

- Lodge, D., G. A. R. Johnston, D. R. Curtis, and J. J. Brand. 1977. Effects of the areca nut constituents Arecadaine and Guvacine on the action of GABA in the cat central nervous system. *Brain Research* 136:513-522.
- Moller, J. J., J. J. Pindborg, and I. Effendi. 1977. The relation between betel-chewing and dental caries. *Scandinavian Journal of Dental Research* 85:64-70.
- Nicol, J. A. C. 1960. *The biology of marine animals*. New York: Interscience.
- Onvlee, L. 1933. Na hoeri hapa. *Tijdschrift voor Indische Taal-, Land- en Volkenkunde* 73:476-494.
- Peeters, A. 1970. La chique de betel: Étude ethnobotanique. Université de Paris: Thèse pour le doctorat de Troisième cycle.
- Rawat, A. K. S., R. Banerjee and V. R. Balasubrahmanyam. 1989. Chemical polymorphism of essential oil of *Piper betle* L. grown in India. *Feddes Repertorium* 100(7/8):331-334.
- Reid, A. 1985. From betel-chewing to tobacco-smoking in Indonesia. *Journal of Asian Studies* 44(3):529-547.
- Rookmaaker, H. R. 1905. Bijdrage tot de kennis van het gebruik van sirih in Nederlandsch-Oost-Indië. *Bulletin Koloniaal Museum te Haarlem* 32:18-49.
- Schwimmer, E. 1982. Betelnut: The beer of the Orokaiva. In *Through a glass darkly: Beer and modernization in Papua New Guinea*, ed. M. Marshall. Boroko: Institute of Applied Social and Economic Research.
- Thierry, S. 1969. *Le Bétel I: Inde et Asie du Sud-Est*. Catalogues du Musée de L'homme. Paris: National Museum of Natural History.
- Tobert, N. 1984. Ethno-archaeology of pottery firing in Darfur, Sudan: Implications for ceramic technology studies. *Oxford Journal of Archaeology* 3(2):141-156.
- Uhl, H. W., and J. Dransfield. 1987. *Genera Palmara*. Kansas: L. H. Bailey Hortorium and International Palm Society.
- de Wit, H. C. D. 1959. A checklist to Rumphius's *Herbarium Amboinense*. In *Rumphius memorial volume*, ed. H. C. D. de Wit. Baarn: Hollandia.

ETYMOLOGY, ENTOMOLOGY, AND NUTRITION: ANOTHER WORD FROM PIGAFETTA

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1. INTRODUCTION

In January 1522, the last surviving ship of Magellan's fleet skirted the coasts of Alor, Pantar, and Timor. The *Victoria* was laden with the cloves of North Maluku and manned by a crew of sixty, including two pilots from Tidore. In those turbulent waters, one of the pilots who had boarded the ship at the direction of the sultan of Tidore spoke to Pigafetta of a nearby island, Arucheto, where dwelt a tribe of naked midgets, long-eared and hairless subterranean cave-dwellers capable of running at great speeds and singing with subtle, thin voices.¹ (See Bausani 1972:56.) Truly a *strana leggenda*, as Bausani (1972) called it—a seaman's tale for the credulous Italian who recorded it for us! Still, one element in the story rings true and, indeed, constitutes a familiar statement of East Indonesia nutrition. This short note will consider the probable diet of the Arucheto folk as related by the Moluccan pilot. At the same time it will propose a solution to an etymological problem noted by Bausani (1972).

The Moluccan pilot may have told Pigafetta a tall tale, but when he described the food of these imaginary (!) unacculturated people, he surely drew on his personal knowledge of the foods of Maluku. As Pigafetta recorded it (Bausani 1972:56, trans. by Collins):

they live in subterranean caves and eat fish and something which comes from [*nasce*] between a tree and its bark; white and round, rather similar to preserved coriander, it is called *ambulon*.²

The identity of this comestible, *ambulon*, is the focus of this brief paper. In the first part, we discuss three possible interpretations of *ambulon*. In the second part, we offer an etymology for the term.

2. AMBULON: A COMESTIBLE

Surely, the comestible described by the Tidore pilot has some relationship to sago, the staple food obtained from the pith of the sago palm tree, principally *Metroxylon* spp. This food at one time constituted an important part of the diet throughout the Malay archipelago and parts of Melanesia. Although it is no longer the favorite foodstuff on long sea voyages, it remains the staple food in various parts of Borneo, Sulawesi, Maluku, and New Guinea. From a nutritional perspective, this is a rational utilization of available resources; indeed, the complement of protein in fish would be a starch, which sago is.

