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Charcoal, Eggplants, and Small Hairy Hominoids

Dietary and Behavioural Components of a "Wildman" Image from West Central Flores (Indonesia)

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Abstract. – Recent writing on hominoid images from Flores Island reveals local conceptions of creatures, now mostly regarded as extinct, which seem zoologically realistic, or natural rather than supernatural. Drawing partly on narratives from the Rajong district recorded by J. A. J. Verheijen, this article explores an attribute that adds to this realism, and hence the putative creatures' empirical plausibility: their consumption of wood charcoal partly in conjunction with eggplants, both of which are claimed to have been regularly stolen in the past from human settlements. Reviewing the evidence for charcoal ingestion by animals and humans in various parts of the world, including Flores, it is shown how this dietary practice can counter toxic effects of various plant foods, including raw eggplant and wild tubers, another, implicit component of the hominoids' diet. It is further suggested that this sort of behaviour and local representations more generally of reputedly recently extant hominoids, as well as the interactions with *Homo sapiens* which these entail, should be taken into account in future anthropological research into the new hominin chrono-species *Homo floresiensis*, discovered on Flores in 2003. *[Indonesia, Flores, folklore, Homo floresiensis, dietary behaviour]*

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In a recent book (Forth 2008) I explored images of putative hominoids which local people claim to exist, or to have existed until recent times, in various parts of Southeast Asia. Most attention was given to eastern Indonesia; in fact, two full chapters specifically concern hominoid categories described for Flores, an island recently made famous by the discovery of what is claimed to be a new hominin species, *Homo floresiensis*. The present article comprises a further investigation of one Florenese image, the *ngiung* of Rajong. More specifically, it reviews new evidence bearing on the ontological status of the creatures so named and their possible empirical referents among past or present species inhabiting Flores Island. In regard to empirical sources of the image, most attention will be given to items of putative *ngiung* consumption, including most notably wood charcoal.

Ngiung are among the seemingly most naturalistic of Florenese hominoidal images. The Rajong people, who claim once to have shared their territory with the creatures, reside in the eastern part of the administrative region (regency) of East Manggarai (Manggarai Timur). In regard to language and culture, the Rajong, like their Rembong neighbours immediately to the north, are distinct from inhabitants of more westerly parts of the larger Manggarai region, and in these respects display closer affinities to groups residing to their east, in the Ngada and recently formed Nage-Keo regencies. These two regencies are home to several ethnolinguistic groups that claim once to have shared their territories with primitive hominoids mostly bearing names quite different from *ngiung* but which are otherwise represented in fundamentally similar ways. Among these are the *ebu gogo* of the Nage region, creatures

that have been hypothetically linked with the recently discovered *Homo floresiensis.*

Before the publication of my 2008 monograph, the only source of information on *ngiung* was a short narrative and a few brief references contained in a doctoral thesis by Maribeth Erb (1987; see Forth 2008: 63–65). Since then, I have been able to consult unpublished texts recorded by J. A. J. Verheijen SVD (1908–1997), a missionary lexicographer, linguist, ethnographer, botanist, and zoologist who worked on Flores for nearly sixty years. Now housed in the library of the Royal Institute for Linguistics and Anthropology (KITLV) in Leiden, Verheijen's archive (Verheijen n. d.) includes several narratives recorded in Rajong, and among these are three which specifically concern the creatures called *ngiung* (see Appendix below).[1] My present objective is to consider what the representation of *ngiung* contained in Verheijen's texts adds to an understanding of this indigenous category, and by extension similar categories found elsewhere on Flores and in eastern Indonesia. Erb describes *ngiung* as short, hairy "forest spirits" whose females possess long pendulous breasts. In a story summarized by Erb, *ngiung* endeavour to kidnap a human child by exchanging it for one of their own, but in consequence are attacked by local villagers who, by firing a cave in which a group of *ngiung* reside, manage to kill many of the creatures. Although Verheijen's texts do not make reference to pendulous breasts – nor do they describe the creatures as "spirits" – their portrayal of the *ngiung* is basically similar to Erb's. At the same time, they reveal additional features which shed new light on the image and raise intriguing questions concerning their possible empirical referents.

Physical and Behavioural Features

English synopses of Verheijen's three Rajong texts appear in the Appendix.[2] The first text depicts the creatures as hairy, while in Text 3 a male *ngiung* possesses a beard so long he is able, quite fantastically, to employ it as a cable to lift a kidnap victim. Text 2 describes *ngiung* as possessing a particular odour, a "putrid smell" which clings to humans with whom they come into contact. Texts 2 and 3 both depict the creatures as physically strong. Neither the odour nor great strength is mentioned in Erb's description. However, both apply to other Florenese hominoids, and indeed to "wildmen" in other parts of Southeast Asia.

