *meme*-, Samosa *mame*-, Wamas *mama*-, Garuh *mam*, Mugil *-mam*, Kuot *mamo*, Baining *mam*, Taulil *mama*, Baniata *mama*.

FATHER₂ Kusunda *yei* = Indo-Pacific: Isam *eya*, Bauzi *ai*, Gresi *aya*, Nimboran *aya*, Taikat *aya*, Yuri *ayə*, Dera *aya*, Kwomtari *ayə?*, Busa *aiya(?)*, Amto *aiya*, Urat *yai*, Yis *aya*, Seti *aya*, Wiaki *yaye*, Hewa *aiya*, Amal *aya*, Siagha *aye*, Dibolug *iaia*, Ekagi *aiya* ‘great grandfather,’ Sausi *ai*- ‘older sibling (same sex),’ Danaru *aya* ‘older sibling (same sex),’ Utu *aya*, Baniata *ai*.

FIRE Kusunda *já* (H), *dza*, *dza?* (R) = Indo-Pacific: Pawaian *sia*, Tebera *si*, Bisorio *tseya* ‘tree, fire,’ Gahuku *dza* ‘tree,’ Kamano *zafa* ‘tree,’ Gadsup *yaa(-ni)* ‘tree,’ Kate *dza*- ‘(it) burns,’ Mape *dza*- ‘(it) burns,’ Burum *dze*- ‘(it) burns,’ Nabak *dzi*- ‘(it) burns,’ Selepet *si*- ‘(it) burns,’ Aeka *(d)zi*, Orokaiva *dzii*.

GIVE Kusunda *ái* (H), *ya-gan*, *ya-wu* ‘give! (imp.)’ = Indo-Pacific: Juwoi *a*-, Jarawa *a:ya*, Bale *oa*-, Brat *-e*, Hatam *-yai* ‘take, give,’ Sentani *ye*, Manem *ya*, Elepi *yau*, Kamasau *nieg* ‘give it to me,’ Wambon *yo*-, Riantana *yə*, Maklew *-ai*-, Gidra *ai(o)*, Northeast Kiwai *ai*.

KNEE Kusunda *tugutu* = Indo-Pacific: Onge *i-tokwage* ‘elbow,’ Bale *togo* ‘wrist,’ Puchikwar *togur* ‘ankle,’ Juwoi *togar* ‘ankle,’ Sahu *dodoŋa* ‘joint,’ Karas *tangum* ‘elbow,’ Iha *-tugun* ‘elbow, knee,’ Baham *-tuggon* ‘elbow, knee,’ Kampong Baru *-tuguno* ‘elbow,’ Arandai *-tuge-do* ‘elbow,’ Bo *na-toku* ‘elbow’ (*na*- ‘arm’), South Ngalik *-(e)dokodu*, Biami *toku* ‘elbow,’ Kapriman *set^huk^hwa* ‘elbow,’ Keladdar *tuj* ‘elbow,’ Kimaghama *tujkⁱε* ‘elbow,’ Karima *si-tuku* ‘elbow’ (*si*- ‘arm’), Keбенagara *duŋwat* ‘elbow,’ Tonda *doŋodi* ‘elbow,’ Kesawai *toko* ‘elbow, knee,’ Pulabu *tujgai* ‘elbow,’ Musar *tukumaŋ* ‘elbow.’

LIVER Kusunda *kammu*, *qamu* (R) = Indo-Pacific: Kauwerawet *okum*, Agob *kam(o)* ‘belly, stomach, guts,’ Gidra *komu* ‘belly, guts,’ Karima *kamo*, Binandare *gomo*, Sausi *kamo*, Siroi *gamu*, Kwato *kamamu*, Panim *gemə*-, Silopi *kemu*-, Utu *gemu*-, Saruga *gam*-, Musak *kum#* ‘liver, belly,’ Mugil *-gem* ‘belly,’ Dimir *kamemaŋ* ‘lung,’ Korak *-gom*, Ulingan *kema*, Musar *gema* ‘lung.’

