Abstract
People have to live on the animals and plants that are available to them. Animals and plants are either wild or domesticated. Some are indigenous, while the others are alien and introduced to the Formosan natives at later stages, as based on linguistic evidence. Rice and millet are some of the cultivated plants that pre-Austronesian speakers must have brought with them to Taiwan from continental Asia when they arrived and colonized Taiwan 5,000 to 6,000 BP, as based on both linguistic and archaeological evidence. I shall show what animals and plants were available to the proto-Austronesian speakers, and what were introduced to Taiwan only a few hundred years ago. A list of Formosan cognates for animals and plants is given in the appendix.

Keywords: animal, plant, wild, domesticated;

1. Introduction

People have to live on the animals and plants that are available to them. Animals and plants are either wild or domesticated. Some are indigenous, while the others are alien and introduced to the natives at later stages.

The wild animals, such as the bear, leopard, wild pig, deer, and monkey, must have arrived in Taiwan before man did; that is, long before the last glacial age over 12,000 BP.

In the mid-19th century, the celebrated British naturalist Alfred R. Wallace discovered that “the floral and faunal assemblages of the Greater Sunda islands closely resemble those of the Asian mainland, whereas those of the islands further to the east resemble those of Australia” (Blust 1982)[1]. This is called the “Wallace Line”. Placental mammals are found mostly west of the Wallace Line, while marsupial mammals are found only east of the Wallace Line. The Wallace Line was then extended to include Borneo and Taiwan. Placental mammals include the pig, ruminant sp. (deer, cattle, goat), monkey, leopard cat, hare, civet, otter, and pangolin in Taiwan. Blust (1982) argues that the distribution of the cognate terms for placental mammals in Austronesian languages in conjunction with subgrouping points to the west of the Wallace Line as the Austronesian homeland.

In short, animals and plants are not only the main sources of food consumed by people, but their distribution also sheds light on human migration.

---

1 An earlier version of this paper was presented at PNC 2012 Annual Conference and Joint Meetings, University of California, Berkeley, December 7-9, 2012. I’d like to thank Shigeru Tsuchida and Lawrence Reid for their valuable comments and for Tsuchida’s providing me with some cognate forms. See a list of cognates for animals and plants (Tsuchida 1977[2], Li 1994[3]) in the appendix.
2. Linguistic evidence

Linguistic evidence indicates that some animals and plants were available to the Formosan natives at the early stage of Proto-Austronesian, ca. 5,000 BP or earlier. These animals include PAN *wasu ‘dog’, *beRek ‘domesticated pig’, *babuy ‘wild pig’, *(qa)Nuang ‘deer’, *luCung ‘monkey’, *qaRem ‘pangolin’, *(ku)labaw ‘rat’, *SulaR ‘snake’, *Sanaq ‘otter’, *qayam ‘bird’, *baRuj ‘dove sp.’, *punay ‘dove sp.’, *tikuRas ‘partridge’, *tuNa ‘eel (fresh water)’, *qaCipa ‘river tortoise’. A few cognates are attested in Formosan languages without any external evidence, e.g., the large land animals *Cumay ‘bear’ and *likuNaw ‘leopard’. These two Formosan cognates are not attested in any of the Malayo-Polynesian languages outside Taiwan, although these two animals are also found in Borneo. Two birds, *RiNaS-an ‘male pheasant’ and *SiSiN ‘omen bird’, are geographically restricted and found only in Taiwan. Consequently, these two Formosan cognates also have no external evidence.

The marine life includes PAN *kaRang ‘crab sp.’, *kaNasay ‘mullet (adult)’, *paRiS ‘stingray’, *qiSu ‘shark’ (Blust 1985)[4].

