Austronesian Lights the Way: The Origins of the Words for ‘Sun’ and Other Celestial Vocabulary in Old Ryukyuan

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Abstract

This paper examines the evidence for historical contacts between Ryukyuan and Austronesians and uses this as a starting point to explore the borrowing of celestial vocabulary from Austronesian languages into Proto or Old Ryukyuan. The previous hypotheses for the etymology of Proto-Ryukyuan *teⁿda ‘sun’ are discussed in detail, and this is followed by discussions on Old Ryukyuan words meaning ‘sun’, ‘sun, light’, ‘heaven’ and ‘moon’. In all of these cases it is argued the most plausible source languages are Austronesian, based on strong phonetic and semantic correspondences, geographic proximity to the Ryukyus or the Old Ryukyuan trade route, shared celestial worship, as well as the lack of cognates in Japanese.

Keywords

Proto-Ryukyuan – Old Ryukyuan – Austronesian – Formosan – Amis – Malayo-Polynesian – etymology – language contact

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1 Introduction

One of the more unusual aspects of the Old Ryukyuan (OR) verse of the *Omoro Sōshi* (OS)¹ anthology, which was compiled from 1531–1623 CE, is that there are several words meaning ‘sun’, or something related to the sun, scattered throughout its 1,554 songs. The fact that only one of these words is assuredly Japonic points to a borrowing situation involving one or more source languages near the Ryukyus. If we are to propose a word is a loanword, strong linguistic evidence is of course necessary, but extralinguistic evidence of historical contact between the peoples in question is also important to increase the plausibility of such a proposition. Ryukyuan contacts with Chinese,² Japanese, Koreans and Ainu have already been firmly established and previous research has shown these contacts resulted in loanwords in Ryukyuan.³ In this paper I will argue contacts between Ryukyuan and Austronesians also resulted in loanwords, at least in celestial vocabulary. I will begin by presenting the extralinguistic evidence of contact between these groups to lay the groundwork, and then I will move on to the linguistic comparisons.

1.1 *Austronesians in the Ryukyus: Evidence from Archaeology*

It has been established that there was an Austronesian culture in the Southern Ryukyus from the time of the Early Neolithic, beginning approximately in 2500 BCE (Asato 1991, Shimabukuro 2011, Pearson 2013). This culture appears to have died out in 1500 BCE, followed by many centuries without human activity on the islands. This ended when a new culture of foragers developed around 800 BCE, in the Late Neolithic, which Hudson (2012) has argued was also Austronesian. The source of this culture could have been from Taiwan or the Philippines; evidence in support of the latter is the use of shell adzes (Asato 1991), but Hudson prefers Taiwan for the source, due to the close proximity. This culture persisted until around 900–1100 CE, when the Northern Ryukyans

1 All citations from the OS provided in this paper are given in the format BOOK.SONG (e.g. 1.20 means Book 1, song 20). I refer to the language recorded in the OS as Old Ryukyuan instead of Old Okinawan because it contains songs from several islands (and language varieties) in the Northern Ryukyus.

2 The historical contact between Ryukyans and Chinese began with the trade of *Turbo* shell in the seventh to ninth centuries CE (Kinoshita 2006, Pearson 2013: 140). The first few centuries of this trade would not have involved Japonic speakers because Japonic immigration to the Ryukyus began around 800 CE (Pearson 2013: 274). The rise of the Japonic Gusuku culture began later, around 1050 CE, and a formal tributary relationship with China did not begin until 1372 CE.

3 See Vovin (2009a, 2009b, 2012: 140) for details of some Ainu and Korean loanwords in OR and Old Kyushu dialects.

descended upon the islands and seem to have completely taken over, linguistically and genetically. It must be mentioned that neither of these Austronesian cultures in the Southern Ryukyus had any presence in the Northern Ryukyus, where an offshoot of Jōmon (Ainu) culture developed and flourished unabated prior to Japonic intrusion (Pearson 2013: 48). There is also no evidence these cultures in the south had any contact with the Ryukyu Jōmon culture. A recent genetic study (Matsukusa et al. 2010: 211) shows that Austronesian genes are not found in Sakishima Ryukyans, so if there were any contacts between Japonic speakers and indigenous Austronesians in the Southern Ryukyus they were neither intimate nor of a long duration.⁴ The earliest confirmed interaction between Taiwan (Austronesians) and the Yaeyama Islands occurred in the first half of the 12th century CE (Kinoshita 2019: 324).

1.2 *Architectural and Cultural Evidence of Contact with Austronesians*

Based solely on the evidence in the previous section, the most plausible scenario for contact-induced linguistic borrowings among indigenous Austronesian inhabitants and Japonic immigrants would have occurred in the Southern Ryukyus. However, George Kerr, in his seminal book *Okinawa: The History of an Island People*, describes some architectural and cultural traits shared among Northern Ryukyans and nearby Austronesian peoples (2000: 27–29). In regard to architecture Kerr notes in the countryside of Okinawa and off-lying islands we find the houses of farmers and fishermen that are “thatched huts whose walls are daubed with clay and whose floor is the beaten earth”; this is in stark contrast to the homes of those in the major cities such as Shuri and Naha, which long ago adopted styles from Chinese and Japanese architecture. Similarly, we find communal storehouses in some Okinawan villages that are nearly identical to those that are found in, and quite distinctive of, mountainous Formosan villages. Furthermore, Kerr makes the observation that the prominent high stone walls that enclose individual homes in Okinawan villages are very similar to “the massive stone embankments which enclose the individual dwellings of the primitive Yami people on Botel Tobago island, some two hundred miles south of Yaeyama”.

