

# *Squib*

## **East is Not a ‘Big Bird’: The Etymology of the Star Altair in the Carolinian Sidereal Compass**

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We argue that the Micronesian constellation centered on Altair, known in Lamotrek as Mailap, has been mistakenly identified in previous literature with another constellation centered on Sirius, known as Mannap. The latter is literally the ‘Big Bird’ and is well known in parts of Polynesia as well. Confusing this Big Bird with Altair has led to much confusion in the literature on Carolinian navigational arts. We trace the history of how this error arose and why it has persisted over time, and we also suggest an alternate etymology for Mailap.

The title of Thomas Gladwin’s (1970) well-known book on Carolinian navigational arts, *East is a Big Bird*, asserts an etymology for the star known in English as Altair. Here we reexamine that proposed etymology in order to explain how the appellation Big Bird came to be associated with East throughout much of the literature on Pacific voyaging and navigation. Unraveling this mistake requires a careful recounting of the history of the study of Micronesian navigation as well as the historical linguistics of the Chuukic languages.

Gladwin writes that “on Puluwat the cardinal direction is east, under the rising of Altair, the ‘Big Bird’” (1970:148). This gloss is found also in David Lewis’s book *We, the navigators*, which recounts the author’s voyaging with Puluwat navigator Hipour (D. Lewis 1972:130). Neither Gladwin nor Lewis cites a Puluwatese form, but it is clear that they intend the gloss ‘big bird’ as a literal translation of the Chuukic name for the star Altair. Subsequent authors are more explicit in asserting a Chuukic form. Stephen Thomas’s book *The last navigator*, based on his work with Satawal navigator Mau Piailug, describes Altair as “the cardinal direction, east, under Mailap, the ‘Big Bird’” (1987:83). Ben Finney also cites a Satawalese form, noting that “the compass is not oriented on due east, but on rising Altair (*Mailap*: ‘Big Bird’)” (2007:160) [italics original].

The sidereal compass is widely used throughout the Caroline Islands, and the names for the navigational stars are largely cognate through the Chuukic languages of western Micronesia. Goodenough (1953) provides names for the star Altair in several Chuukic language varieties, including Satawalese *mailap*, Puluwatese *mailap* (Elbert 1972), and Woleaian *mailap* (Sohn and Tawerilmang 1976). The name reconstructs as Proto-Central

Micronesian \*mati-lapa (Bender et al. 2003a). The final element *-lap* is a common morpheme meaning ‘primary, main, big’; the star *mailap* is, thus, the ‘main or big *mai*’. So in asserting ‘big bird’ as a gloss for *mailap*, these authors implicitly assert a gloss of ‘bird’ for the morpheme *mai* and its cognates. But in none of these languages is the morpheme *mai* recognizable as meaning ‘bird’. Instead, the general term for ‘animal, bird, living being of land or air’ is Satawalese and Puluwatese *maan* and Woleaian *mal*, regularly reflecting Proto-Micronesian \*manu (Bender et al. 2003a). In particular, \*-n- is never lost. So what then is this *mai* and how did it come to be glossed as ‘bird’?

To unravel the story, the *mai* and *mailap* require a brief review of the rather vast literature on Carolinian navigation. The star *mailap* (Altair) forms the central focus point of the Carolinian sidereal compass, which in turn forms the basis for a system of navigation that facilitates regular voyaging throughout a vast archipelago of small islands. Altair is one of seventeen navigational stars and asterisms whose names and declinations are committed to memory at a very early stage of learning the art of navigation. The stars Polaris and Crux, fixed in the northern and southern horizons, respectively, form an axis around which the other stars rotate, rising predictably in the east and setting 180 degrees opposite in the west. Of these, only the star Altair traces a path directly overhead at the latitude of the Caroline Islands. (A star will appear directly overhead when its declination is equal to the latitude of the observer, and the declination of the star Altair is roughly the same as the latitude of the Caroline Islands.) The rising and setting positions of Altair, thus, define a second axis orthogonal to the north-south axis defined by Polaris and Crux. Seven navigational stars rise to the north of Altair, and seven more rise to the south.