The PAN speakers also had to live and bear with the parasites, *kuCuh ‘head louse’, *CumeS ‘body louse’, *(qa)timela ‘flea’, *Nimatek ‘jungle leech’, *(qaNi)meCaq ‘paddy leech’, and the unwelcome insects or creepy-crawly creatures, such as *langaw ‘fly’, *Sipes ‘cockroach’, *qalu-Sipan ‘centipede’, and *aNay ‘termite’ (Li 1991[5]). People carried lice or their eggs (*liseqeS) and fleas (*qa(timela)) with them without knowing it when they traveled and moved to a new land.

It is not clear if the Formosan natives ate rats and snakes in the old time, but some of them do in the modern time. Some domesticated animals were introduced to Taiwan only in the past few hundred years. For instance, carabao and horses were not introduced to Taiwan until the 17th century, e.g., Kavalan kbayu which is a loan from Spanish caballo ‘horse’.

The plants include the following edible ones: PAN *NaCeng ‘vegetables’, *pajay ‘rice plant’, *baCaR ‘millet sp.’, *beCeng ‘millet, foxtail millet’, *zawa ‘millet sp.’, *CebuS ‘sugarcane’, *quSung ‘mushroom’, *qaNuNang ‘Cordia spp.’, *ikuC ‘Asplenium nidus’, *ameCi ‘Solanum nigrum’, *pangavan ‘pandanus’, *apuR ‘betel chew’, and inedible but useful to make a living, or even annoying: *biRaq ‘leaf, inedible taro, Alocasia spp’, *(za)lateng ‘nettle, Laportea spp.’, *baNar or *banaw ‘Smilax spp.’, *baNHiR ‘cypress’, *CeRe ‘plant sp., Bischofia javanica’, *qauR ‘type of bamboo’, *buluq ‘type of bamboo’, *kawayan ‘type of bamboo’, *Riaq ‘cogon grass, Imperata cylindrica’, *quay ‘rattan’, *puluC ‘Urena lobata’, *saleng ‘Pinus spp., pine tree’, *taNiud ‘mulberry’, *tuba ‘fish poison, Derris spp.’, the last of which was used to catch fish. The natives used bamboos, rattan, pine tree, and cogon grass to build houses/huts, and/or make baskets, traps, etc. They also ate *Cubuq ‘bamboo shoots’. Reflexes of PAN *saleng ‘pine tree’ are widely attested in Taiwan and the Philippines, but not elsewhere (Blust 1982:49-50).

Rice, millet, and sugarcane were some of the cultivated plants that pre-Austronesian speakers may have brought with them to Taiwan from continental Asia, specifically western China, when they arrived and colonized Taiwan. According to Vavilov (1926[6], 1951[7]), the Chinese center of the cultivated plants includes these plants. These are the related cognates for rice: *pajay ‘rice plant,

---

2 Abbreviations as used in this paper are: <A, assimilation; <M, metathesis; PAN, Proto-Austronesian; PMP, Proto-Malayo-Polynesian.

3 The term refers to both deer and cattle in some Formosan languages: Bun qonwau, Tha qwan, Paz naug (<A, n/l), Sir louang ‘deer, cattle’, while it refers only to cattle in two others: RukBu loaq, Pai luag ‘cattle’. The term refers to both deer and cattle, namely animals with *uReng ‘horn’, excluding goat. Cattle bones have not been found in archaeological sites in Taiwan until recently. Bones of water buffalo were recently found in an archaeological site in Taiwan during the iron period (Tsang, pers. comm.). There is no evidence that they existed in Taiwan any earlier.
unhusked rice’, *beRas ‘husked rice’, *Semay ‘cooked rice’, *bineSiq ‘seed for next planting’, *qeCah ‘husk of grains’, and *zaRami ‘rice stubble’ (Blust 1985).

3. Wild vs. domesticated/cultivated

The number of wild animals and plants is clearly much larger than that of domesticated or cultivated. The number of domesticated animals or cultivated plants gradually increases over the time.

The domesticated animals included dogs and pigs at the PAN stage. The main function of a dog was for ‘hunting’ (*qaNup). The archaeological evidence excavated from the archaeological sites in the Tainan Plains indicates that the natives treated a dog as their important companion, as it was buried like a human being.