Kerr further describes cultural links that “suggest affiliations with other areas and strong surviving links with prehistoric settlement” (2000: 28). For example, in Northern Okinawa and on some off-lying islands we find women who carry heavy loads “by means of a band which fits across the forehead,

4 In contrast, a genetic link has been found between male Ryukyans and Hokkaido Ainu (Pearson 2013: 79), the latter of which we assume to be closely genetically related to the Ainu who previously occupied the Northern Ryukyus.

passes over the shoulders, and supports weights carried on the back". This is also what we find with the Atayal people of northern Taiwan. In contrast, women of southern Okinawa balance loads on their heads, just as Korean women did. Until recently we also found tattoos on the back of the hands and fingers of women in Okinawa and the Amami Islands (Osada and Suyama 1977: 562–7). Tattooing of women was a common practice among Formosan (and Ainu) groups, including Amis and Atayal, though most primarily tattooed the face. It seems only Paiwan and Rukai tattooed the back of the hands and fingers of women, but not the face (Steere 1874: 312). We also found in Okinawa women who wore their hair in a style called *katakashira*, which is "a curious off-center topknot into which the hair is drawn in a fashion to be found among the Yami of Botel Tobago, among the Malays on Mindanao in the Philippines, and elsewhere among the islands which served as steppingstones along the sea frontier" (Kerr 2000: 28–9).

1.3 *Contact with Austronesians through Trade Routes*

Ryukyuan traded with Sumatrans in the Late Gusuku Period (1250–1429 CE) and Early Ryukyu Kingdom Period (1429–1609 CE) with known sites including Aceh, Jambi and Palembang. During these periods we also know of Ryukyuan trade with Manila in the Philippines, and Sunda Kelapa (Jakarta) and Trowulan (East Java) in Indonesia (Pearson 2013: 195).

Of course, these architectural and cultural similarities, and known trade routes, in and of themselves are not evidence of any linguistic borrowings, but they are important because they indicate there were contacts with Austronesians that could have been the impetus for linguistic borrowings in Ryukyuan. Contacts with Japanese using Sino-Japanese vocabulary may have also led to the borrowing of one or more of the words I examine in the following sections, and I will investigate this possibility along with the comparison to Austronesian words.

2 The Words in Question

The Proto-Japonic (PJ) word for 'sun' is **pi*, which also means 'day'. It is reflected in Old Japanese as *pî*, in Modern Japanese as *hi*, and in OR as *phi*. It is found throughout the Modern Ryukyuan languages, and its primary meaning in those languages is 'day'. The four other words for 'sun' in OR are *teda* 'sun', *kawa* 'sun, heaven', *sino* 'sun, light' and *sina* 'sun'. Unlike the other three words, cognates of OR *teda* 'sun' are found in nearly all modern Ryukyuan languages, which means we can confidently reconstruct it at the Proto-Ryukyuan (PR) level. Several etymologies have been proposed for *teda* 'sun', and it is a word

that has garnered considerable attention from scholars over the past century. I discuss each of these proposed etymologies in detail below along with some new evidence. A loanword origin for the words *kawa* ‘sun, heaven’, *sino* ‘sun, light’, and *sina* ‘sun’ is a new hypothesis that I also discuss in detail in the sections that follow.

2.1 OR teda ‘Sun’

The OR word *teda*⁵ (< PR *teⁿda) refers to the ‘sun’ or the ‘king’ throughout the OS. Outside of Okinawa it only means ‘sun’, not ‘king’, which suggests the ‘king’ meaning is a secondary development in Okinawan. There have been four hypotheses presented to explain the etymology of this word. The information on the chronology of the hypotheses is based on the summary presented in Mamiya (2005: 219–231). I discuss the merits and weaknesses of each hypothesis, in order of their appearance, and then I conclude by explaining why I think one is stronger than the others.

The first hypothesis was put forth in 1927 by Shinmura Izuru, who proposed the OR word is related to Amis *cidal* /tsidal/⁶ ‘sun’. Amis is a relatively healthy East Formosan language in the Austronesian language family that historically stretched over a large area of the central eastern coastline of Taiwan. They are noteworthy among Formosan groups for having a long tradition of seafaring (Kaifu et al. 2019: 1432). Based on this, importation to PR through borrowing from Amis is plausible from a geographic and temporal point of view. In regard to phonetics, Amis /tsi/ ([tʃi] ~ [tsi]) borrowed into PR as /te/ is irregular because PR had /i/, though [e] is the closest tense vowel to [i], so this is a minor irregularity.⁷ Modern Amis has a small inventory of four vowel phonemes (/i/, /a/, /o/, /ə/) (Imanishi 2014: 35), and although /i/ does lower allophonically to [e] or [eə] in a few environments (Blust 2013: 264–265)⁸ it does not lower after /ts/, instead /tsi/ optionally palatalizes to [tʃi] (Maddieson and Wright 1995:

5 Medial /d/ was prenasalized [ʰd] in OR, as evidenced from 15th–16th century Middle Korean and Chinese transcriptions (Vovin 2012a, Lin 2015). We can project this back to PR as well (Vovin 2012a).

6 In Amis orthography intervocalic *d* represents [d] ~ [ð] in Northern Amis but [ð] or [ɬ] in the other dialects (Maddieson and Wright 1995: 48).

7 Cross-linguistically we find variation in the borrowing of [i] as [e] or [ɪ] in the same phonological environment, even among the same two languages. Compare the borrowing of English ‘cherry’ [tʃɛɹi] into Maori as *tiere*, showing the final [i] changed to [e], with the borrowing of English ‘sentry’ [sɛntri] as *heeteri* in Maori, showing the final [i] unchanged (examples from <https://maoridictionary.co.nz/>).

8 Many other Austronesian languages also lower or lax /i/ in certain environments. For example, Chamorro laxes /i/ to [ɪ] in all unstressed syllables and the Formosan language Thao lowers /i/ to [e] when adjacent to /r/ and laxes /i/ to [ɛ] or [ɪ] in closed syllables (Blust 2013: 263–265).

47). Unfortunately, we do not know what kind of allophonic consonant and vowel variation occurred in Amis dialects from roughly 800–1200 years ago. The onset of the second syllable in Amis *cidal*, most likely [d] (though possibly [ð] or [ʒ]) at the time, is expected to show [ʰd] in PR, due to the lack of [d] in the language. PR did not have coda obstruents, and as a result the deletion of the Amis syllable-final [l] is expected.