Although the Carolinian compass is usually depicted in the literature with north at the top (for example, Alkire 1970; Gladwin 1970; Goodenough 1953; Goodenough and Thomas 1987), Carolinian navigators invariably lay out the compass with east at the top, marked by the star Altair. Goodenough is among those authors who depict a north-oriented compass, but he also clearly acknowledges that “the rising and setting of its main star, Altair, indicate due east and west on the central Carolinian compass, in which east, not north, is the basic direction” (1953:12). Moreover, Altair is “the base star in the native compass” (1953:5). In teaching, the navigator represents the star positions with small rocks, laying out first the rising of Altair in the east, then the setting of Altair in the west, then the location of Polaris in the north, and finally the upright position of Crux in the south. The remaining intermediary positions of the compass are filled in by a process of repeatedly finding the centers of these axes until all 32 positions are marked. In describing the use of waves for navigation, Lewis notes that “the Big Wave from approximately east has special significance as coming from ‘under the Big Bird’—Altair, the cardinal direction star in the Carolines” (D. Lewis 1994:130). Additional evidence for the primacy of east comes from the directional system, which equates east with ‘up’ and west with ‘down’. East is also the source of the primary navigational wave, the steady swell that provides a reliable steering guide.

The present authors are part of a large, interdisciplinary research project whose objective is to compare ethnomathematical knowledge across five cultures. In this work, we are especially interested in common principles of symmetry and centering which might be used to improve indigenous math education (cf. Lipka 1994; Lipka, Andrew-Ihlke, and

Yanez 2011). The Carolinian sidereal compass provides an ideal exemplar of these principles, so we naturally spent some time investigating navigational knowledge. We were fortunate to have among our team the well-known Carolinian navigator, Ali Haleyalur, from Lamotrek. Mr. Haleyalur is the son of Jesus Uripiy, the Satawal navigator who revived the *pwo* ceremony for teaching traditional navigation in 1990 after a half century hiatus (Metzgar 1996). He was one of five initiates in this ceremony, and he has since gone on to lead voyages from the Caroline Islands to Guam and Palau. Haleyalur is, thus, among a handful of key leaders currently reviving the Carolinian navigational arts in Micronesia.

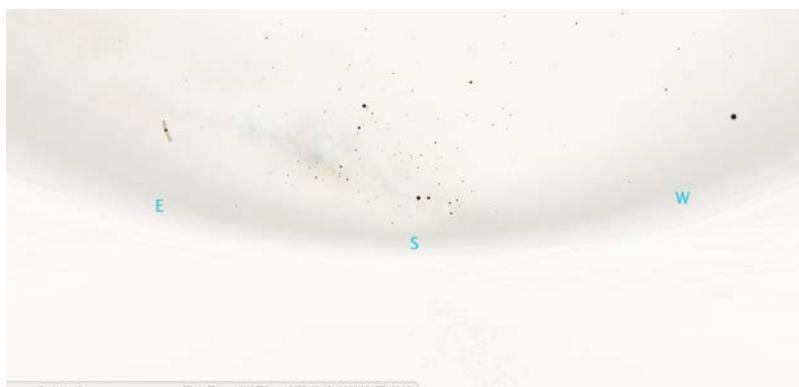
During our most recent work in Yap in March 2015, we spent several evenings stargazing and learning the names of the Carolinian stars and constellations. Mr. Haleyalur pointed out the location of the large constellation *Mannap*, which is centered on the star known in English as Sirius. The Woleaian name *Mannap* means literally 'big bird', and this is indeed a large constellation. The head of the bird is located at Sirius. One wing extends to Procyon in the east, while the other wing extends to the star Canopus in the far southern sky, an arc of more than 58 degrees. But *Mannap* rises not in the east but rather in the southeastern sky. This observation prompted one of us to ask, if *Mannap* is the big bird, then why do people also call *Mailap* the big bird? Had these two constellations, *Mannap* and *Mailap*, been confused in the literature? Native speaker Haleyalur responded with a quizzical look and replied, "you know, I've always wondered that myself."

Although the possibility of a simple error cannot be ruled out, it would be difficult for even a novice observer to confuse *Mannap* and *Mailap*. The latter is both the name of the star Altair and the name of a very small constellation composed of three closely spaced stars centered on Altair. These are the same stars that comprise the western constellation Aquila. The stars Altair and Sirius, on which the constellations *Mailap* and *Mannap* are centered, are located far apart in the celestial sphere. The declinations of the two stars differ by approximately 26 degrees. Altair (declination  $\delta = +8^\circ 52'$ ) rises just north of east, a direction that is perceived as approximately east from the latitude of Yap ( $9^\circ 31' N$ ), whereas Sirius ( $\delta = -16^\circ 43'$ ) rises well to the south. Moreover, Sirius (right ascension RA =  $06^\text{h}45^\text{m}$ ) rises more than 13 hours before Altair (RA =  $19^\text{h}51^\text{m}$ ). On March 9, 2015 we observed Sirius and the constellation *Mannap* at approximately 50 degrees above the horizon in Yap at sunset (see figure 1), whereas *Mailap* did not rise above the horizon until approximately 4:00 a.m. the following morning (see figure 2). Thus, not only are *Mannap* and *Mailap* located in different parts of the sky, they are rarely visible at the same time. Only at certain times of year will *Mailap* be visible setting in the west for about an hour while *Mannap* is rising in the southeast. From an observational point of view, it is almost impossible to confuse these two constellations.