Earlier in his description of Tidore, Pigafetta described sago, its origin, mode of production, and usefulness. The form of sago he described seems to have been sago bread, that is sago flour baked in molds and subsequently dried in the sun. However, Pigafetta did not associate this sago, which he apparently saw in Tidore, with the *ambulon* of the pilot's narrative. The fact that Pigafetta himself did not observe the Arucheto comestible and that the process differed from the one with which he was familiar in Tidore perhaps obfuscated its identity for him. In Maluku, there are numerous ways to process and prepare sago flour, ranging from baking and roasting to mixing with boiling water or frying in a greaseless wok. One of the methods, least common but still known in Maluku, is the production of sago pearls, a form of sago rather well-known in Western countries. Sago pearls are obtained by dissolving raw sago flour in water, pressing the solute through a coarse sieve and drying it. This results in white spheres (pearls), about the size of preserved coriander, as Pigafetta recorded. Thus, one interpretation of the Arucheto food is sago, a food stuff well-known to the pilot from Tidore.

Another interpretation should be considered. In the seventeenth century, Dutch observers noted that one of the comestibles held in the highest esteem by the Ambonese was a grub infesting the stumps of felled sago trees. Sago grubs could be the referent of *ambulon*. Valentijn (1726:295, trans. by Collins), for example, wrote:

People here have a sort of worm, named the sago worm, which flourishes in the mealy pith of the sago tree when it has borne its fruit and is about to die. These worms, which are very fat and greasy, are considered one of the greatest delicacies of the Ambonese who usually roast them on small spits.³

Although *sate* has become an Indonesian food of worldwide renown, it is unlikely that sago grub *sate* would have the same afficiandos! Still, the

eating of sago grubs is certainly not a cultural pattern found only in Maluku. Burkill (1966:1488) provided a fuller report:

Sago palm-stumps make a very suitable breeding-place for the Palm-weevil (*Rhynchophorus*), and so does sago refuse. In eastern Malaysia [i.e., the eastern parts of island Southeast Asia], where much sago is prepared, the grubs of the beetle are eaten as a delicacy.

More modern and fuller accounts are given regarding the consumption of sago grubs in Sarawak, Malaysia (Tan 1977) and in Papua New Guinea (Ohtsuka 1977, May 1984). According to Ohtsuka (1977), the beetle family is Cerambycidae (genus *Rhynchophorus*) and is known in Papuan pidgin as *binatang bilong saksak*. Beetles lay eggs, which develop into the larvae and then beetles, in the pith of the fallen sago trunk.

Although in Papua New Guinea sago grubs are said to be more frequently collected and eaten by children, in Maluku this does not seem to be the case.⁴ Eilen (1978:71) includes grubs as one of several "recognized secondary sources of animal foods" among the Nuaulu of central Seram. Moreover, during an intensive fieldtrip on Ambon Island in June 1991, we collected preliminary data on sago grub collection and consumption among the Christian Ambonese of Ambon Bay. Indeed, demonstrations of various ways of eating sago grubs were photographed. The grub, *ulat sagu* in Ambonese Malay, is usually eaten fried in a pan or wok in its own ample fat, obtained by pinching it between the fingers. Occasionally the grubs as well as the adult *Rhynchophorus* beetle, *maimai sagu* (again in Ambonese Malay), are eaten raw.

Because sago is mostly carbohydrate, and the grub is mostly protein (14% dry mass) and fat (64% dry mass) (Tan 1977), the grub provides an essential element to the diet, in the absence of fish or meat. Not only is the protein essential, but the fat is essential for the absorption of fat-soluble vitamins. To put it another way, the diet becomes complete, except for some vitamins and minerals, with sago and the grub.

A third possibility is that *ambulon* refers to an edible mushroom, *jamur sagu*, that grows on sago refuse heaps. It is white with a round top and is found wherever sago is extracted. Moreover, in many of the languages spoken in or near modern Brunei—one of Pigafetta's most important ports of call—these mushrooms are named *ombulon*, or words of phonetic similarity (D. J. Prentice, pers. comm., November 1991; Prentice n.d.).