There is also morphosyntactic evidence in support of an Amis origin for OR *teda* that has not yet been mentioned in the research on the subject. In the second song of the first book of the OS we find the first of many attestations of the OR phrase *kami teda*, morphosyntactically ‘deity sun’, but semantically ‘sun deity’. OR is an SOV language that has a modifier-head constituent order, so the reverse order is unusual and requires an explanation.⁹ One possibility is OR speakers copied the Amis word order when they borrowed the usage of *teda* ‘sun’ in reference to deities. The traditional Amis pantheon, which is still maintained today by the Sikawasay priests in the Hualian area on the eastern coast of Taiwan, is comprised of deities that appear in certain demarcated positions of the sun during the day (Hara 2004: 24). All of these deities’ names end in *cidal* ‘sun’. For example, *Anavoyay cidal* is the first sun deity of the day. It appears before dawn and is believed to be hiding in the ocean.¹⁰ Subsequent to this is the *Halalayo cidal*, which appears just as dawn breaks on the horizon. When the sun fully rises over the horizon, the *Kamsadakan no cidal* appears. Two more sun deities follow during the day before the final sun deity, *Lalevogan no cidal*, appears when the sun sets. These examples of Amis deity names reveal a clear pattern of a deity name followed by (no) *cidal*, and OR *kami teda* ‘deity sun’ mimics this structure. This is supported by the fact that, as far as I am aware, there are no other deity names in Okinawan (or Japanese) that have *kami* ‘deity’ as the first part of the name, rather it is always at the end of the name.¹¹ Furthermore, two attestations of the reverse order, *teda kami* ‘sun deity’, are also found in the OS, but these occur in later books (songs 12.740 and 22.1552), suggesting the order of the words was switched by some speakers

9 There is evidence for an earlier SVO word order with head-modifier order in pre-Proto-Japonic, as first mentioned in Vovin (2009c), but the shift to SOV predates the borrowing of PR *te^hda, so I do not think it is a plausible explanation in this case.

10 It may prove useful to compare *teda-ga ana* ‘sun-Poss hole’ (attestations include OS 10.524 and 10.531), referring to the hole that the OR speakers believed the sun came out of when it rose in the east.

11 Compare the Old Japanese sun deity name *amaterasu opo mî-kami* ‘the great deity Amaterasu’, Japanese *megami* ‘goddess’ (a contraction of PJ *me n-ə kamuy ‘female COP-ATTR deity’), as well as other Okinawan deities such as *phi-nu kami* ‘fire deity’ (traditionally worshipped at the second enclosure of Kacchin Gusuku on Okinawa island).

to conform to the normal constituent order of the language. The first book of the OS contains the earliest songs, some believed to date from as early as the 12th century CE, and in it we only find *kami teda*.¹²

The second hypothesis was proposed by Andō Masatsugu in 1935 and is somewhat similar to Shinmura's. In this hypothesis OR *teda* is related to the words *tōdaru* and *tidaru*¹³ in Old Japanese (both attested exclusively in the *Kojiki*, circa 712 CE), which in turn, Andō argues, originate from a southern language such as Amis. The main problem with this idea (other than the vowels) is there is no evidence these Old Japanese words mean 'sun', and in fact what little evidence we have suggests they are both verbs that have a meaning of 'to be quite satisfied' (Omodaka et al. 1967: 454, 494).

The third hypothesis – which is said to have been originally proposed by the Japanese folklorist Yanagita Kunio but was first described in writing by Nakahara Zenchū in his *Omoro Shinshaku* published in 1957 – is that *teda* 'sun' is a nominal derivation of the verb *ter-* 'shine' with the following development: *teriya* 'something that shines' > *tera* > *teda* 'sun'. Although *teriya* meaning 'something that shines' (i.e. *ter-i-ya* 'shine-INF-thing') is possible in OR grammar,¹⁴ other examples of the contraction of an *-iya sequence to [a] are lacking in the language. The related idea that *teda* 'sun' is a nominal that was formed through direct suffixation of *-a* to the verb root *ter-* 'shine' is also implausible because *ter-* 'shine' is an intransitive verb and the small number of deverbal nouns derived with *-a* in Japonic languages are all formed from transitive verb roots (e.g. Japanese *hor-* 'to dig', *hora* 'cave'). A final problem with this hypothesis is that the change of *r > d is much rarer than the change of *d > r in Ryukyuan languages (Mamiya 2005: 223–5).

The fourth and most recent hypothesis, first put forth by Kamei Takashi in 1962, is that OR *teda* 'sun' is a borrowing of the premodern Sino-Japanese form *tentau* ~ *tendau* (later *tendō* ~ *tentō*), a Buddhist term meaning 'Heavenly way, heaven' which also carries the more recent secondary meanings 'deity' and 'sun'. The earliest attestations with the meaning 'deity' date to the early 10th century CE and attestations with the meaning 'sun' appear much later,

12 However, *kami teda* is also attested in OS songs 4.155, 5.221, 7.370, 8.399, 8.426, 13.804, 15.1088, 20.1332, and 20.1361, which shows it was the dominant form across the entire OS.