MORNING Kusunda *gorak* (H) ‘tomorrow,’ *goraq* ‘tomorrow,’ *gora?dzi* ‘this morning’ = Indo-Pacific: Onge *gegariko*-, Kosarek *kwelek-nak*, Bine *koroke*, Kunini *korokerage*, Meriam *geragə*, Enga *koraka* ‘day,’ Moere *kuru-kia*, Sulka *kolkha*.

MOUNTAIN Kusunda *dibi?oŋ* ‘hill’ = Indo-Pacific: Sahu *tubu* ‘summit,’ Iha *təber*, Kosarek *dub* ‘mountain peak,’ Suki *dipra* ‘hill,’ Foe *tuma* ~ *duma*, Yaben *tabə:nu*, Bilua *sopu*.

RIVER Kusunda *wideə* ‘flow (n.)’ = Indo-Pacific: Baham *weja*, Iha *wadar*, Puragi *owedo*, Aikwakai *wetai*, Siagha *wedi*, Pisa *wadi*, Aghu *widi*, Kombai *wodei*, South Kati *ok-wiri* (*ok*- ‘water’), Awin *waiduo* ‘Fly

River.’

ROOT Kusunda *itak* ‘root, tuber’ = Indo-Pacific: Bojigiab *cok*, Juwoi *cok-*, Bale *cag-*, Moni *taki*, Bogaya *tako*, Binumarien *tuka*, Wiru *teke*, Kire *t^hok*.

RUN Kusunda *gorgo-wóto* (H) = Indo-Pacific: Gogodala *gigira*, Pulabu *guru-*, Usino *gururw*, Danaru *nguruguru-*, Jilim *guru-*, Rerau *gur-*, Duduela *guri-*, Male *gur-*, Bemal *gurgure-*, Sihan *ku?ure-*, Isebe *guguli-*, Panim *gugul-*, Bau *gu?ur-*, Baimak *kura-*, Gal *gur-*, Sulka *guruŋ*, Buin *kuro-*.

SAND Kusunda *gəli* = Indo-Pacific: Sougb *gəria*, Tao-Sumato *giri*, Podopa *kekere* ~ *gegera*, Keuru *kekelea*, Orokololo *kekele*, Elema *kekere*, Opaok *kekere*, Kosarek *kirik-aŋer*, Yafi *gələk* ~ *gərək*, Dera *gələk*.

SHORT Kusunda *potə* = Indo-Pacific: Fayu *bosa* ‘small,’ Sehudate *buse* ‘small,’ Monumbo *put*, Bahinemo *bət^ha*, Northeast Tasmanian *pute* ~ *pote* ‘small,’ Southeast Tasmanian *pute* ‘small,’ Middle Eastern Tasmanian *pote* ‘small.’

SHOULDER Kusunda *pənaq* ‘shoulder strap for net bag’ = Indo-Pacific: Kede *ben*, Puchikwar *ben* ‘shoulder blade,’ Bojigiab *ben*, Iha *mbeŋ* ~ *nbeŋ*, Kwerba *pan* ~ *ban* ‘upper arm,’ Manambu *ban* ‘back,’ Yelogu *bwənyəgər* ‘back,’ Murik *pinagep* ~ *p^hinagemb*, Pogaya *peni*, Tirio *pauna*, Yei *mbiŋg*, Waia *bena*, North East Kiwai *bena*, Ipikoi *beno*, Fuyuge *bano* ‘spine.’