2. AMBULON: AN ETYMOLOGY

The description of sago pearls, sago grubs, and sago mushrooms, as well as the likelihood of these comestibles being familiar to the pilot, lead us to the issue of the etymology of *ambulon*. In his edition of Pigafetta's narrative (Pigafetta 1906), James Robertson ventured a timid identification in his index (vol. 3:8): "Ambulon (a food)." Bausani (1972:56, n. 121) was more forthright, admitting he was unable to trace the word: "*Il cibo di scorza d'albero detto ambulon non sono riuscito a identificarlo.*" Although many scholars and Southeast Asian specialists have studied Pigafetta's wordlist, renowned as the first European attempt at Malay lexicography, few of them turned their attention to the many Malay words which appear outside the wordlist, that is, in the narrative parts of Pigafetta's account. Approximately thirty Malay words stud the Italian narrative text but only five of these appear in the wordlist. Bausani, of all the editors of Pigafetta, was the most conscientious and effective in interpreting and elucidating these 450-year-old lexical items. However, *ambulon* escaped his interpretation.

In the 1930s, several scholars debated the provenance of Pigafetta's wordlist, disagreeing about its "Moluccan-ness" and especially noting the elements from Brunei Malay.⁵ This debate provides a clue toward the path of interpretation. Despite the appearance of a few misplaced Cebuano terms,⁶ the majority of the words in the list are clearly Malay, most likely collected in Brunei and Maluku. Indeed, in the sixteenth century, Brunei Malay and the variant of Malay spoken in North Maluku were probably quite similar to each other (see Collins 1991). Thus, it is to the Malay dialects of contemporary Brunei and north Maluku that we turn for illumination.

The general variant of Brunei Malay—that is, neither the Kedayan nor the Kampong Ayer subdialects—was partially described in a series of lexical entries prepared by Brunei's National Language Bureau (Dewan Bahasa dan Pustaka Brunei). Although there are numerous works on the vocabularies of Malay variants in eastern Indonesia (Collins in press), the most recent and complete is an unpublished lexicon of the variant spoken in Bacan (Collins n.d.). Both of these Malay dialects yield an acceptable source for Pigafetta's *ambulon*. Note the following very close matches between Brunei and Bacan.

Brunei *ambulung* 'sago flour' (Dewan Bahasa 1971)⁷
 Bacan *ambulung* 'sago tree' (Collins n.d.)⁸

Today, in both Brunei and north Maluku, the very place in which Pigafetta most likely collected his Malay vocabulary, *ambulung* refers to

sago. Furthermore, it is most likely that the vehicular language of both regions was a dialect of Malay most closely resembling modern Bacan Malay (Collins 1991). Thus, it is plausible that the pilot narrated his tale using a variant and a vocabulary similar to that of Bacan Malay. While there are three possible interpretations of the term *ambulon*, namely sago flour (especially in the form of sago pearls), sago grubs, and sago mushrooms, based on the lexicon of contemporary Malay variants in the region, we consider sago flour (in the shape of pearls) the most likely meaning of *ambulon*.⁹ It most closely fits the available description and, in combination with fish, makes nutritional sense.

3. CONCLUSION

In this brief foray into the sixteenth century dietary habits of Maluku, we have presented an etymology of a hitherto unidentified lexical item in Pigafetta's historic narrative. The identification proposed here rests on the marshalling of nutritional, entomological, cultural, and dialectal evidence. It is the combination of these multidisciplinary resources which has yielded a solution to Bausani's (1972) dilemma. Dialectology leads us to conclude that, of all the languages which display forms similar to *ambulon* (see de Clercq 1909), the Malay of Brunei and north Maluku constitutes the most likely source of the word. Nutrition, moreover, suggests that a starch rather than grubs or mushrooms was the intent of the narrator. In addition, the contemporary consumption of sago in the north Maluku homeland of the pilot strengthens the identification.

We do not, however, claim that the Arucheto folk themselves necessarily ate *ambulung*. Modern reports of the societies of the Alor and Pantar islands do not contain evidence of that. Indeed, the dry climate and rugged terrain of these islands do not seem conducive to the growth of the sago palm in numbers large enough to sustain its widespread exploitation as a foodstuff. Rather, the pilot's story remains a *strana leggenda*, weaving together strands of reality with outlandish threads of narrative. Pigafetta not only preserved for us a 450-year-old lexeme but also one of the earliest, though condensed, examples of north Maluku oral literature.

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NOTES

1. Pigafetta made very clear who had told him the story and how the narrator had come to be aboard the *Victoria*. He wrote at the time the ship was still in Tidore that:

Sabato, a vintuno de dicembre, giorno de San Tommaso, il re nostro venne a le navi e ne consegno il due piloti [che] avevamo pagati, perch'e ne conducessero fora de queste isole. (Bausani 1972:49-50).