13 There is actually a third attested form, *sōdaru*, an example of a rare *t-/s-* variation in Japanese.

14 Mamiya (2005: 226) states he could not find any other examples of *V-i-ya* and is thus skeptical of the existence of *-ya* 'thing, person', but several examples in the OS are given in Nakahara and Hokama (1978: 332) such as *shita tar-i-ya* down droop-INF-person 'a person with plump (attractive) cheeks' (attested in OS 9.491).

no earlier than the late 16th century CE.¹⁵ The meaning ‘sun’ is not even mentioned in the largest and most detailed dictionary of Japanese from the 14th to the beginning of the 17th century CE (Doi et al. 2000: 194–5). Kamei’s hypothesis is supported by Mamiya (2005: 229–230) mainly due to OR *sedo* ‘boatman’, which he states is a borrowing of Sino-Japanese *sentou* ‘id.’ and is also attested in the OS as *sendoo*. Mamiya proposes OR *sendoo* is the older form and OR *sedo* is the later shortened form, and he believes this is analogous to the proposed borrowing of premodern Sino-Japanese *tentau* in OR. In his hypothesis the putative earlier OR form *tentau* (or *tendau*) is simply unattested in the OS, so we only find the later ‘shortened’ form *teda* ‘sun’. In support of this he notes OS attestations of *sedo* outnumber attestations of *sendoo* thirteen to two. If we look at reflexes of OR *sedo* ~ *sendoo* in modern Ryukyuan languages, however, a different picture emerges. This word is *shinduu* in Modern Shuri Okinawan (NINJAL 1963: 479), showing both a coda nasal in the first syllable and a long vowel in the second syllable. This is exactly what we would expect if the word descended from OR *sendoo*, but it goes against Mamiya’s theory that *sedo* is the later (shortened) form. Moving down to the Southern Ryukyus we also find *shinduu* ‘boatman’ in Irabu Miyako (Tomihama 2013: 291). It is only when we examine the Ishigaki dialect of the Southern Ryukyuan language Yaeyama that we find the form *shidu* ‘boatman’ (Miyagi 2003: 444) which can only be a reflex from OR *sedo*, though this language also has the doublet form *shinduu*. What these forms demonstrate is the exact opposite of what Mamiya argues: OR *sedo* is the earlier form, and OR *sendoo* is the later form. In other words, the words were borrowed twice, under different rules of loanword phonology. OR *sedo* was borrowed at a time when *nd clusters were disallowed (so Sino-Japanese *nd ~ *nt was borrowed as [nd]) and when word-final *ou underwent contraction to [o]. At some later date Sino-Japanese *sentou* was borrowed again, after [nd] was allowed and the language had changed its loanword phonology by allowing *ou to be imported as the long monophthong [oo]. Based on phonetics and semantics Sino-Japanese is the most plausible source for both OR *sedo* ‘boatman’ and OR *sendoo* ‘boatman’. In most Ryukyuan languages the OR form *sedo* simply died out, replaced by reflexes of OR *sendoo* – except in Ishigaki Yaeyama, and perhaps other pockets of the Ryukyus, where both forms survived. Coming back to the main topic at hand, at first glance the phonological adaptation of OR *teda* ‘sun’ looks like it patterns with that of OR *sedo* if we propose they were borrowed from Sino-Japanese around the same time (some early stage of Proto-Ryukyuan). In this hypothesis the PR forms are *teⁿda¹⁶

15 Source: *Nihon Kokugo Daijiten*, digital edition.

16 The vowel sequence *au has been reconstructed for several words in PR (Thorpe 1983). If the PR form was *teⁿdau, as Mamiya believes, it would have developed into *tidoo* in

‘sun’ and *seⁿdo ‘boatman’, as shown in Table 1 below. The Ryukyuan languages that have *shinduu* ‘boatman’ today all have *tida* ‘sun’ (or a phonetically very similar form), and, importantly, none of them shows a form like *tindoo* for ‘sun’.

However, looks can be deceiving. The main linguistic defect with the Sino-Japanese hypothesis is no other Sino-Japanese loanword in PR has been identified with the phonological adaptation of *Cau > /Ca/ proposed for *teⁿda.¹⁷ At least three other Sino-Japanese loanwords with *Cau have been reconstructed as having *Cau in PR and none of them display a /Ca/ reflex in a modern Ryukyuan language (Pellard 2015: 23).

After reviewing the above, it is apparent that the second and third hypotheses are both significantly flawed in one or more ways. Although Kamei’s Sino-Japanese origin hypothesis has wide acceptance today, it suffers from a phonetic irregularity in the second syllable that is difficult to explain in a plausible way. The phonological adaptation of OR *sedo* ‘boatman’ in PR from a Sino-Japanese source is not the perfect parallel to OR *teda* that it seems, because PR had *au but not *oo,¹⁸ thus the latter would have naturally reduced

TABLE 1 Comparative development of OR *teda* ‘sun’, *sedo* ‘boatman’ and *sendoo* ‘boatman’ in the Sino-Japanese loanword hypothesis

Premodern Sino-Japanese	Early Proto- Ryukyuan	Pre-Old Ryukyuan	Old Ryukyuan	Modern Ryukyuan	Meaning
tentau ~ tendau	*te ⁿ da	*te ⁿ da	te ⁿ da	tida	‘sun’
sendou ₁	*se ⁿ do	*se ⁿ do	se ⁿ do	shidu	‘boatman’
sendou ₂		*sendoo	sendoo	shinduu	‘boatman’

Modern Ryukyuan languages. Compare PR *au^ŋg- ‘to fan’ with Shuri Okinawan *ʔooḡj-* and Yoron *ʔooḡj-*. These modern Northern Ryukyuan forms show /oo/ instead of the /uu/ we find in *shinduu* ‘boatman’ because the change of *au > /oo/ occurred after the change of *oo > /uu/.

17 The Ryukyuan word for ‘sugar’, which is *sata* ~ *satta* in most Northern and Southern Ryukyuan languages (Hirayama et al. 1966: 325) but is not attested in the OS, looks like it might be an exception, but I think this is a direct loanword from some earlier Fujian dialect form of Southern Min *suathŋg* ‘sugar’ instead of Sino-Japanese *satau* (> *satō*). Compare the case of PR *bau ‘stick’ (> Northern and Southern Ryukyuan *boo* ~ *bau* (Hirayama et al. 1966: 68, 320)), borrowed from Sino-Japanese *bau* (> *bō*) instead of an earlier form of Southern Min *pāng* ‘stick’. This is further borne out by the historical record that shows Ryukyuan were introduced to sugar by Chinese people (Kerr 2000: 122).