Another feature not recorded by Erb is the human use, referred to in two narratives, of forked bamboo combs to attack *ngiung*; in one case it is explained that only the combs are effective because the creatures are impervious to spears. This is one of relatively few apparently implausible elements found in Verheijen's texts, and one which, by the same token, suggests a possible connection with more manifestly spiritual beings. In other parts of central Flores (Forth 2008) similar hominoids are described as being morbidly fearful of bamboo combs; but this is not actually stated with reference to *ngiung*. In two narratives, humans further employ dogs to attack *ngiung*, and in the third, *ngiung* are shown to be especially afraid of dogs – a fear identically ascribed to other central Florenese hominoids, including the Nage *ebu gogo*. In one text, local humans finally defeat the *ngiung* by introducing bees and wasps into their cave.

In all three narratives, a single *ngiung* is described as communicating with humans, evidently in a language known to both. In Text 3, the creatures are depicted as using weapons (apparently sticks or clubs) and employing bamboo containers. In Texts 1 and 3, they abduct, or endeavour to abduct humans (an infant in one instance, an elderly man in another), and in one case the abduction is motivated by anthropophagy. With the possible exception of possession of technology (tool use if not manufacture), these too are all behaviours attributed to other Florenese hominoids – and especially in regard to abduction of humans, to hominoids in other parts of the world.

All three tales represent *ngiung* as living in groups. In at least two instances, they inhabit a cave. Text 3 further describes groups of *ngiung* residing in several different mutually distant locations. In this same narrative, a particular cave is described in some detail: it is situated "high up a long and steep, vertical cliff face" in an area "covered in thick jungle" where "people never even thought about going." Moreover, "the path *ngiung* used to travel to the cave was very narrow, requiring walking in a single file." This isolated spot, difficult of access by

1 Although Verheijen initially transcribes the name as "Razong," it has appeared in print as "Rajong"; hence I employ the latter transcription. At the same time, whereas Erb writes "niung," Verheijen gives the name as "ngiung." Partly because "ngiung" more closely resembles names for similar creatures from other languages and dialects spoken in both the Manggarai and Ngada regencies, I have chosen to follow Verheijen's transcription.

2 These are translated mainly from Verheijen's apparently quite literal translations from Rajong to Bahasa Indonesia. For particular points of translation, I have further referred to the original texts in Rajong, a language related to languages spoken in the Ngada and Nage-Keo regencies with which I am familiar.

humans, is similar to other locations Florenese peoples report as once having been inhabited by hominoids – and probably none more so than Lia Ula, a cave in Nage territory formerly occupied by the creatures named *ebu gogo*. In Text 1, villagers use a ladder to climb up to a cave occupied by *ngiung*, a detail reminiscent of Nage statements that a long ladder would be required to reach the cave that the *ebu gogo* formerly occupied (Forth 2008: 19 f.).

Consistent with their group-living and the danger they pose to human populations, in all three stories local people – in two instances the residents of particular (though unnamed) villages – attack or otherwise bring about the deaths of numerous *ngiung*.[3] In this way, the creatures are shown to be mortal and ultimately vulnerable to human aggression. Apparently in all instances the killing results in the extermination of a whole local group of *ngiung*, while in one it is explicitly stated that the human attack rendered the creatures extinct, so that "nowadays there are no longer *ngiung* on the face of the earth."

What the *Ngiung* Ate

Text 2 indicates a more positive relationship between humans and *ngiung*, as in this narrative the hominoids endeavour to initiate an exchange of foodstuffs. The *ngiung* wish to trade two sorts of tubers for eggplants and charcoal, items about which I shall have more to say below. The tubers are not specified as plants cultivated by the *ngiung*, nor is it indicated how the hominoids might otherwise have obtained them (for example, through theft). At least one kind, however, is a species of wild tuber.

The contract between humans and *ngiung* is significant for two reasons. First, in regard to hominoids recognized by people on Flores and elsewhere in eastern Indonesia, this seems to be the only reference to a material reciprocity – an exchange of goods for goods – between the creatures and local humans. On the other hand, the exchange is reminiscent of a silent trade reputedly conducted between local people and hominoids in the Caucasus and parts of Africa, as well as attested instances of the same practice involving local cultivators and equally human hunter-gatherers such as African pygmies and the Vedda of Sri Lanka (Forth 2008). Secondly, and by the same token, the putative exchange relationship is one of relatively few indications that the *ngiung* – or any of the hominoid images of Flores – may ultimately be grounded in a culturally or phenotypically distinct population of *Homo sapiens* conspecific with, but normally territorially or ecologically separate from, the human creators of the narratives.

Even more intriguing details revealed by Verheijen's texts, and ones of possibly even greater relevance to the ontological status of *ngiung* and comparable Florenese hominoids, concern the creatures' reputed diet. In two of the three Rajong narratives, *ngiung* are described as eating wood charcoal, in one case stealing it from human fireplaces, and as consuming charcoal together with eggplant. Eggplants, typically stolen from cultivated fields, are described as a favourite food of hominoids in several parts of central and western Flores (Forth 2008: 17, 52, 54, 61). Theft and consumption of eggplants could conceivably be attributed to known animals or human pilferers. Charcoal, however, is a somewhat different matter. It also raises comparative questions of several kinds.