The word for ‘chicken’ is not reconstructible at the PAN level. But it could probably be reconstructed as Formosan *teRakuk vs. PMP *manuk ‘chicken’. Although the cognate forms for ‘duck’ are attested in Paiwan bibiq, Sai bibi’, Taokas bibi < PAN *bibiq, they sound like a case of onomatopoeia. Taiwan did not have any cat until rather late, and it was not domesticated until recently. The forms for ‘cat’ are mostly onomatopoeic in Formosan languages, such as ngiaw or the like.

It is not always clear at what stage a certain animal or plant was domesticated. The plant *taNiuD ‘mulberry’ was probably not cultivated until recently. Formosan natives enjoy its fruit.

Except for the plants mentioned above, most cultivated plants in Taiwan were not introduced to Taiwan until a few hundred years ago. Their cognate forms cannot be reconstructed at the PAN level. These cultivated plants include potato, sweet potato, taro, corn/maize, pumpkin, cucumber, bottle gourd, sponge gourd, banana, guava, papaya, pineapple, coconut, mango, peach, pear, persimmon, loquat, water melon, sesame, eggplant, tomato, garlic, pepper, ginger, cinnamon, beans, peas, peanut, hemp plant, etc. (Tsuchida 1976[8]). In fact, many of them are not reconstructible at all.

Some of the cultivated plants came originally from the Americas (Vavilov 1926, 1951, Lee 2013[9]), and so did a few domesticated animals, such as turkey. Hence they were not introduced to Taiwan until after Columbus discovered the Americas in 1492. These cultivated plants include potato, sweet potato, peanut, corn, bean (string bean, Sierra bean), pumpkin, pepper, onion, garlic, asparagus, celery, olive, papaya, tomato, guava, strawberry, custard apple, and tobacco. There are three possible routes from Americas to Taiwan: (1) via the South Pacific islands, (2) via Europe and China, Japan or Java, and (3) via Spain and the Philippines (Lee 2013).

4. Archaeological evidence

Some historical linguistic reconstructions are confirmed by archaeological evidence. For instance, a fair amount of rice and millet unearthed from the archaeological sites in Tainan Science Park have been dated 5,000~3,300BP (Tsang 2012)[10]. The cognates for rice are well attested in all the major subgroups, while two cognates for millet (*beCeng and *zawa) are attested only in languages in the south (Rukai and Puyuma). Both linguistic and archaeological evidence indicates that there is an uninterrupted history of rice planting by the Formosan natives, whereas millet planting may have been discontinued about 3,000 BP.
5. Using plants for different purposes

The Formosan natives have used plants for different purposes. In addition to consuming the edible plants for food, some plants are also used for medical purposes, e.g., both *NataD ‘Formosan elderberry’ (Sambucus formosana Nakai) and ‘cape jasmine’ (Gardenia jasminoides Ellis) are used to reduce infection, and *DakeS ‘camphor laurel’ is processed for drugs. Some other plants are used for ritual ceremonies, e.g., the important role played by *Riaq ‘cogon grass (Imperata cylindrica, Miscanthus sienensis Anders)’ during the pashta ‘ay ceremony of Saisiyat.

6. More work needs to be done

We need more specific knowledge about when and what cultivated plants were introduced to Taiwan. No single field of specialization can give a satisfactory answer to such a problem. This requires interdisciplinary study, such as linguistics, archaeology, and breeding of cultivated plants.