18 Thorpe (1983) does not reconstruct any PR word with *oo. The assumption that a very late stage of PR allowed *oo, at least in a Sino-Japanese stratum, is necessary if we are to accept *sendoo as a PR form. Alternatively, OR *sendoo* was borrowed post-PR and spread

to one vowel at the time. The late textual emergence of the meaning 'sun' for Sino-Japanese *tentō* is another serious problem, postdating the end of PR by several centuries. That leaves Shinmura's Amis origin hypothesis, which comes out as the strongest overall. It is the only one to support the new morphosyntactic evidence I presented and the semantics are a perfect match. Although the [e] in the first syllable in PR instead of expected [i] is a minor irregularity, it is not unusual in a cross-linguistic perspective. As an additional possibility not mentioned before, if we look to other Formosan languages spoken in Eastern Taiwan, Paiwan has the word *cedas* [tʃedas] 'sunrise, eastern direction'.¹⁹ This is a closer phonetic match with OR *teda*, but the semantic connection is weaker, and I could not find evidence of sun worship among the Paiwan (nor any evidence they were seafarers), so I think Amis is the more plausible source.

2.2 OR *sino* 'Sun, Light' and *sina* 'Sun'

An Austronesian origin for OR *sino* 'sun, light' and *sina* 'sun' was proposed by Murayama Shichirō (1970). He claimed these forms descend from earlier *t'inay and are also related to the WOJ form *sina* in the poetic epithet *sinateru* (phonographically attested only in *Nihon Shoki Kayō* 104). On the latter point he is most likely correct because the similarity between WOJ *sinateru* and OR *teru sina* 'shining sun' is striking and thus the WOJ word form is probably *sina-teru* 'sun-shines'.²⁰ In this hypothesis OR *sino* and *sina* are retentions from an earlier proto-language of mixed Altaic and Austronesian elements, not loanwords due to later contacts. Due to the unsubstantiated genetic relationship required to accept this hypothesis, few (if any) linguists support it today.

Although the meaning of *sino* is given as 'concerning the sun'²¹ in the *Konkōkenshū* (1711), the earliest dictionary of Old Okinawan, in the *Tajima-bon*²² (1895) the attestation of OR *sino* in OS 5.233 is marked with a note that its

through the Southern Ryukyus by later contacts with the North. If any word would do this, a word for 'boatman' seems like a good candidate.

19 Source: <https://e-dictionary.apc.gov.tw/pwn/search/list.htm>.

20 In addition, Omodaka et al. (1967: 360) list the bird name *sinagatōri* and the epithets *sinazakaru*, *sinatatu* and *sinadayupu*, all of which are classified as having unclear meanings and may or may not contain the same *sina*. There is also a WOJ word *sina* that means 'stairs; something piled up in layers; above and below; distinction; type' which might be found in one or more of these forms. However, based on WOJ *ama-zakaru* 'heaven-to-be.far.away' 'being as far away (from something) as heaven' (MYS 17.3973b), WOJ *sinazakaru* (MYS 17.3969) is most likely of a similar meaning, i.e. 'being as far away (from something) as the sun' (Vovin 2016: 111).

21 「御日の事」

22 A handwritten copy of the OS *Aniyake-bon* made by Tajima Risaburō.

meaning is ‘concerning the moon’.²³ Murayama (1970: 17–18) proposed this apparent semantic range extending to both ‘sun’ and ‘moon’ was because the word had a more general meaning of ‘radiance’ or ‘light’. The single attestation of the meaning ‘moon’ was probably nothing more than the speculation of the scribe, but the contexts in which OR *sino* appears make sense with the meaning ‘light’ or ‘radiance’. It is most commonly attested in two phrases in the OS: *teru sino* ‘shining sun/light’ (e.g. OS 1.39) and *nade-sino* ‘caressing (or ‘loving’) sun/light’ (e.g. OS 13.934). Nakahara and Hokama (1978: 259) state *nade-sino* is a goddess worshipped on the island of Yoron. In addition, we find it in the goddess names *ake-sino* ‘dawning sun/light’ in OS 13.846 and *sino-kuriya* in OS 11.637. The latter was also used to refer to the *noro* (‘priestess’) at Gushikawa Castle in Nishime, Kumejima (Nakahara and Hokama 1978: 176). In regard to the meaning of *kuriya*, *-ya* is a suffix meaning ‘person, thing’ and *kuri* is most likely the infinitive form of *kur-* ‘to draw in, to catch hold of’, which can be used in an attributive function. Following this analysis, *sino-kuriya* means ‘One who catches hold of the sun/light’. OR *sinokur-* is also a verb meaning ‘to dance in a beautiful manner’ but it shares the same etymology.

Nakahara Zenchū (Nakahara and Hokama 1978: 239) has suggested OR *sino* ‘sun, light’ may be related to the *sino* in Japanese *sinonome* ‘dawn’, but linguistic evidence does not support this idea. Japanese *sinonome* ‘dawn’ descends from Old Japanese *sinô-nō mē* small.bamboo-GEN eye ‘eye of the small bamboo’. The predominant hypothesis is this was originally in reference to the small bamboo mesh used for window screens in traditional Japanese houses (Omodaka et al. 1967: 88, 362); the ‘eye’ refers to the gaps between the woven mesh through which the dawning light streamed (cf. Japanese *ami-no me* net-GEN eye ‘mesh of a net’, *tatami-no me* tatami-GEN eye ‘grain of a tatami (mat)’, etc.). This subsequently shifted in meaning to ‘dawn’.²⁴ Etymologically, the *sino* in this word means ‘small bamboo’, not ‘dawn’, ‘sun’ or ‘light’, therefore it is implausible to propose cognancy with OR *sino* ‘sun, light’. A borrowing of premodern Japanese *sinonome* ‘dawn’ into OR followed by a semantic change of ‘dawn’ to ‘sun’ is possible, but the additional sporadic deletion of the last two syllables makes this hypothesis implausible in my view.