The first is ethnographic. Erb describes the Rajong creatures as having "a passion for eating eggplants as well as the *live coals* of banked fires" (1987: 242; emphasis added). Although Erb's account thus confirms an association of eggplant consumption with what may be generalized as ingestion of "coal," Verheijen in contrast clearly and consistently specifies "charcoal" (BI *arang*; Rajong *kara*), that is, wood coal which has cooled and is no longer hot. To that extent, the substance allegedly consumed by *ngiung* could indeed be ingested by an empirical animal, something which of course cannot literally apply to "live coals." Why *ngiung* might consume charcoal is a question I address later. First, however, it should be noted that consuming either charcoal or live coals is a practice attributed not only to *ngiung* but to several other central Florenese images. These comparative reports are somewhat ambiguous, and it is precisely in this respect that the Rajong evidence concerning charcoal ingestion by hominoids assumes a special value.

Located to the east of Rajong, the people of Poma and Rawe recognize small, hairy hominoids named *ana ula* which they now mostly describe as extinct. In 2005, Poma people told me that *ana ula* stole "coals" from local hearths (Forth 2008: 52). At the time, I was unable to confirm whether the

3 In the story recounted by Erb (1987: 97 f.), apparently a variant of one recorded by Verheijen, the attack was carried out by inhabitants of a village named Nanga. This followed the abduction of a child from a field hut in a garden site called Rokot, described as located between "the old villages of Nanga and Lando." The suggestion is that these settlements are now abandoned. Located somewhere near Nanga, according to Erb, is or was a place called "*ngiung* grave" (*rate niung*), which is where the slaughtered creatures were supposed to have been buried. Recent enquiries I conducted in 2010 indicate the possible existence of one or more *ngiung* burial sites in other parts of East Manggarai.

creatures consumed the coals; however, in 2010 a Nage man resident part-time in Poma, which lies to the northeast of Nage, stated that the Poma hominoids ate as well as stole charcoal (*kapu api*). Some twenty-five years before, also in the Nage region, I had recorded a secondhand report that the *ana ula* of Poma and Rawe "like eating live coals (*fanga api*) which they steal from people's houses" (Forth 1998: 102). Obviously, then, the evidently fantastic idea of a creature eating *live* coals was already in my mind well before I composed my 2008 monograph, and it was likely consolidated when I read Erb's 1987 description of the Rajong *ngiung*, three or four years after I first heard about coal-eating *ana ula* from people in the Nage region. The Nage term *fanga api*, it should be stressed, does indeed denote "live coals," and contrasts with *'atu* (or *'atu api*) and *kapu* (or *kapu api*) words Nage apply to (cooled) charcoal.[4]

Elsewhere in my book (Forth 2008: 54 f.), I refer to creatures similar in all essentials to the Rajong *ngiung* and Poma *ana ula*, which the people of Tana Wolo, a district to the west of Poma, designate as *noa*, or *ana noa*. These creatures, too, are described as habitually "stealing eggplants and also live coals," and as I further note in this case, Tana Wolo people stated explicitly that the thieves ate the coals. Returning to my 2005 fieldnotes, however, I find additional details. First, these *noa* were described as taking the coals from "field huts or outdoor fires" (rather as in the Rajong story of the *ngiung* attempting to steal charcoal from a hearth inside an elderly man's remote garden dwelling). Second, my notes show that Tana Wolo informants specified the object of the *noa*'s theft with the Indonesian phrase *arang api*, a term which (although *api* is "fire" in both Indonesian and Flores languages) appears not to refer to live coals. This was confirmed by a Nage man whom I questioned in 2010. A regular visitor to Tana Wolo, he stated that people there had told him that *ana noa* steal or formerly stole "charcoal" from field huts in order to eat it. Tana Wolo folk would cover charcoal remaining in fireplaces with ash and stones in order to prevent such theft, since dead fires can be difficult to rekindle in the absence of a layer of charcoal on top of bare ground – or were so in the days before safety matches. (Fires made in Florenese field huts, it should be noted, are laid on the earth in an unenclosed section of the structure, so that charcoal remaining from these would be readily accessible to animal or other thieves, especially when human occupants are absent.)

The fact that, in my previous writing, I did not fully pursue the question of what exactly was stolen and eaten by the *ana noa* of Tana Wolo is partly attributable to the aforementioned impression, which I had held since the 1980s, that creatures of this general sort were believed somehow to eat live coals. In my 2008 work I further refer to hominoids whom the people of So'a – a district to the northwest of the Nage (and thus closer to Poma and Tana Wolo) – designate as *toro gogo* (a name partly cognate with the Nage *ebu gogo*). These I also describe as possessing "the curious habit of eating live coals" (Forth 2008: 56). But here, too, additional ethnographic detail is in order, for my notebooks show that So'anese informants referred to the object of consumption both with the Indonesian term *bara api* (*bara* in standard Indonesian is "coal"; *api* is "fire") and with the local term *kapu api*, which in some So'anese dialects seems to refer to charcoal, as does the same term in Nage.