References

Appendix. List of Formosan Cognates for Animals and Plants

Animals:
* qaRem > AtaMx qagum, Tso hi-arm-ua, Kan kani-arum-ai, Sar arôm, Bun galum, Pai qam, Tha galhum, Sai qelôm, Paz azêm, Ami galêm, Kav irôm ‘anteater’
*sakeC > Tso ta’êc (t- irregular), RukBu akêc, Bun cakut, Pai takêc, Tha takît, Ami cakê ‘pygmy deer’
*wasu > RukMg aðòo, BunN acu, Pai vatu, Puy su-ân, Tha atu, Sai ñëhâ-, Paz wazu, Ami wacu, Kav wasu ‘dog’
*titu (PAN-F) > Kan tama-titu, Sar tama-titua, Tha titu, Kav titu ‘puppy’, Paz titu ‘cub, young animal’
*babuy > Tso fuzu, Kan vavalu, RukBu baboy, Pai vavuy, PuyPn babuy, Ami fajuy, Kav babuy ‘wild pig’, Sed babuy, Bun babu, Tha fajuy, Sai babuy, Ami fajuy, Kav babuy, Sir vaboy ‘domesticated pig’. This term must have referred to ‘pig’ in general (Blust 2002)[11]
*beRek > Tso frêsi, RukBu bêkô, PuyKl vêkô ‘domesticated pig’
*waNiS > Tso xisi, Kan anisi, RukTa valise, Bun vanis, Sai walif, Paz walis, AmiSa waôis ‘boar’s tusk’
*waNiS-an > RukTo valis-ân, Bun vanis, Sai walif-an, Tha waôif ‘wild pig’
*luCung > Bun hutuy, Puy Lutuy, Tha rûkn, Sai Losoy, Ami lutug, Kav Rutuy, Sir routuy ‘monkey’
*Cumay (PAN-F) > Tso emoi, Bun tumaz, Pai cumay, Tha thumay, Ami tumay, Kav tumay ‘bear’
*lukêNaw (PAN-F) > Ata ak-li? , Sed rkel-ic, Tso r’shu, Kan ukunau, Sar lukulhu, Bun huknaw, Pai Lukljaw, Puy Likulaw, Tha rukdaw, Sai Loklaw, Ami lukdaw, Kav ruqjaw ‘leopard’
Note: Both Rukai and Puyuma reflect *i for the first vowel.
*Sidi (PAN-F) > Bun sidi, Pai sizi, Puy siri, Tha sisi (<A), Sai firi, AmiSa sidi, Kav sizi, Bas sili ‘goat’
*(ku)labaw > Kan tuujigi-lavau, RukBu koLabaw, Pai kuLavaw, Puy kuLabaw, AmiSa kalabaw (<A), Kav m-rabaw, Fij kakavo (<A) ‘rat’
*SulâR > RukMg sura-a, RukTo soa‘a, RukMn ëLa‘a ‘snake’
*qayam > Tso zôm, Sar akmô, RukBu adôdamô, BunC qâdam, Pai qay-qayam, PuyPn ñyam, Paz ayam, Kav alam, Ami qayam, Sir aiâm ‘bird’; Fav adâm ‘omen bird’; Kav alam, Sai ñêyêm ‘meat’
*baRuj > Tso xo-foru, Kan ta-varuru (< A), Bun balu, Tha faîô, Sai baloz, Kav banur (< M) ‘dove sp.’
*punay > Tso ñoï, Kan punai, RukBu ponay, Pai punuy, Puy punay, Sai ponay ‘dove sp.’
*tikuRas > BunN tikulac, Puy tukuras, Tha tikûtô, Ami tikulac, Kav tikuRis (< A) ‘partridge’
*RiNaS-an (PAN-F) > AtaMx gîla-qay, Sed gla-qn, Bun linas, Tha  tôaf, Ami Lilaf-an, Paz xîlas-an ‘male of blue pheasant’

4 While most of these cognates can be traced back to proto-Austronesian, a few are not attested outside Taiwan, such as *Sidi ‘goat’, *waNiS ‘tusk of wild pig’, *RiNaS-an ‘pheasant’, *Sanaq ‘otter’, *DakeS ‘camphor laurel’, and *NataD ‘Formosan elderberry’. Blust labels it as “PAN-F” in his Austronesian Comparative Dictionary, assuming that they are reconstructible at PAN level, but lost outside Taiwan.