[On the day of St. Thomas, Saturday, December twenty-one, our king came to the ships, and assigned us the two pilots whom we had paid to conduct us out of those islands (Pigafetta 1906:111).]

And later near the coasts of Pantar and Alor he mentioned the Moluccan narrator again:

Ne disse il nostro piloto vecchio de Maluco, come appresso quivi era una isola, chiamata Arucheto (Bausani 1972:56)

[Our old pilot from Maluco told us that there was an island nearby called Arucheto (Pigafetta 1906:161).]

Although Mosto (Pigafetta 1894:106, n. 3) suggests that Arucheto may be identified as Haruku or Aru, and Robertson (Pigafetta 1906:225) does not disagree with Mosto, Bausani (1972:56), wisely concludes that,

given the geography of the story, an island near Alor or Timor must have been intended.

2. The original reads: "*abitano in cave sotto terra e mangiano pesce e una cosa che nasce tra l'arbore e la scorza, che e bianca e rotunda come coriandoli de confetto, detta ambulon*" (Bausani 1972:56). Note that Bausani used the manuscript of the Bibliotheca Ambrosiana in Milan, the text he considered the most reliable and complete. See Robertson's description of this manuscript (Pigafetta 1906, vol. 2:243-248), which he dated 1525.
3. A fuller, more accurate, and earlier (though published later) account is provided by Rumphius (1750:79, 83).
4. Nor is it the case for the grubs eaten in Java. According to F. X. Rahyono (pers. comm., November 1991), in Central Java *gendon* ("*een groote dikke worm in rotanplanten, aren- of kokosboomen, die tot lekkerij dient evw.*" Jansz 1932:279) is most often cooked in vegetables dishes.
5. In particular, Blagden (1931), Gonda (1938), Kern (1938), and Le Roux (1929) wrote, some at great length, on Pigafetta's sources. More recently Bausani (1960) also joined the debate.
6. Pigafetta included a Cebuano wordlist in his narrative as well as a Malay one. A few Cebuano words crept into the Malay list and a few Malay words are found in the Cebuano list. Bausani (1972) provides a lucid discussion of this phenomenon.
7. In the vocabulary prepared by Brunei's Dewan Bahasa staff, *ambulung* is defined as *tepong sagu* 'sago flour', which is distinguished from *ambuyat*, which is sago flour cooked by pouring boiling water over it. Earlier Haynes (1900) also cited *ambulung*.
8. In Bacan, a divergent dialect of Malay (Collins 1983), *ambulung* is a generic term for sago tree. At least seven kinds of sago are distinguished: *ambulung duri puti*, *ambulung licing*, *ambulung pulutang*, *ambulung nggani*, *ambulung sike*, *ambulung soang*, and *ambulung tirus*.
9. We do not deny the possibility of a shift in the meaning of *ambulung* from sago to a phenomenon closely related to sago, such as the grub or the mushroom. Precisely this kind of metonymy seems to have taken

place in the Murut word for sago mushroom (D. J. Prentice, pers. comm., November 1991). Nonetheless, the combination of evidence supports the identification of sago itself, rather than the symbiotic mushrooms or grubs.