However these several terms are to be interpreted, it is clear that the object of hominoid thefts and consumption in Poma, Tana Wolo, and So'a is not unequivocally "live coals." What is absolutely clear is Verheijen's specification of this object in Rajong as "charcoal" (*kara*). And in view of this, and several statements I myself recorded in neighbouring regions, I conclude that at least some people in this part of Flores, including people in Rajong, maintain a representation of hominoidal beings that steal and eat *charcoal*. We are of course still left with the fact that Erb refers explicitly to "live coals," as apparently did some of my informants in other parts of west central Flores. A possible explanation is that, in some places (including, possibly, some parts of the Rajong region), a more naturalistic representation has been elaborated in a fantastic direction – a common process I have commented on previously (Forth 2008: 39–42). It is just conceivable that Verheijen's texts, and possibly some of my own field data as well, reflect the opposite transformation. But especially since, as I show in a moment, charcoal consumption by both humans and animals, on Flores and elsewhere, is empirically well founded, this would seem highly unlikely. Given Verheijen's vast linguistic and ethnographic experience, it is even less likely that he was somehow mistaken in his specification of charcoal. Moreover, it would seem significant that Verheijen's texts were record-

4 While Nage often describe *'atu api* and *kapu api* as synonymous, *'atu* more specifically denotes hard charcoal, especially that used for making marks or, nowadays, writing. *Kapu*, by contrast, can refer to softer charcoal that readily crumbles, and some informants accordingly described it as a material more like ash (*awu lapu*). Generally, though, *kapu api*, like *'atu api*, is translated with Indonesian *arang* (charcoal) and both are definitely distinct from *fanga api*, "live coals."

ed some decades prior to Erb's fieldwork in central Flores in the 1980s, and to my own.[5]

Analysis

If *ngiung* and comparable hominoids ate charcoal, this is an additional element contributing to the naturalistic character of the representation. For like other items of *ngiung* diet indicated in the Rajong texts (eggplants and, apparently, two sorts of tubers), charcoal is a substance regularly consumed by some animal species, including primates, and by certain human populations. Non-primates observed to consume charcoal include deer, elk, wild horses, and dogs (Engel 2002: 71; Struhsaker et al. 1997: 62), while archaeological findings suggest pre-sapiens hominins may also have eaten charcoal.

On Flores, villagers in the Nage region described pigs (both domesticated and wild), deer, goats, buffalo, horses, cattle, and dogs as animals that will eat, or lick, charcoal from outdoor fires; two informants speculated they may be attracted by the salty taste. Pigs were the animals mentioned most often. Although no one thought macaques consumed charcoal, there is a notion that these monkeys, more specifically named Long-tailed or Crab-eating Macaques (*Macaca fascicularis*), will poke crustaceans they have caught into the remains of dead fires, in a futile attempt to cook them (Forth, fieldnotes 2010). Fires made by humans, including fires set by hunters to drive game, are not the only source of charcoal for wild animals on Flores. As the island is highly volcanic, charred tree stumps and branches from fires caused by volcanic activity are another regularly available source.

Florenese also describe charcoal as a substance occasionally consumed by local humans. For humans and animals generally, available evidence points to two related values of, and therefore possible motives for, charcoal consumption: as a curative or as a dietary supplement counteracting deleterious effects of toxins contained in plant foods. The effectiveness of activated charcoal as an antidote for poisons and plant toxins consumed by humans is now well established. "Activated charcoal" refers to charcoal taken from "the controlled pyrolysis of the starting material and subjecting it to the action of an oxidizing gas such as steam or air in elevated temperatures" (Cooney 1980: 6). This process enhances the adsorptive power of the charcoal, but the effects of the product do not differ qualitatively from those of charcoal produced by other means, including natural fires (Cooney and Struhsaker 1997). In Zanzibar, Red Colobus monkeys (*Procolobus kirkii*) eat charcoal obtained from charred wood and tree stumps or snatched from local kilns. The preferred diet of the monkeys, especially troops feeding near cultivated fields, includes Indian almond and mango leaves, plant foods rich in protein but also high in phenolics. Charcoal counters these toxins by adsorption, a fact that explains higher birth rates and population densities of Colobus monkeys living in Indian almond and mango tree habitat relative to those of monkeys inhabiting other parts of the region. It is further suggested that ingesting charcoal to counteract adverse effects of potentially toxic substances in their diet is a behaviour acquired by these monkeys through learning (Struhsaker et al. 1997).

While Red Colobus are the only nonhuman primates for which there is conclusive evidence of charcoal consumption, chimpanzees in the Gombe region of East Africa will "quite frequently" enter the empty huts of fishermen and, for up to ten minutes, feed on ash from cooking grates (Goodall 1986: 247). Wrangham (1977: 519) similarly mentions ash among organic foods consumed by Gombe chimpanzees, eaten rarely, but for up to twenty minutes at a time. One authority has speculated that ash consumed by elephants and domestic livestock may act as an antacid (Engel 2002: 72 f.). But why chimps might eat ash is nowhere stated; nor is it clear whether the ash in question has the same properties as wood charcoal. Even so, humans are known to use ash as a detoxifier. For example, Johns (1990: 79) refers to a West African practice of detoxifying rhizomes of *Anchomanes difformis* by adding "hearth ash" to cooking water. On Flores, Nage people consume ash with tamarind fruit, to counter the sour, acidic taste; in solution, it is said to cure diarrhoea, an unidentified illness compared to malaria, and bed-wetting in children.