238
*taRekuk (PAN-F) > Tso trooʔu-a, Kan tarikuuk-a, Sar turukuuk-a, RukTa tarokoko, Bun tuluk, PuyLp təʔkuk, AmiSa tulakuk, Kav traʔuq ‘chicken’
*balaCuk > Pai vaLacuk, Sai baLasok, Ceb balalatuk ‘woodpecker’
*SiSiN (PAN-F) > AtaMx sisil-iq, Sed sisil, Kan sisini, Sar iʔu, Pai sisilj, Sai fiʔil, Paz sisil, Kav sisin ‘omen bird, Garrulax canorus taewamus Swinhoe’
*labaw > Kan tuŋinjni-lavau ‘a type of large mountain rat’, Ruk ko-Labaw, Pai ku-lavaw, Puy ku-Labaw, AmiSa ka-labaw ‘rat’
*tuNa > AtaMx tula-qi, Ruk tola, Pai tjulja, Puy tula, Tha tuʔa, Sai tola, Paz tula, AmiSa tuʔa ‘eel’
*kaRang > AtaSq kagaʔ, Sed karaj, Bun kalaj, Tha kaʔan, Sai kaLaʔ, Paz kəxay, Ami kalaj, Sir kəgan ‘crab’
*paRiS > Sir pagig, Ceb pəgi ‘stingray’
*qiSu > Pai qisu, Ceb iʔu ‘shark’, Ami qiso ‘whale’
*Sanaq (PAN-F) > AtaMx sanaʔ, Tso snoo, Kan sanaʔa, Sar sanaʔa, RukTo sana, Pai sanaq, Tha sanaʔa, Kav sanaj, Pai senaʔ, Kav sanaj, Tha fanaq, Kav sanaj, Fav channa ‘the Chinese river otter’, Sir hann ‘fox’
*langaw > Ata ajaw, Sed raqaw, Ruk a-La-Lagaw ‘big fly’, Pai laʔaLagaw, Puy a-LaLaLaw (<M), Tha ranaw, Sai Laʔaw, Paz raʔaw, Kav raʔaw ‘small fly’, Tso taʔoʔ ‘honeybee’, Kan taaʔaLaL ‘gnat’
*kuCuh > AtaMx kuʔu (female form), Sed kuʔu, Tso kuʔu, Kan kuʔu, Sar kuʔu, Ruk koko, Bun kuʔu, Pai kuʔu, Puy kuʔu, Tha kuʔu, Sai kəsə, Paz kəsə, Ami kuʔu, Kav qutu ‘head louse’
*CumeS > AtaMx lum-iq (<A), Sai soməʔ, Paz sumah, Ami tumus (<A), Kav tumaz ‘body louse’
*liSeqS > RukBu a-Lisəʔ (<A), BunN icqus, Pai lisəʔ (<A), Sai Liʔilf (<A, M), AmiSa licaʔ ‘nit of louse’
*qatiyel > Tso timro, Kan aʔatimuʔa, Sar aʔatimuʔa, Pai qatim-tim, PuyKl aʔatimLa, Tha qa-ti-tira, Sai kə-ʔim, Kav tim̕Ra, Ami qatimla ‘flea’
*Nimatek > Kan aʔ-nimaʔ-a, Sar aʔ-himəʔ-a, RukBu limatək, Pai liMaʔək, Puy limatək, AmiSa ka-liməʔək-a ‘jungle leech’
*wiNi > Bun vini, AmiSa wizi ‘water leech 水蛭’
*(qaNi)meCaq > Sar aʔli-maa-maca, ‘paddy leech’
*aNay > RukBu v-alay, Paz alay ‘termite’, Itbayat anay ‘termite’
*Sipes > AtaMx ha-hupux (<D), Sai hipih (<A), Paz hipəʔ, Kav sipəs ‘cockroach’
*qal-u-Sipan > Tso rerpa, Kanʔal-alipanə, Sarʔal-alipə, SaiʔaLaʔa-hipan, Paz h-ar-ipan, Kav Rusipan ‘centipede’
*buhet > Ata buḥet, Kan vuʔu, RukBu bu-wuʔu, Bun puʔu (<A), Pai vutj, Puy vutj, Sai kə-bohət (<A), Paz buhut (<A) Ami foʔət ‘squirrel’