OR *sina* is a *hapax legomenon* attested in the phrase *teru sina* ‘shining sun’ (OS 14.1041). The attestation of this word is in the context of a religious

23 「御月の事」

24 There is also *ina-nō mē* rice.plant-GEN eye ‘eye of the rice plant’ (attested logographically in MYS 10.2022, with many phonographic attestations after the Nara period) that similarly shifted to mean ‘dawn’. It seems windows screens were made from either small bamboo or rice plant fibers. Neither lexeme has ever been a common word for ‘dawn’, however; they are decidedly poetic terms.

festival performed in a palace courtyard. Thorpe (1983: 337) lists Hateruma²⁵ *sina* ‘sun’ as a reflex of PR *teⁿda ‘sun’, but there is compelling evidence this is a reflex of PR *sina ‘sun’²⁶ instead. In Minami Hateruma the word is /sina/ but in Kita Hateruma the form is /sina/ [ʃina] (Shimabukuro 2016: 5–8). One of these forms shows an irregular change in the first syllable. The Minami form /sina/ is probably more archaic because sporadic palatalization of *si > [ʃi] is more likely than the reverse process. PR *i reflects Hateruma /i/, whereas PR *e reflects Hateruma /i/ (the former change occurred before the latter). Furthermore, the change *t > /s/_i/ occurred in Hateruma, after the change of *e > /i/ (cf. PR *te ‘hand’, Hateruma /si/ ‘id.’). Although the change of intervocalic *nd > /n/ is otherwise irregular (cf. PR *juⁿda ‘branch’ > Hateruma /juda/ ‘id.’ (Thorpe 1983: 267) and PR *noⁿdo ‘throat’ > Hateruma /nudu/ ‘id.’ (Thorpe 1983: 341)) the change of PR *-iⁿda > -/ina/ did occur in the development of PR *piⁿdari ‘left’ > Hateruma /pinari/,²⁷ but here we would have to assume PR *-eⁿda developed in a similar way.²⁸ In sum, Minami Hateruma /sina/ is the expected reflex of putative PR *sina ‘sun’, whereas the expected reflex of PR *teⁿda ‘sun’ would be /sida/ (or /sina/, solely based on the historical development of Hateruma /pinari/ ‘left’). Accordingly, although we cannot completely dismiss the possibility of the development of PR *teⁿda > Kita Hateruma /sina/ with the irregular form /sina/ in Minami Hateruma, nor the remote possibility it was a separate, later borrowing in Hateruma,²⁹ the origin of OR *sina* ‘sun’ most likely predates the split of Northern and Southern Ryukyuan.

I agree with Maruyama that OR *sina* and *sino* are Austronesian in origin, but I disagree with the source form being *tⁱnaɣ, and I also reject the idea the words are remnants of an earlier genetic relationship between Japonic and Austronesian. I propose both words were borrowed from reflexes of Proto-Malayo-Polynesian (PMP) *sinaR ‘ray of light, sunbeam’ (Blust and Trussel 2020) in two different Malayo-Polynesian (MP) languages. In addition, I do not think they were borrowed around the same time, for the following

25 A Southern Ryukyuan language variety.

26 Possibly another reflex of OR *sina* exists in the Yoron language today, if we accept the idea it has grammaticalized into an honorific suffix meaning ‘person’. Examples include word forms such as *taru-sina* ‘who (honorific)’, lit. ‘who-person.HON’, and *fun-sina* ‘this person (honorific)’ (Yamada 1995: 645; Kiku and Takahashi 2005: 247).

27 We do not find Hateruma /pinari/ because /i/ has the allophone [i] after /p/ (Aso 2010: 191), merging with /i/ in this environment. The final vowel in this word seems to have changed to /i/ under assimilatory pressure.

28 I was unable to find any other examples of PR *-iⁿda > Hateruma -/ina/ or PR *-eⁿda > Hateruma -/ina/.

29 Hateruma is the southernmost inhabited island in the Ryukyus, and thus closest to Austronesian speakers in the south.

reasons: the variant final vowels; the fact that we do not find the words attested in the same OS book; the heavily skewed distribution of the words in the OS with attestations of *sino* being plentiful and *sina* being a *hapax legomenon*; the meaning of *sina* seems to only be ‘sun’ whereas the semantics of *sino* appear to extend to ‘radiance’ or ‘light’; and *sina* showing a probable reflex in Hateruma (and possibly also Yoron) as well as a plausible link to the *sina* fossilized in a few WOJ poetic epithets. As an opposing hypothesis to mine, Murayama (1970) used the example of WOJ *sirô* ‘white’ and its bound, compounding allomorph *sira-* (< PJ **sirau*) to argue OR *sina* and *sino* are similarly two allomorphs of a single root. I find this idea unconvincing for the following reasons. First, outside of WOJ *sira-* ~ *sirô* ‘white’ and possibly the pair Late WOJ *kura-* ‘dark’ and WOJ *kurô* ‘black’,³⁰ there are no other examples of this alternation in Japonic languages. These examples are also both color adjectives. That would make the case of *sina-* and *sino* unique among Japonic nouns. The second problem is OR *sino* is unattested in WOJ, thus there is no evidence it was the unbound form in WOJ. The third problem is OR *sina* is attested in the same environment as OR *sino*, thus we cannot explain their distribution as a case of compounding (or bound) versus free (or unbound) forms. A related issue is the one noun-verb compound attested in OR containing either of these forms contains *sino* instead of *sina* (*sino-kur-* ‘to catch hold of the sun/light’), which is the opposite of what we would expect if the *sina-* ~ *sino* hypothesis were true. The fourth problem is the Hateruma form is *sina*, but if *sino* were the original free form, we would expect the language to have a reflex of that form instead.

Based on this evidence OR *sina* can be projected back to Proto-Japonic, but at that point in time the contact must have occurred in Kyushu with some yet unknown MP-speaking people. OR *sino* cannot be projected so far back, so it is more likely this word is the result of a later contact. Those languages spoken in or relatively near known trading centers on a historical Ryukyuan trading route would be the most probable candidates, provided the culture connected to the language practiced celestial worship. A sample is provided in Table 2 below (data from Blust and Trussel 2020).