Returning to primates, it may be relevant that chimpanzees that consume toxic plant materials also eat particular clays taken from termite mounds, apparently to reduce the toxicity of these plants. It is, therefore, conceivable that the same ape's habit of eating ash performs the same function, as evidently does charcoal consumption among Colobus monkeys. Ingesting clay – or geophagy to use the more inclusive term – has been confirmed among several primate species besides chimpanzees, including Rhesus Monkeys (*Macaca mulatta*) and Leaf-eating

5 Dr. Marie-Antoinette Willemsen, Verheijen's biographer, has kindly informed me (pers. comm. 6 and 17 January 2010) that the Rajong texts were most likely recorded in the 1960s by two men, Paulus Tiwu and Darius Kondo, probably two local school teachers who assisted Verheijen in his linguistic work. The latest the texts would have been recorded was the 1970s.

monkeys (*Presbytis* spp.; see Clutton-Brock 1977: 234, 348, 497–499). Noting the absence of clays suitable for adsorbing plant toxins in the Colobus environment, Struhsaker et al. (1997: 71) suggest that charcoal consumption may be "functionally analogous to" and thus a substitute for clay eating in other populations or species. So what applies to these monkeys could apply occasionally or regionally to great apes.

Charcoal consumption has a more definite and apparently more widespread incidence among *Homo sapiens*. As a medicine or detoxification agent, deliberate ingestion of charcoal has been reported for Asian, African, and Native North and South American Indian communities. In western Kenya, Luo and Kisi tribesmen told Johns (1990: 89) that some people, most commonly pregnant women, consume charcoal; circumstances suggest they do so because of charcoal's efficacy as a detoxifier. Charcoal eating by infants among the Badaga of India has been attributed to "dietary deficiency" (Hockings 1980: 30 f.), while for traditional Iranians the practice is reported as a pregnancy craving (Massé 1954). Among the Alaskan Tlingit, both children and old people ate charcoal, consumption by the elderly being locally interpreted as a symptom of child-like, senescent behaviour (Laguna 1972). Chippewa (Ojibwa) children were traditionally encouraged to eat charcoal in order to strengthen their bones and acquire resistance to sickness, and also as part of certain ritual procedures (Hilger 1951). An association of characoal consumption with young people is also indicated by a report on the Warao Indians of Venezuela, among whom otherwise well-fed boys are described as compulsively eating "dirt and charcoal" (Turrado Moreno 1945: 138). The author speculatively ascribes this practice to the incidence of intestinal worms; he further links Warao eating of "dirt" to a diet deficient in calcium and phosphate.

In eastern Indonesia, human consumption of charcoal is reported from both Flores and Sumba. Among the Nage, powdered charcoal in solution is taken to cure diarrhoea, and also as an anti-toxin, for example when consuming certain fish thought to contain poison.[6] The same uses of charcoal, as an antitoxin and as a treatment for diarrhoea, were reported in East Manggarai (Elar). In the first case it was suggested that charcoal might counter the toxic effects of certain tubers, foodstuffs which, as already noted, are also associated with *ngiung*.[7] Two Nage women mentioned habitual consumption of charcoal by elderly and middle-aged females. Neither informant knew any reason for this practice, but one, who referred to a particular case – a deceased aunt she had known as a young girl – was certain the woman was healthy and not "insane." Also among Nage, eating charcoal, along with other things not ordinarily consumed, is known as a practice of pregnant women (Forth, fieldnotes 2010).

While eating clay and charcoal has sometimes been construed as an individual behavioural abnormality (see, e.g., Lackey 1978: 125), the evidence for charcoal ingestion as a normal curative or dietary practice in human cultures, both past and present, thus appears substantial. Writing on Australia, Rowland (2002) has argued that the ingestion of clay and charcoal, a practice he describes as "global in distribution" and of "considerable antiquity," may have been introduced by Aboriginal ancestors coming either from Southeast Asia or Melanesia some 40,000 years ago. As a means of adsorbing dietary toxins, Rowland further suggests, the practice may have enabled the earliest Australian colonists to "adapt to toxic plants earlier and more easily than has usually been assumed." Direct evidence for Aborigines purposely consuming charcoal, as opposed to clay, is apparently rare. Nevertheless, from circumstantial evidence Rowland is able to demonstrate that "Indigenous Australians were aware of the biochemical functions of charcoal," as they were of clay (2002: 58) – a conclusion indirectly supported by my recent findings on charcoal use on Flores. Rowland's essay is of more general interest, since he argues for geophagy (a term he uses for the consumption of charcoal as well as clay) as a prehistoric practice favouring the evolution of "hominids that could efficiently harvest underground tubers" (2002: 61, citing O'Connell et al. 1999) – a development that occurred two million years ago and thus before the advent of cooking, "the primary mechanism for making plants available to humans" (Rowland 2002: 53). In regard to the seemingly nonhuman *ngiung* of Rajong, the possible significance of this interpretation will become apparent below.