Plants
*pajey > AtaSq pagaʔ, Sed payay, Tso pai, RukBu pagay, Bun paʔə, Pai paʔay, Tha paʔay, Sai pazay, Ami paʔay, Kavpany, Pap pada ‘rice plant, unhusked rice’
*beRas > Tso fəʔa, Kan vəʔa, Sar əʔa, RukTo boʔa, Pai vut, AmiSa boʔa, Kav boʔa ‘husked rice’
*Semay > Paz sumay, Ami həməʔay, Kav ʔaʔay ‘cooked rice’
*qeCah > RukBu ʔuə, PuyKl ʔoʔa, Tha qəʔa, Sai kə-ʔaʔəʔ, Ami ʔaʔ ‘husk of grains’

239
*bineSiq > BunTbk binsiq, Puy biniʔ, Sai binfiʔ, Tha fa-finfiq, Tagalog binhiʔ ‘seed for next planting’
*baCaR > AtaSk bacax, AtaMx basag, SedTr basag, Sai basal, Tao basau ‘millet, Panicum miliaceum’
*beCeng > Sar ṭo-vaʃə, RukBu ḩaʃə ‘millet, foxtail, Setaria italica’

Note: The Saaroa form is probably a loan from the Mantauran dialect of Rukai vaʃə ‘millet’. If so, it is found only in Rukai.
*zaw > Puy dawa ‘millet, Setaria italica’
Note: This cognate is found only in one Formosan language.
*balaysan (PAN-F) > Sed brisan, Puy balaysan, Ami balaysan ‘sorghum’
*tebuS > Tso tâʃə, Kan təʃə, RukMg ibusu, Bun cibus, Pai tjəvus, Sai ka-thof, Paz tubus (<A), Ami təbus, Kav təbus ‘sugarcane’
*qauR > AtaMx qau-a-g, Tso oru, Kan ḗaru, Sar ḗaru, Bun qaul, Pai qaul, Tha qauɬ, Sai ʃəL, Ami qaul, Kav iəR ‘bamboo, bamboo, Bambusa spp’
*buluq > RukTa bolo, Pai vuljuq, PuyPn bLuʔ, Sar boLʔ, Paz buru, Ami jũluq, Bambusa spp’
*kawayan > RukBu kavadən, Pai kawayan, Puy kawayan ‘bamboo, Bambusa spinosa spp’
*quay > Ata qa-wi, Sed qwa-rux, Tso ue, Kan ḗai, Ruk ovay, Bai qaud, Pai quay, Puy ḗway, Tha quay, Sai ʃæv, Paz way, Ami qoya, Kav way, Bas way, Bab choa, Sir uweg ‘rattan’
*biRaq > RukTa bia, Puy biraʔ, Sai biLæʔ, Tha fiãq, Kav biRi , Tao bixax, Bab bia ‘leaf’, RukTo biʔa ‘Alocasia’
*tuba > AtaSq tuba, SedTr tuba, Sai ta-toba, Paz ta-tuba, Jav tuba ‘fish poison, Derris spp 魚藤’
*panguDaN > Kav panguzan ‘pandanus’, Ata paŋran, RukBu paŋDalə, Pai paŋuDalj, Puy paŋuDal, Sai paŋran ‘pineapple’
*lukuC > RukBu Łukucu, Puy ljukuc, Puy ŁukuT, Ami lukut ‘parasitic plant sp., Asplenium nidus 山蘇’
*Riaq > Tso ν-rio, Kan rəʃə, Sar ʃəka, Bun liaq ‘cogon grass, Imperata cylindrica 白茅’
*qaRisam > Tso resmə, Sar ʃəram, BunIs haslam (<M), Sai ʃəLəʃəm, Kav qiisam ‘miscanthus stalks, stems of cogon grass’