As Mr. Haleyalur went on to explain, to him *Mailap* has nothing to do with a bird. He had previously asked several outside researchers about this but had never received a satisfactory explanation. His intuition was later confirmed by other speakers, none of whom recognized 'big bird' as a valid gloss for *mailap*. Indeed, when we asked how to say 'big bird', speakers offered two possibilities, *malilap* and *manna*, the second being the preferred form and not coincidentally also the name assigned to the bird constellation centered on the star Sirius discussed above. The first possibility, *malilap*, retains the final vowel in the combining form *malilu* of *mal*. Compare *malilugach* 'good person' < *malilu*

FIGURE 1. VIEW OF THE CONSTELLATION *MANNAP*†

† View of the constellation *Mannap*, looking south from Yap ( $9^{\circ}31' N$ ,  $138^{\circ}08' E$ ) on February 15, 2015 at 8:00 p.m. local time (UTC+10). One wing extends east to Procyon; the other “broken” wing extends south to Canopus in the far southern sky. Due to its negative declination *Mannap* traces a course across the southern sky.

FIGURE 2. VIEW OF THE CONSTELLATION *MAILAP*†

† View of the constellation *Mailap*, looking south from Yap on February 15, 2015 at 6:00 a.m. local time (UTC+10). At the latitude of Yap, the constellation *Mailap* traces a course from east to west passing directly overhead. Due to its much later right ascension, *Mailap* is visible only after *Mannap* has set.

‘living being’+ *gachiu* ‘good’. The second, preferred form, reflects a regular phonological process by which sequences of laterals are reflected as a geminate alveolar nasal. Neither of these forms for ‘big bird’ equates with *mailap*. So how did the star *Mailap* come to be incorrectly associated with the ‘big bird’ in the literature, and what is the correct etymology for *mailap*?

The first of these questions is easier to answer. One possibility that must be considered is the association of *Mailap* with the western constellation Aquila, the eagle, comprising the three stars Altair, Tarazed, and Alshain. For many Carolinian constellations, the central star lends its name to the entire constellation. This is true of *Mailap*, which is both the

name of the star Altair and the name of a constellation known in English as Aquila. Seen from the point of view of western mythology, *Mailap* (that is, Aquila) would be a bird. Gladwin alludes to this western interpretation when he refers to Tarazed (γ Aquilae) and Alshain (β Aquilae) as the “wings” of *Mailap* (1970:154). Here, Gladwin is evidently offering a translation of the Puluwatese names for Tarazed and Alshain, *Pádyefáng* and *Páyéér*, respectively, meaning literally ‘páá of the north’ and ‘páá of the south’. Gladwin evidently interprets the term *páá* as meaning ‘wing’, but it could equally be translated as ‘arm’. For example, *páá* could refer to one arm of *Pwupw*, the Southern Cross. Alkire (1970:44) avoids both ‘arm’ and ‘wing’ and instead offers the translations ‘line to the north’ and ‘line to the south’ for Tarazed and Alshain, respectively. Gladwin’s ‘wing’ gloss is clearly biased toward an interpretation of *Mailap* as a bird and cannot be taken as evidence supporting that etymology.

A more likely possibility is that Gladwin’s original gloss may have been based on a linguistic misunderstanding. Gladwin’s description of Carolinian seafaring culture and navigational arts was based on 2.5 months of field work conducted on Puluwat in 1967, during which time he worked with the navigator Hipour. The contact language used by Gladwin was not Hipour’s native Puluwatese but rather Chuukese, a language which he asserts all Puluwat men were familiar with. In spite of this claim, some of Gladwin’s observations hint at communication difficulties encountered during his research: “In a short time I regained the fluency in Trukese [Chuukese] which I had acquired twenty years earlier, but the combination of minor dialectical differences and the fact that Trukese [Chuukese] was a second language for both me and my Puluwat informants made it more difficult to talk with some people than with others” (Gladwin 1970:134). As this passage makes clear, Gladwin was working in a second language that he hadn’t spoken in two decades. That he could regain fluency in such a short period of field work is remarkable but may not have been sufficient to overcome the language barrier. The degree of fluency of the Puluwat men in Chuukese is also questionable; a functional ability to communicate is not the same as the ability to convey complex navigation concepts. If both Gladwin and his Puluwat consultants were communicating in a language over which they had an imperfect command, the margin of error for etymological interpretation would be greatly increased.