As might be expected, evidence for consumption of charcoal by pre-sapiens hominins is scarcer

6 In one account, fish killed with homemade bombs (apparently made from a combination of kerosene and nitrates from fertilizer) were also specifically mentioned; in this case, charcoal is added when boiling the fish. A woman recommended taking charcoal with water after eating any food inadvertently received from someone suspected of being a witch.

7 On Sumba, charcoal (in one instance charcoal from a particular tree) mixed with water was described as a remedy for bloody diarrhoea, bloody vomit, and internal bleeding resulting from wounding (Forth, fieldnotes 2010). Similarly, on Flores, charcoal mixed with coconut oil can be rubbed on the body to cure sores, while soot mixed with kerosene is used to treat wounds and sores on horses. Soot mixed with water can also be taken by humans suffering from bloody diarrhoea.

than for modern or historic peoples or nonhuman primates. Nevertheless, several authorities have interpreted evidence from analyses of coprolites as indicating charcoal ingestion by archaic Homo (especially *Homo neanderthalensis*).[8] In all cases, the origin of the interpretation is evidently E. O. Callen (1969; see Kliks 1978: 184). In a report on coprolites excavated from Lazaret cave near Nice in southern France, and dating to 150,000 years ago or earlier, Callen describes what is "very probably a human coprolite" as containing "what appear to be small fragments of charcoal" (1969: 124). Admittedly, this is slender evidence for deliberate consumption of charcoal, as the substance could have been ingested accidentally with cooked food. Even so, in the light of more recent indications of the beneficial effects of charcoal ingestion as well as observations of deliberate charcoal consumption by nonhuman primates and by various ethnolinguistic groups (many of which were published only after Callen wrote), the hypothesis that ancient hominins and prehistoric human populations ate charcoal takes on an additional plausibility.[9]

In view of the efficacy of charcoal in adsorbing plant toxins, the association of *ngiung* charcoal eating with their reputed consumption of eggplant (or aubergine, *Solanum melongena*) takes on a special significance. So too does a report by Tana Wolo people that eggplant fruits nibbled by the hominoids they call *noa* – and evidently not subsequently taken away by the creatures for further consumption – taste exceptionally *bitter* when later cooked and consumed by humans (Forth, fieldnotes 2005). A bitter taste, in the latter case obviously not removed by cooking, is of course a possible indication of plant toxicity. More recently I learned from Nage informants that red ants which infest eggplant leaves can cause the fruit to taste bitter (Forth, fieldnotes 2010), possibly, one might infer, as an effect of formic acid. However, ants do not "nibble" at eggplant fruits, so ant infestation cannot fully explain the Tana Wolo report.

Inherent bitterness, on the other hand, reflects the presence in eggplant of glycoalkaloids (Tiwari et al. 2009: 9), one of which, solanine, can be very toxic even in small quantities. A member of the nightshade family (Solanaceae), eggplants (*Solanum melongena*) further contain nicotinoid alkaloids, which can be toxic in large doses. Cooking apparently reduces or prevents deleterious effects of ingesting raw eggplant – either the fruit, crown (calyx), or leaves. At the same time, charcoal can adsorb both nicotine (Cooney 1980: 4) and other alkaloids (Cooney and Struhsaker 1997: 237), as well as phenolics and tannins, potentially toxic substances present in both the fruit and crown of eggplant (Tiwari et al. 2009: 10)

While it is not entirely clear whether toxic substances present in eggplants are effectively counteracted by natural charcoal, Cooney's work on the adsorptive capacity of activated charcoal suggests that they probably are. According to the prevailing view, *Solanum melongena* is harmless to humans and the eggplant's traditional reputation – for example as the "mad apple" (or *Solanum insanum* in Linnaeus's original classification) and as a cause of mental derangement – reflects transference from other members of the Solanaceae (Heiser 1987: 47–51). Some varieties of eggplant are even consumed raw by humans, without apparent ill effects. Even so, the general assessment appears mostly to presume cooking as well as consumption, in moderate quantities, of the fruit alone (the part normally eaten by modern humans). Hence there remains the possibility that consumption of uncooked eggplant by some nonhuman (or non-sapiens) creature will produce negative effects, and moreover that these can be countered by the ingestion of charcoal.[10] At the same time, it should be noted that eating charcoal in response to the bitter taste of raw eggplant does not require that *Solanum melongena* be invariably toxic. Bitterness can indeed indicate toxicity. However, the behaviour could develop from consuming other bitter plants which *are* toxic, and then be extended to all bitter-tasting plants.[11] Relevant here is the implicit consumption by *ngiung* of toxic wild tubers (about which more below).

There is also the question of degrees of bitterness, and hence toxicity, among different varieties of eggplants. Nage distinguish several sorts of eggplants, including kinds which grow wild, which are

8 See Engel (2002); Johns (1990); Kliks 1978).

9 Hominin occupants of Lazaret Cave were not clearly *Homo neanderthalensis*; they could have been *Homo heidelbergensis*. But this distinction is hardly germane to our present concern.