Nias offers a perfect phonetic match for OR *sino* ‘sun, light’, but this language is spoken on a small island off the western coast of Sumatra that is a bit removed from the known trading centers, and I was unable to find evidence of celestial worship among these people. Several languages in Sumatra and Eastern Java, including Javanese, raise and round word-final /a/ to [o] or [ɔ] (Tadmor 2003), though in most cases a final consonant blocks this process

30 The problem with this idea is the words in this pair belong to different phonological registers in Japanese (Alexander Vovin, personal communication).

TABLE 2 Reflexes of PMP *sinaR ‘ray of light, sunbeam’ in a sample of MP languages

Language	Location	Word	Meaning
Isinay	Philippines	<i>sínag</i>	‘the sun’
Simalur	Sumatra	<i>man-sinal</i>	‘to dry something in the sun’
Javanese	Java	<i>sinar</i>	‘light, radiance’
Malay	Malaysia	<i>sinar</i>	‘ray of light; gleam; radiance’
Maranao	Mindanao	<i>sinar</i>	‘sunray, ray of light, reflection of light’
Nias	Nias, Sumatra	<i>sino</i>	‘sunshine’

(Blust 2013: 669). In Eastern Javanese dialects such as Osing, however, the raising and rounding of /a/ to [ɔ] tends to occur regardless of position or whether the syllable is open or closed (e.g. Standard Javanese *kanca-ne* [kɑntʃane] ‘friend-the’ is [kɔntʃɔne] in Osing (Conners 2010)).³¹ I think an older form of such a dialect that pronounced *sinar* ‘light’ as [sinɔr] or [sinɔr] is the most plausible source for OR *sino* ‘sun, light’, but Old Javanese *sinorot* ‘shining (ray of light)’³² is another possibility. This would have been borrowed into OR as *sinoro*. We would then have to posit intervocalic *r loss (which is irregular) and the subsequent contraction of *oo > [o]. Javanese religion is complex and syncretic, with deep-rooted celestial worship (Pigeaud 1962: 482). Moreover, Old Javanese was a language spoken in a widespread culture of great prominence and influence, which makes it a strong candidate for the source of a trade-route importation of a celestial word.

2.3 OR *kawa* ‘Sun, Heaven’

Like OR *sino*, the definition for OR *kawa*³³ in the *Konkōkenshū* is ‘concerning the sun’,³⁴ which is supported by Nakahara and Hokama (1978: 238) and Hokama et al. (1995: 445). This word is attested in two different phrases in the OS, both of which are used as honorific epithets for the sun or the king. First, we find it in the phrase *teru kawa* (*ter-u* shine-ADN ‘shining’) which is attested 68 times in the OS, including several attestations in the first book of the OS which contains the oldest songs (some examples include songs 1.4, 1.6, 1.16 and

31 In the eastern Tengger dialect /a/ laxes to the rounded allophone [ɔ] in all closed syllables (Conners 2008: 51), which could also be borrowed into OR as [ɔ].
32 Source: <http://sealang.net/ojed/>.
33 We find OR *kawa* ‘sun, heaven’ written in the OS as both かいは and かわ (Hokama and Hateruma 2002).
34 「御日の事」

1.31). The other OR phrase is *midu kawa*, attested twice in OS 10.531. The *mid-u* in this phrase might be cognate with Eastern OJ *mēd-u* ‘to love’ (MYS 14.3502) but is thought to mean ‘to be beautiful’ (Nakahara and Hokama 1978: 314), or perhaps ‘to be lovely’, in this context (*-u* is the adnominal suffix). Hokama et al. (1995: 445) claim the *kawa* in these phrases is an old word for ‘sun’, it was pronounced *kaa*, and it is the same word as Japanese and OR *-ka* ‘day’. This hypothesis clearly tries to make a parallel to OJ *pî* ‘sun,’ which also has a meaning of ‘day’. However, it is unsupported by philological and linguistic evidence. First, *-ka* is a classifier in both Japanese and OR, therefore it cannot be used as an independent noun. Second, a comprehensive search of all attestations of *-ka* ‘day’ in the OS reveals none are written as *-kawa* (and, conversely, no attestation of *kawa* in *teru kawa* or *midu kawa* is written as *ka*). Third, *-ka* ‘day’ is unattested with a meaning of ‘sun’ in mainland Japanese dialects or in any Ryukyuan language, thus there is no evidence it ever had that meaning in PJ (if it really does descend from PJ). Also, there is good evidence it is a loan from Old Korean and the earliest Japonic form was **-uka* (Vovin 2005: 392–393).

If we look to Japanese and attempt to account for both syllables in this word we find as candidates only (OJ *kapa* >) JP *kawa* ‘river’ and (OJ *kapa* >) JP *kawa* ‘skin’, neither of which makes any sense here. However, in Amis we find the word *kawas* ‘heaven, deity, spirit’ (< Proto-Austronesian (PAN) **kawaS₁* ‘sky, heaven, season, year’³⁵), which is a very important word in their religion. From a phonetic perspective this comparison is flawless: deletion of the final *-s* of this word when imported into OR is the expected outcome, as discussed in §2.1. Based on this, I will change the previously assumed gloss of OR *kawa* ‘sun’ to ‘heaven’. Contextually, this change in semantics is unproblematic.

When we compare the similar celestial-based religious culture evidenced in eighth century WOJ poetry, we find the following attested forms: *ama-teru* ‘heaven shines’ (MYS 15.3650) and the aforementioned *sina-teru* ‘sun shines’. Although OR *ame* ~ *ama-* ‘heaven’ is well-attested in the OS (e.g. 12.713, 6.342), unlike WOJ it is not attested directly before or after *teru* ‘shining’. OR *teru kawa* ‘shining heaven’ fills this gap perfectly and aligns well with OR *teru sina* ‘shining sun’ and OR *teru sino* ‘shining sun/light’ from a cross-cultural and semantic perspective.