Gladwin’s 2.5 months in Puluwat in 1967 overlapped with that of two other researchers, Saul Riesenber and Samuel Elbert. At the time, Riesenber was studying the cognitive organization of navigational knowledge, while Elbert was documenting the Puluwat language. By his own admission, Gladwin deferred to these other researchers in regards to linguistic information: “Samuel H. Elbert prepared a dictionary and syntax of the Puluwat language which among other things relieves me of the need to reproduce native terms and phonetics. Accordingly, I use only English equivalents for Puluwat terms” (Gladwin 1970:vi).

Gladwin never cites the indigenous term for the star in his book, so presumably the ‘big bird’ gloss is intended as an “English equivalent” of Elbert’s (1972) *Mááyláp*. Given Gladwin’s lack of knowledge of Puluwatese and asserted fluency in Chuukese, it is likely that he based his English equivalent not on Puluwatese *Mááyláp* but rather on Chuukese *Máánap* (see table 1). Although Puluwatese and Chuukese are indeed closely related,

they differ in at least one respect that impinges crucially on the etymology in question. While Proto-Chuukic \*l is retained in Puluwatese as /l/, in Chuukese \*l>n, merging with n<\*n. Thus, in Chuukese, both *Máánap* ‘Altair’ and *mannap* ‘big bird’ have an alveolar nasal intervocally.

The Chuukese form *Máánap* shows irregular loss of original \*i with concomitant fronting of low vowel \*a>*dá* (Dyen 1949:433). As a result of this irregularity, the Chuukese forms for ‘big bird’ and ‘Altair’ appear deceptively similar to the casual observer. When Gladwin was conducting his field work on Puluwat, there was no standardized orthography for Puluwatese, and the Chuukese orthography in use at the time, by the church and the colonial administration, was heavily influenced by Mortlockese. In particular, this orthography did not distinguish the fronted vowel *á*. If Gladwin were relying on written transcriptions, it would be very easy to incorrectly parse *Máánap* as *máán-(n)ap* and then equate the first syllable *máán* with *maan* ‘bird, animal, living being’. In this way, *Máánap* would become the ‘big bird’. Since Gladwin was explicitly using ‘only English equivalents,’ he would have, thus, associated the ‘big bird’ gloss directly with Altair, the English equivalent of both Chuukese *Máánap* as well as Puluwatese *Mááylap*.

If Gladwin did indeed misinterpret the initial *máá-* of Chuukese *Máánap* as *maan* ‘bird’, he is not alone in this mistake. Other authors have also been misled by the diacritics on this form. Johnson and Mahelona (1975:46–47) list the Micronesian calendar stars ‘Maanap, the Bird’ and ‘Maan, the Bird,’ which they identify with ‘Altair (Aquila)’ and ‘Castor, Procyon, Pollux,’ respectively. These authors cite Goodenough (1953:33) as a source for these star names and identifications. Yet Goodenough transcribes the name for Altair as *määnap* using the diacritic umlaut, equivalent to the orthographic <á>. Moreover, Goodenough identifies *maan* with ‘Sirius and Procyon.’ How Johnson and Mahelona managed to insert Castor and Pollux (in the western constellation Gemini) into the Micronesian constellation *Maan* is unclear. This identification most certainly does not come from Goodenough (1953). Although Johnson and Mahelona do not cite another source for this identification, they were aware of the astronomical problems that follow from it. Indeed, they go on a few pages later to correctly identify *Maan*, ignoring their original identification of *Maan* with the stars in Gemini.

TABLE 1. REFLEXES OF \*I AND \*N

	Proto-Chuukic	Chuukese	Puluwatese	Satawalese	Woleian
‘bird, living being’	*manú	maan	maan	maan	malii
‘big, main’	*lapa	nap	lap	nap/nap <sup>†</sup>	lap
‘big bird’	*manú-lapa	mannap	mallap	mannap	mannap
‘Altair’	*maati-lapa	Máánap	Mááyláp	Mainap	Mailap

<sup>†</sup> Roddy (2007) lists Satawalese *nap* ‘big’, whereas Bender et al. (2003a) cite Satawalese *lap* ‘big’. When this morpheme is combined to form the name for Altair, both sources show an alveolar nasal: *Mainap* (Roddy 2007) and *Maai-nap* (Bender et al. 2003a). Bender et al. (2003a) note that roughly 25 percent of Satawalese forms show an unconditioned reversal \*l>n, \*n>l or else show both variants, \*l>l~n, and \*n>l~n.