10 Eggplant is further credited with positive medicinal properties. Conceivably, in addition to the plant's nutritional value, these qualities could motivate the consumption of *Solanum melongena* not just by humans but by various kinds of nonhuman animals, whose practice of consuming plants for curative purposes is becoming increasingly known (see Engel 2002).

11 I am grateful to Cindy Engel (pers. comm. 4–6 March 2010) for pointing this out. As Dr. Engel also notes, a proclivity to charcoal consumption could either be an adaptive behaviour which is a product of natural selection – and so be biologically based – or a response to bitter tastes that is acquired through experience and passed on through learning (as apparently in the case of the Colobus monkeys studied by Struhsaker et al.).

described as especially bitter, and which are, therefore, not usually eaten by humans. Presumably, if *ngiung* stole cultivated eggplants, they would also have consumed eggplants growing wild, and insofar as the latter taste especially bitter, any habit, such as consuming substances containing antitoxins which they may have developed from consuming wild plants, could have been further applied to the consumption of cultivated varieties. In the Elar region of East Manggarai, one sort of thorny wild eggplant is named *toro ngiung*, a designation said to refer the resemblance between the shape of the fruit and the breasts of female *ngiung* (Forth, fieldnotes 2010).[12]

While Florenese generally recognize that ants can infest the leaves, how far larger animals consume eggplants is subject to disagreement. In the Nage region, two informants described goats and deer as eating the leaves, and porcupines (*Hystrix javanica*) and Flores Giant Rats (*Papagomys armandvillei*) as creatures that will eat the fruit, with one man mentioning the distinctive teeth marks and tracks of porcupines as supporting his claim. Other people, however, denied that eggplants are ever susceptible to depredation by porcupines or other rodents, while people questioned in East Manggarai stated that only *ngiung*, and not any other creature, ate eggplants. No one I spoke to believed that Long-tailed Macaques, the only scientifically attested nonhuman primates on Flores, stole or consumed eggplants. Thus the idea, current in several parts of the island, that a hominoidal creature is given to the practice cannot readily be attributed to the actions of any known animal, wild or domestic.

As illustrated by the Elar term *toro ngiung*, linguistic evidence suggests that the association of central Florenese hominoids with eggplant consumption may be closer than what is indicated by the evidence of ethnography or Verheijen's Rajong texts. Among the reputed eggplant eaters are the previously mentioned creatures which the people of So'a name *toro gogo*. *Toro* has several meanings in Florenese languages, including a colour largely corresponding to English "red," while in Ngadha *toro gogo* can refer a spider and, by extension, any frightening image (Forth 2008: 292, note 5). In the So'anese dialect of Lo'a, *toro gogo* is the name of a hairy red and black caterpillar. But in other dialects of So'a *toro* alone denotes the eggplant (Verheijen 1984: 20; 1990: 42, 18 s. v. bara), as it does in Rembong (Verheijen 1977), which is closely related to Rajong, and in all languages of Manggarai (Verheijen 1984: 20; and see footnote 12). What *gogo* means in So'anese I am unable to confirm; however, in neighbouring languages, including Nage, the term denotes voracious consumption. Hence *toro gogo* could mean something like "eggplant glutton," a sense particularly suited to the widespread reputation of central Florenese hominoids as stealers not only of charcoal but, among cultigens, of eggplants as well.

A close association between Florenese hominoids and eggplants is of course consistent with indications that the *ngiung* consumed eggplants simultaneously with charcoal. Even so, it is nowhere stated that the creatures ate charcoal only with eggplants. As pointed out earlier, in Rajong Text 2 the *ngiung* are described as providing human youngsters with two sorts of tubers in exchange for charcoal and eggplants; hence it is reasonable to suppose that these tubers were also consumed by the legendary hominoids themselves. One species, in Rajong named *tétéq* (cf. Bahasa Indonesia *ubi tatas*), may be either the sweet potato (*Ipomoea batatas*) or a species of yam; but which is uncertain. The other kind, called *uwi* (or perhaps *uwi gia*), is elsewhere identified by Verheijen (1984: 53, 86) as *Dioscorea pentaphylla*, a plant he describes as an "edible wild dioscorea." The Indonesian name is *ubi pasir*. Often known in English as the Five-leaf yam, the tuber is exploited in various parts of Asia as a famine food and is usually rendered edible by leaching and cooking. Otherwise, the tuber is toxic, and although highly nutritious, eating it raw causes, among other things, severe irritation and inflammation of the mouth (Katewa et al. 2008: 271 f.). How consuming charcoal might counter this effect is unclear. Nevertheless, by all indications the *ngiung*, like all other Florenese hominoids, lacked fire and, therefore,