35 Blust and Trussell (2020) write: “It is difficult to achieve an adequate gloss for this word, as it apparently represented a concept for which there is no English equivalent, one which combined the notion ‘sky’ as the abode of deities rather than a physical domain (cf. Proto-Austronesian **lanjC* ‘sky’), and at the same time related this feature of Nature to the cycling of the seasons.”

3 From the Sun to the Moon?

There is another potential Austronesian loanword in the OS I would like to point out that falls under the heading of ‘celestial vocabulary’. The word is OR *ora*, which I propose means ‘moon’, a doublet with OR *tuki* ‘moon’. It is a *hapax legomenon* attested in OS song 1174, from Book 16,³⁶ shown below (1).

(1) OS 16.1174

てくらんの	のろの
<i>tekuran-no</i>	<i>noro-no</i>
PLACENAME-GEN	priestess-GEN
たしちたしちしやめかしや	みちへ
<i>tashichi-tashichi-shamekasha</i> ³⁷	<i>mi-che</i>
PERSONAL NAME	see-GER

よかる	おらに
<i>yokar-u</i>	<i>ora-ni</i>
be.auspicious-ADN	moon-LOC

‘The priestess of Tekuran sees Tashichi-Tashichi-Shamekasha in the (time of an) auspicious **moon**.’

There is no plausible internal explanation for *ora* or *orani* and Ryukyuan scholars have struggled with interpreting this song due to that fact. Shimizu (2004: 240–1) proposes the word in question is composed of *wur-an-i* exist-NEG-QUE ‘does it not exist?’, but placing the adnominal verbal form *yokar-u* ‘be.auspicious-ADN’ directly before another verb is ungrammatical, and doing so also fails to make the line intelligible. Nakahara and Hokama propose *ora* is a noun that describes ‘something related to a holy place where divine rituals were performed’ and *-ni* is the locative case marker (1978: 97). This is a vague definition, but I think they were right that *-ni* is a locative here. Looking outside of Japonic,³⁸ OR *ora* is phonetically similar to many words for ‘moon’ found

36 Book 16 contains songs from Katsuren and Gushikawa, as well as from islands off the eastern coast of Okinawa including Henza-jima, Miyagi-jima and Ikei-jima.

37 This name is of obscure meaning and no one has proposed a coherent etymology for it yet.

38 *Ura* means ‘divination’ in Western Old Japanese and it is well-attested in the *Man'yōshū*. Although at first glance this may appear to be a possible cognate with OR *ora*, there are several problems with that idea. First, it appears nowhere else in the OS or other OR texts. Second, to the best of my knowledge it is unattested in other Ryukyuan languages as

in nearby Formosan languages and MP languages spoken near trade centers in the Old Ryukyuan trade route (e.g. Old Javanese *wulan*), but, once again, Amis *folad* (Blust and Trussel 2020) is a perfect match – PR did not have initial /f/, so borrowing this as zero (or /w/) is expected. The Amis origin hypothesis also completes a set of three major celestial loanwords from the language: sun, heaven, and moon.

Another piece of evidence supporting the meaning ‘moon’ is the textual distribution of OR *yokaru* ‘to be good, auspicious’: most of the attestations of this word form occur before the word *phi* ‘sun, day’ in the OS (62 out of 92 attestations). An example is provided below (2).

(2)	OS 1.19		
	けおの	よかる	ひに
	<i>keo-no</i>	<i>yokar-u</i>	<i>phi-ni</i>
	today-GEN	be. auspicious-ADN	day/sun-LOC
	‘Today, on (this) auspicious day.’		

As indicated by the translation above, *yokaru phi* does not simply mean ‘good day’ in this context, but rather ‘auspicious day (for the deities)’ (Nakahara and Hokama 1978: 348). Due to this I have adopted a similar meaning for my translation of *yokaru ora* ‘auspicious moon’ in OS 16.1174.

4 Conclusion

In this paper I have argued the words for ‘sun’ and some related celestial vocabulary attested in the OS were borrowed from Austronesian languages. The evidence points to three languages from different areas and time periods being the donors. For OR *teda* ‘sun’, OR *kawa* ‘heaven’ and OR *ora* ‘moon’ I argued that Amis *cidal* ‘sun’, *kawas* ‘heaven’ and *folad* ‘moon’ are the strongest matches, though in the case of OR *teda* I built upon Shinmura Izuru’s groundbreaking original hypothesis from nearly a century ago. For OR *sino* ‘sun, light’, I proposed an MP language spoken near one of the main trading centers in Sumatra or Eastern Java is the donor, with the most likely source being Eastern (Old) Javanese *sinar* [sinɔr] ~ [sinɔr] ‘light, radiance’. In the case of OR *sina* ‘sun’ we find a probable cognate in WOJ *sina* ‘sun’ along with strong evidence for a reflex in Hateruma, therefore it looks like this word stands apart from the rest

well. And third, the Eastern Old Japanese form was *mura* (attested in MYS 14.3418), so we should reconstruct Proto-Japanese **mura* ‘divination’.

as being a retention from a more ancient contact situation with Austronesians in Kyushu that happened in the time of Proto-Japonic or earlier.

It remains unclear as to how the Amis came in contact with Proto-Ryukyuan speakers, but the linguistic evidence indicates this contact occurred in the time of PR. Were Amis travelling to the Northern Ryukyus or Southern Kyushu for trade 900–1300 years ago? Was there an Amis diaspora somewhere in these regions during this time? At present, I cannot provide anything more than speculation to answer such questions, but future research into potential Amis loanwords in other areas of the OR lexicon may offer further clues.

The broader significance of this research is that it sheds some new light, even if it may be just a glimmer, on the culture and contacts of the early Japonic Ryukyuans from the time of PR until the beginning of the 16th century CE when the first book of the OS was written. It underscores the central nature of sun worship in their society during this time, and it also speaks to a people that embraced shared solar (and other celestial) worship with outside cultures to an extent that linguistic borrowings occurred.

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