The name [Maan] appears as the base for the Micronesian month corresponding roughly to August-September and makes a formation of a big bird composed of three stars: Sirius, Canopus, and Procyon. The identification of the Twins [Gemini] as belonging in Maan does not make good sense, since Canopus lies south of the celestial equator and the constellation of Gemini is far to the north of it. Since the Polynesian star lists construct the Big Bird as a formation with Sirius, Canopus, and Procyon ... it follows that there must have been a carry-over from Maan as Aquila to Sirius, Canopus, and Procyon (Johnson and Mahelona 1975:51).

Here, by a simple dropping of diacritics, Johnson and Mahelona have inferred that the Big Bird constellation was originally Altair and only later was transferred to the constellation *Maan*, centered on Sirius. Having asserted a correspondence between Micronesian and Polynesian constellation names, these authors then assume that literal translations of Polynesian names for Altair must also apply to names for that star in the Chuukic languages. They cite Goodenough as providing the literal translation 'pillar of heaven'. In fact, Goodenough does not ascribe this meaning to Altair in Micronesia but instead cites this literal translation from Polynesian as evidence of the importance attached to Altair. As he wrote, "while the same name [*määinap*] does not appear in Polynesia proper; such epithets as 'pillar of heaven' reflect a similar importance attached to Altair" (Goodenough 1953:12). So what Goodenough was arguing was that Altair played an important role not only in Micronesia but in Polynesia as well. But it is not the importance of Altair that is in question but rather its etymology. Johnson and Mahelona show just how easy it is for linguistically naïve observers to equate Chuukese *Määinap* with *Maan*, based on a perceived orthographic similarity. It is likely that Gladwin made a similar equation in order to arrive at his gloss of Altair as the big bird.

Whatever led Gladwin to assert the 'big bird' etymology, it is important to note that at least some authors are more circumspect. Reviews of Gladwin's book were extremely favorable (cf. Goodenough 1971, Richey 1974), though none attempted to explain the motivation behind Gladwin's choice of title. Both previous and contemporary authors avoid offering an etymology for *Mailap*. Goodenough, from whom Gladwin draws heavily for both star names and the layout of the sidereal compass, says merely that "the meaning of the name is obscure. It is the main \**maa*" (1953:12). Alkire (1970:44) does not offer a translation for the star *Mailap* but does suggest that the companion stars Tarazed and Alshain in the constellation *Mailap* have names that translate as 'line to the north' and 'line to the south', respectively. Riesenbergs, who was with Gladwin in Puluwat in 1967, makes no attempt to gloss Altair in his detailed study of Puluwat navigational knowledge (1972).

If the big bird etymology is not correct, then we must also ask why it has persisted for so long, with continuing citations in the literature up to the present day. Part of the reason surely lies in Gladwin's choice, deliberate or not, to encapsulate this etymology in the title of his 1970 book. *East is a Big Bird* was published by a university press and likely received limited distribution. Yet many more people are familiar with the title than have actually read or even seen the book, and a simple citation to this book is sufficient to convey the 'big bird' etymology. Gladwin's book also appeared during the height of the revival of Pacific voyaging. The maiden voyage of the *Hōkūle'a* sailed in 1975. The sim-

ple characterization of East as a Big Bird offers a powerful image for a system of knowledge that had largely been forgotten outside Micronesia. The big bird *Mannap* (that is, the constellation centered on Sirius) is an important Carolinian constellation, while the direction east marked by Altair is fundamental to the Carolinian sidereal compass. Conflating these two concepts is, thus, very tempting and has even passed into popular culture in the form of t-shirt designs and graphic imagery. Gladwin provided a compelling, accessible, and accurate description of Puluwat navigational knowledge that was well received by both academic and lay audiences and has continued to inspire readers. Given the richness and thoroughness of Gladwin's description, it is easy to tacitly assume that he has applied the same level of precision to the linguistic details.