*Dauq > Kan caaʔə, Sar caaʔə, RukTo Daw, Bun daqu, Pai zaq, Puy Daʔə, Ami raq ‘soapberry (Sapindus mukorossi) 無患子’
*baNhiR > Tso fahri, RukBu baali ‘cypress 柏, 檜’; Sar vaʔiri, Pai vaʔi ‘board’; Bun banhil ‘cypress, board’; Mal banir ‘buttress-like projection from a tree-trunk’ (Tsuchida 1976:140)
*CeŋeR > Sar ʃəjə, ‘type of plant with red sap’, Pai ʃəmu ‘dye yam (Discorea rhogonioides) 落棉’, Ceb tuŋug ‘kind of mangrove, the bark of which is used for dyeing’ (Wolff 2010[12])
*quSung > AtaMx quyi,Tso uŋo, Kan uŋ, Sar uŋ-a (M), RukMn ḗŋo, Bun quŋ, Ilk uŋ ‘edible mushroom’
*saleng > AtaMx haŋ (female form), Sed harŋ, Tso sroŋ, Kan aŋə, Sar aŋə, RukBu aLŋə,
BunN caay, Pai taray, Tha tarin, Sai hæLay, Ami calay, Ilok saleay ‘pine tree’
*taNiuD> AtaSq liu?, Tso tahzucu, Kan taniucu, Sar tahusu, RukBu talioDo, Itb tanjud ‘mulberry tree’
*ameCi > Tso mici, Kan m-amici, Sar t-amici, RukBu amici, Pai s-amci, PuyKl ṯamTi, Tha q-amθ, Btk amti ‘Solanum nigrum 陇葵’
*laCeng > Sai kæh-Lasay ‘stinging nettle, Laportea spp. 咬人狗’
Note: The cognate is found in only one Formosan language
*puluC > Kan puucu, Puy puLuT ‘Urena lobata’, Tso ta-prucu ‘a species of grass whose seeds easily stick to clothes in a line’
*Cubuq > Kan cuvuʔa, Sar cuvuʔa, Pai cuvuq ‘bamboo shoot’; RukMn ṯa-cuvu ‘treetop’; To tupu ‘to grow up’
*qaRa > AtaMx qaʔa, Sai ṯæLaʔ ‘Alsophila pustulosa, type of fern’; Old Jav hara ‘Focus spp 蛇木’
*tanaq (PAN-F) > Tso tnoo, Tha ta-tanaq, Kav tani, Ami tanaq ‘plant sp., Aralia decaisneana Hance 刺楓’
*NayaD (PAN-F) > AtaMx layaʔa, Tso xzoc, Kan nalac, RukBu laLaD, Bun naʔa, Pai ljayaz, Puy layaD, Sai layar, Kav layas, AmiSa dayas ‘Ebulus formosana 有骨消’
*Samaq (PAN-F) > Kan samaʔa, Ruk Bu sama, Bun samaq, PuyKl amaR, Tha famaq, Paz sama, Kav sami, AmSa samaq ‘Lactuca indica 蒿芚’
*DaRa (PAN-F) > AtaMx ragaʔa, SedTn dara, Bun dala, Tha kək (<A), Sai raLaʔa, Paz daxa ‘maple tree 楓’
*DakeS (PAN-F) > AtaMx rakus, Tso ṭos, kan cakəs, RukBu Dakəs, Bun dakus, Pai Dakus, Puy Dakəs, Tha fakif (<A), Sai rakəf, Paz dakəs, Kav raqs, AmiSa rakəs ‘camphor laurel 柏’
*bangaS (PAN-F) > Tso ṭos, Kan vaŋas, Sar vaŋas, RukBu baŋas, Pai vaŋas ‘Melia azedarach 苦苓樹’
*keRiw (PAN-F) > AtaMx kgiy, SedTr kərig, BunTbn kaliv, Puy kəriv, Tha kfu, Sai ka-kliw, Paz kixiw, AmSa kəliw, Kav qəRiw ‘hemp plant’