TODAY Kusunda *ibe* ‘today,’ *ibə* ‘now’ = Indo-Pacific: Inanwatan *abo* ‘morning,’ Momuna *abee*, Taikat *yabui* ‘morning,’ Kwoma *aφa*, Washkuk *apa*, Yei *abete*, Bugi *yabada* ‘day, sun,’ Ekagi *abata* ‘morning,’ Pole *ambi* ‘today,’ *ambi-ati* ‘now,’ Awa *apiae* ~ *ahbiyah* ‘tomorrow,’ Lemio *yampir* ‘dawn,’ Usu *ibəte* ‘tomorrow,’ Bongu *yamba* ‘tomorrow,’ Garuh *abera* ‘morning,’ Atemptle *ambire* ‘tomorrow, yesterday,’ Yaben *balima* ‘tomorrow,’ Siwai *imba* ‘now.’

TREE Kusunda *i* (H), *yi*, *ii* (R) = Indo-Pacific: Sentani *i* ‘fire,’ Biaka *yei?* ‘fire,’ Kwomtari *i?* ‘fire,’ Rocky Peak *yəyu* ‘fire,’ Siagha *yi*, Kombai *e*, Girara *ei*, Gogodala *i:*, Kairi *i* ‘tree, fire,’ Tumu *ii*, Kibiri *i*, Mena *?i*, Pawaian *i(n)*, Kasua *i*, Pa *ĩ*, Angaataha *i-pati* (*-pati* [class prefix]), Fuyuge *i(-ye)* ‘tree, wood,’ Zia *i*, Notu *yi*, Yeletnye *yi*.

UNRIPE Kusunda *kátuk* (H) ‘bitter,’ *qatu* ‘bitter’ = Indo-Pacific: Kede *kat* ‘bad,’ Chariar *kedəŋ* ‘bad,’ Juwoi *kadak* ‘bad (character),’ Moi *kasi*, Biaka *kwatəkə* ‘green,’ Grand Valley Dani *katokka* ‘green,’ Foe *k^hasigi*, Siagha *kadayai*, Kaeti *ketet*, Orokololo *kairuka* ‘green,’ Doromu *kati*, Northeast Tasmanian *kati* ‘bad,’ Southeast Tasmanian *kati* ‘bad.’

WOMAN Kusunda *puan* ‘co-wife’ = Indo-Pacific: Bunak *pana* ~ *fana* ‘woman, wife,’ Oirata *panar* ‘female (of animal),’ Moni *pane* ‘girl,’ Brat *vaniya*, Yava *wanya*, Pole *wena*, West Kewa *wena*, Forei *wa:nyi* ‘wife,’ Yekora *bana*, Dumpu *fan*, Kolom *pəno*, Tauya *fena?a*.

This paper was written as part of the Santa Fe Institute's program on the Evolution of Human Languages, directed by Murray Gell-Mann, and we gratefully acknowledge their support, the support of the City University of Hong Kong, under grants #901001 and CERG #9040781, W. S-Y. Wang, Principal Investigator, where part of the paper was written, and the invaluable assistance of Ruth Thurman at the Summer Institute of Linguistics office in Papua, New Guinea.

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Figure 1. Location of Indo-Pacific Languages.

Supporting Information for the Web

Appendix

The following list identifies the sources of the Indo-Pacific languages cited in this paper:

Abui (14), Abun (15), Aeka (16), Aghu (17), Agob (18), Aikwakai (19), Amal (20), Amele (21), Amtto (22), Angaataha (23), Angoram (24), Arandai (22), Arawum (25), Asmat (26), Atemptle (27), Auyana (28), Awa (29), Awin (30), Baham (31), Bahinemo (32), Baimak (33), Baining (34), Bale (35), Baniata (36), Bau (33), Bauzi (19), Bea (35), Bemal (33), Biaka (37), Biami (32), Bilua (36), Binandare (38), Bine (18), Binumarien (39), Bisorio (40), Biyom (27), Bo (22), Bogaya (41), Bojigiab (35), Bongu (25), Brat (42), Bugi (43), Buin (44), Bunak (14), Burum (45), Busa (22), Chariar (35), Chimbu (46), Danaru (25), Demta (17), Dera (17), Dibiri (47), Dibolug (48), Dimir (49), Doromu (50), Duduela (25), Dumpu (25), Eipo (51), Ekagi (52), Elema (53), Elepi (54), Enga (40), Eritai (19), Faita (27), Fas (37), Fasu (55), Fayu (19), Foe (56), Forei (57), Fuyuge (58), Gadsup (59), Gahuku (46), Gaima (18), Gal (33), Galela (60), Garuh (33), Gende (46), Gibaio (61), Gidra (62), Girara (63), Gogodala (64), Grand Valley Dani (17), Gresi (17), Hatam (65), Hewa (40), Huli (56), Humene (50), Iha (66), Inanwatan (17), Ipikoi (67), Isam (60), Isebe (33), Itik (17), Ivori (23), Jarawa (68), Jilim (25), Juwoi (35), Kaeti (17), Kairi (69), Kamano (28), Kamasau (54), Kamba (33), Kampong Baru (17), Karas (31), Kare (33), Karima (70), Karon Dori (71), Kasua (72), Kate (45), Katiati (27), Kauwerawet (73), Kebenagara (74), Kede (35), Keladdar (75), Kesawai (25), Keuru (53), Kibirri (76), Kimaghama (77), Kire (78), Kobon (79), Koiari (50), Koita (80), Kolom (25), Kombai (17), Konda (81), Korak (49), Korowai (82), Kosarek (83), Kui (14), Kunini (18), Kuot (28), Kwale (50), Kwateva (18), Kwato (25), Kwerba (84), Kwesten (17), Kwoma (85), Kwomtari (37), Lemio (25), Magi (86), Maklew (87), Male (25), Manambu (88), Manem (17), Mape (45), Marind (87), Mena (89), Menya (23), Meriam (90), Middle Eastern Tasmanian (91), Minanibai (55), Moere (49), Mombum (87), Momuna (17), Moni (52), Monumbo (92), Mor (17), Morara (93), Morawa (94), Mountain Koiari (80), Mugil (49), Murik (24), Musak (27), Musar (49), Nabak (45), Neme (94), Ngala (88), Ngalik (95), Nimboran (96), Noraia (97), Northeast Kiwai (98), Northeast Tasmanian (91), Notu (16), Oirata (14), Oksapmin (99), Onge (100), Opao (53), Orokaiva (16), Orokolo (101), Pa (69), Panim (33), Pawaian (102), Pisa (17), Podopa (103), Pogaya (41), Pole (57), Puchikwar (35), Pulabu (25), Puragi (104), Purari (53), Rerau (25), Riantana (17), Rocky Peak (22), Saep (25), Sahu (105), Samosa (33), Sangke (106), Saruga (33), Sau (57), Sausi (25), Savosavo (36), Sawuy (17), Seget (17), Sehudate (19), Selepet (45), Sene (10), Sentani (17), Seti (20), Siagha (17), Sihan (33), Silopi (33), Siroi (25), Siwai (107), Sko (106), Solowat (17), Sougb (108), South Kati (87), South Ngalik (17), Southeast Tasmanian (91), Suki (64), Sulka (109), Tabla (17), Taikat (17), Tanglupui (14), Tani (49),

Tao-Sumato (110), Tate (53), Taulil (111), Tauya (27), Tebera (103), Timbe (45), Tirio (18), Tobelo (60), Tofamna (17), Tonda (97), Tumu (112), Tunjuamu (113), Ulingan (49), Urama (61), Urat (20), Usino (25), Usu (25), Utu (33), Wabuda (18), Wahgi (114), Waia (18), Wamas (33), Wambon (17), Wanembre (49), Warapu (115), Waritai (19), Washkuk (85), West Kewa (57), West Makian (116), Wiaki (20), Wiru (57), Woisika (14), Yaben (49), Yabura (86), Yafi (17), Yahadian (17), Yareba (86), Yava (117), Yei (87), Yekora (16), Yeletnye (118), Yelmek (87), Yelogu (88), Yis (20), Yoda (90), Yuri (37), Zia (16).

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