Finally, an additional factor contributing to the persistence of the 'big bird' etymology is the lack of a plausible alternate etymology. Bender et al. reconstruct Proto-Central Micronesian \*mati-lapa 'Altair, constellation in Aquila' (2003a:54). They also reconstruct \*mati-ciki 'a star', containing the same morpheme \*mati. This latter form designates a star in the western constellation Hercules (cf. Woleaian *Maishig*, Chuukese *Mááchik*) that can be literally glossed as 'little \*mati'. This *Maishig* is not a navigational star, but it does lend its name to a month in the Carolinian calendar. We, thus, have reconstructions for 'big \*mati' and 'little \*mati', but Bender et al. (2003) do not offer a gloss for \*mati or even assert that it occurs as an independent form. Two contemporary possibilities suggest themselves as a source for Woleaian *mai*. The first is the homophonous Woleaian form *mai* 'breadfruit', and the second is the very similar form *mmaiye* 'taut', which can also mean 'sail into wind'. This latter meaning is ostensibly derived from the practice of hauling the sail tight in order to tack. Given the prevailing east wind, an association of this *mmaiye* with east and the star Altair is at least plausible. However, Lamotrek speakers, including authors Hachibmai and Haleyalur, reject both analyses as folk etymologies. Moreover, comparative evidence argues against these putative etymologies, since both forms reconstruct without the original \*t found in \*mati: Proto-Micronesian \*mai 'breadfruit' (Bender et al. 2003a:49) and Proto-Chuukic \*mai(a) 'taut' (Bender et al. 2003b:301).

Here the research focus of our current project on ethnomathematics may provide some additional insight. Among the indigenous mathematical concepts we have been exploring is the concept of "centering" through repeatedly finding the center and verifying. Centering forms the basis for symmetry and turns out to be a significant organizing principle for daily activities in many cultures, including Micronesian. Caroline Islanders make use of centering in the design and execution of architecture, navigation, handicrafts, and art (cf. Alkire 1970). For example, the highest form of traditional weaving employs "a nine-strand pattern with the midline and borders accentuated, and the successive bifurcations dividing the space into halves, quarters, and eighths" (Rubinstein 1993). The result is not only symmetrical but also evenly divided through halving. The domain of navigation also makes extensive use of this centering algorithm. For example, the northern and southern points on the sidereal compass define an axis of symmetry dividing the rising star points from the setting star points.

Within the context of this discussion of symmetry, authors Hachibmai and Haleyalur immediately recognized Woleaian *mailap* as referring to the center of the abdomen. Specifically, *mailap* refers to the central area of the abdomen under the umbilicus that is

massaged as a part of healing. This definition is not found in the standard lexical sources for Woleian, Puluwatese, Satawalese, or Chuukese. However, in the closely related Mortlockese language variety, *mailap* is glossed as both (i) an alternate term for ‘navel’ and (ii) ‘a certain form of massage’ (Odango, pers. comm.).

We were not successful in our attempts to contact a traditional massage expert prior to leaving Yap, so an elaboration of the semantics of *mailap* as a form of massage must await further research. It is difficult to speculate as to whether the star *Mailap* has any association with this traditional massage. The best we can do at present is to note that both senses of *mailap*—as the star Altair and as the umbilicus—draw on a shared concept of symmetry and centering. As Daiber observes, “the interest Caroline peoples have in Altair . . . can best be interpreted as an awareness and interest in the zenith” (1986:373). The star path of Altair divides the sky into two equal halves, just as the umbilicus defines the center of the body.

Finally, an additional possible source for *mailap* is the place name Meilap, located on the extreme west end of the island of Pohnpei. Bender et al. (2003a) do not list a Pohnpeian reflex of \*mati-lapa; however, Pohnpeian *meilap* follows the expected sound correspondences, with loss of the intervocalic stop and regular raising of the low vowel. Though a well-documented place name, Meilap does not refer to the star Altair in Pohnpeian (Panholzer and Mauricio 2003). One can, then, justifiably ask how a place on the west shore of Pohnpei came to be associated with the East. The most economical interpretation is that the place Meilap serves as a point of reference for Central and Western Micronesia navigators when sailing to the east.

Of course, none of these possible sources for the name *mailap* brings us any closer to unraveling the mystery of the cranberry morpheme *mai* < \*mati. However, we can be more certain in our conclusion that Puluwatese *mai*, Chuukese *máá*, and Proto-Central Micronesian \*mati from which they derive do not mean ‘bird’. East is indeed associated with Altair, the big *máá/mai*, but the latter morpheme does not mean ‘bird’. Thus, East is not a Big Bird.

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