REFERENCES

- Bausani, A. 1960. The first Italian-Malay vocabulary by Antonio Pigafetta. *East and West* (n.s.) 11(4):229-248.
- Bausani, A., ed. 1972. *L'Indonesia nella relazione di viaggio di Antonio Pigafetta*. (Con traduzione in indonesiano di F. Soenoto Rivai.) *Relazioni di Viaggiatori Italiani in Indonesia 2*. Roma: Istituto Italiano per il medio ed estremo Oriente. Centro Italiano di Cultura, Djakarta.
- Blagden, C. O. 1931. Corrigenda to Malay and other words collected by Pigafetta. *Journal of the Malayan Branch of the Royal Asiatic Society* 9:857-861.
- Burkill, I. H. 1966. *A dictionary of the economic products of the Malay peninsula*. 2 vols. (Originally published in 1935.) Kuala Lumpur: Ministry of Agriculture and Cooperatives, Malaysia.
- Clercq, F. S. A. de. 1876. *Het Maleisch der Molukken: Lijst der meest voorkomende vreemde en van het gewone Maleish verschillende woorden, zooals die gebruikt worden in de residentien Manado, Ternate, Ambon met Banda en Timor Koepang*. Batavia: W. Bruining.
- . 1909. *Nieuw plantkundig woordenboek voor Nederlandsch Indie*, ed. M. Greshoff. Amsterdam: J.H. Bussy.
- Collins, James T. 1983. Penggolongan bahasa Bacan. *Nusantara* 10:86-125.
- . 1991. Malay dialects and the history of Malays. A paper presented at the Centre National de Recherche Scientifique, Paris, December 2, 1991.
- . In press. *Bibliografi dialek Melayu di Indonesia Timur*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- . n.d. A lexicon of the language of Bacan. Ms.
- Dempwolff, Otto. 1938. *Vergleichende Lautlehre des Austronesischen Wortschatzes*, vol 3, *Austronesisches Wörterzeichniss*. Hamburg: Friederichsen, de Gruyter & Co.; Berlin: Dietrich Reimer.
- Dewan Bahasa dan Pustaka (Brunei). 1971. Perbendaharaan-kata Melayu Brunei. *Bahasa* 15:917-920.
- Ellen, Roy F. 1978. *Nuulu settlement and ecology: An approach to the environmental relations of an Eastern Indonesian community*. (VKI 83) The Hague: Martinus Nijhoff.
- Gonda, J. 1938. Pigafetta's vocabulary van het "Molukken Maleisch." *Bijdragen tot de Taal-, Land- en Volkenkunde* 97:101-124, 516-541.
- Haynes, H. S. 1900. A list of Brunei-Malay words. *Journal of the Straits Branch of the Royal Asiatic Society* 34:39-48.
- Heyne, K. 1950. *De nuttige planten van Indonesie*, 3rd ed. 2 vols. 's-Gravenhage/Bandung: W. van Hoeve.
- Jansz, P. [1932]. *Practisch Javaansch-Nederlandsch woordenboek*, 3rd ed. Semarang: G. C. T. van Dorp.
- Kern, W. 1938. Waar verzamelde Pigafetta zijn Maleise woorden? *Tijdschrift voor Indische Taal-, Land- en Volkenkunde* 78:271-273.
- Tan, Koonlin. 1977. *Sago-76: Papers of the First International Sago Symposium. the equatorial swamp as a natural resource*, Appendix B. *Sago worms (Rhyncophorus sp.)* Kuala Lumpur: Kemajuan Kanji.
- May, R. J. 1984. *Kaikai aniani: A guide to bush foods, markets, and culinary arts of Papua New Guinea*. Bathurst, N. S. W.: Robert Brown and Associates.
- Ohtsuka, Ryutaro. 1977. Time-space use of the Papuans depending on sago and game. In *Human activity system: Its spatiotemporal structure*, ed. Hitoshi Watanabe, pp. 231-260. Tokyo: University of Tokyo Press.
- Pigafetta, Antonio. 1894. *Relazione sul primo viaggio intorno al globo colle regole sull'arte del navigare*, ed. Andrea da Mosto. Raccolta di Documenti e Studi pubblicati dalla R. Commissione Columbiana pel Quarto Centenario dalla scoperta dell'America, part 5, vol. 3. Roma: Il Ministero della Pubblica Istruzione.
- Pigafetta, Antonio. 1906. *Magellan's voyage around the world*. The original text of the Ambrosian manuscript, with English translation, notes, bibliography, and index, ed. James A. Robertson. 3 vols. Cleveland: The Arthur H. Clark Company.
- Prentice, D. J. n.d. Murut-English dictionary. Ms.

Roux, C. C. F. M. Le. 1929. De Elcano's tocht door den Timorarchipel met Magalhaes' schip *Victoria*. In *Feestbundel uitgegeven door het Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen bij gelegenheid van zijn 150 jarig bestaan 1778-1928*, vol. 2:1-99. Weltevreden: G. Kolff.

Rumphius, Georgius E. 1741. *Herbarium Amboinense*. 7 vols. Amsterdam: F. Changuion, J. Catuffe and H. Uytwerf.

———. 1750. *Het Amboinsche Kruid-boek*, vol. 1, ed. J. Burmannus. Amsterdam: M. Uytwerf.

Valentijn, François. 1726. *Oud en Nieuw Oost-Indien*, vol. 3, *Omstanding verhaal van de geschiedenissen en zaaken het kerkylyke ofte den Godsdienst betreffende, zoo in Ambonia*. Dordrecht: Joannis van Braam; Amsterdam: Gerard onder de Linden.

Wilkinson, H. J. 1932. *A Malay-English dictionary*. London: Macmillan.