12 Wild eggplants identified by Nage include *dhoso 'e'e'* ("ugly" or "bad" eggplant) and *dhoso ga* ("thorny" eggplant), also called *dhoso witu* (*witu* is "forest," and contextually "wild"). Both, however, appear to have thorns. According to one account, some people now plant and consume *dhoso ga*. Otherwise, they are used, interestingly enough, to make the necklaces with which Nage adorn sacrificial buffalo. Referring to Rembong, a language closely related to Rajong, Verheijen (1977) gives *toro* as "small eggplant, *Solanum melongena*"; *toro-tok* as "a small, thorny, wild eggplant (*Solanum* sp.)"; and *toro-mézéq* as a "large kind of eggplant." I can find no evidence that these differ significantly in their chemical constituents. Elsewhere, Verheijen (1984: 20) notes that the large eggplants were introduced into the Manggarai region "only a few decades ago," but he adds that a "smaller variety with yellowish, globose fruits, measuring 2–3 cm in diameter, must have been known already among the Manggarai a long time ago." He further speculates that the name *toro* may be original Manggarai and may have been "the name for a wild native *Solanum* sp." The latter is apparently the wild thorny kind specified in Rembong as *toro-tok* and in Nage as *dhoso ga*, and may correspond to the scientific taxon *Solanum ferox*. That eggplant is native to Southeast Asia is a view held by several authors (see Heiser 1987: 50).

knowledge of cooking. Hence if they – or creatures to which the Rajong name ultimately refers – did eat wild yams, they must somehow have been capable of facilitating their consumption, and comparative evidence suggests charcoal ingestion as a hypothetical possibility.

Further Observations

In addition to the putative creatures' habits, other features of the *ngiung* described in the Rajong myths warrant commentary as clues to their ontological status. As noted, Text 2 expressly distinguishes *ngiung* – as a reference to hominoids the narrator explicitly describes as extinct – from still surviving flying creatures also named *ngiung*, or more completely *ngiung raé*. All evidence indicates that the second name refers to an onomatopoeically named owl, and most likely to the Brown Hawk-Owl (*Ninox scutulata*; Verheijen 1963: 684, 711; 1977: 112), a species elsewhere named *iu*, *wéu-kondo* or *wiu-kondo* (*kondo* alone refers to a large diurnal raptor, *Haliastur indus*). In other parts of central and western Flores, hominoids comparable to *ngiung* are similarly labelled with names that simultaneously denote the hawk-owl or its cry (Forth 2008). Yet it is especially in the Rajong narrative that a distinction is explicitly drawn between a fully attested species of bird and creatures which could be equally natural but which in any case are not demonstrably supernatural, not least because they are represented as extinct and as having been rendered extinct by human action. Expressed another way, the contrast registered in Text 2 plainly shows that Rajong people do not regard the *ngiung* hominoids as creatures that can fly or that somehow share their being with a kind of empirical bird (for example, by being able to transform into the bird). The distinction is recognized elsewhere on Flores. Referring to unspecified parts of Manggarai, Verheijen (1963: 684) notes that beings called *iu* (which are evidently of a kind with the Rajong *ngiung*) are distinguished from the identically named hawk-owl as *iu-lako-wa'i*, "*iu* that goes on foot," and *iu-hang-toro*, "*iu* that eats *toro* [eggplant] fruits." (The second phrase of course further attests to the association of eggplants with hominoidal creatures rather than with birds.) In all likelihood, the coincidence of names reflects a similarity of sounds, a shrill hoot in the case of the owl and a high-pitched voice commonly attributed to small-bodied hominoids in several parts of Southeast Asia and even further afield (Forth 2008). Alternatively or additionally, it may be connected with a Florenese conception of owls as birds with hominoid faces (Forth 2004: 76).[13]

In her summary of a Rajong tale, Erb (1987) depicts Rajong *ngiung* as tending buffalo. More specifically, she states that "because there had never been anything but friendly relations between niungs and human beings, niungs were often in the meadow herding *the* wild buffalo" (1987: 98; emphasis added). Elsewhere, Erb indicates that this "meadow" was located somewhere near a village called Nanga. Although buffalo tending is not a *ngiung* attribute mentioned in Verheijen's texts, it may not be entirely coincidental that, in Text 2, a *ngiung* approaches two boys while they are tending buffalo, implicitly in a lonely spot some distance from their village. Erb's account may, therefore, refer to a scenario not entirely different from this, particularly as her seemingly explanatory reference to former "friendly relations," and the definite article before "wild buffalo," suggest that the creatures may have been tending the animals on behalf of human owners.[14] Also relevant is the traditional practice of leaving buffalo to roam free in areas of pasture, with reference to which Nage and other central Florenese sometimes describe free-ranging animals as "wild," that is, as actually or potentially feral.

Even if there were a local belief that presently extinct *ngiung* once owned, or at any rate tended, feral buffalo, this idea might not be entirely fantastic. Nor would it necessarily point to an unidentified group of human pastoralists, for it could be grounded in another sort of association. In Africa, scientifically unattested hominoid categories, probably traceable to certain local experiences of chimpanzees, are similarly associated with Bush Pigs (*Potamochoerus porcus*), an idea possibly reflecting the fact that chimpanzees regularly prey on young Bush Pigs (Goodall 1986: 275–277; Forth 2008: 221, 224). It may also be noted that the "orang pendek" (or "short man") of Sumatra, a representation that has been linked to extraterritorial orangutans or an

13 Nage people also describe owl faces, especially those of eared owls, as resembling cat faces (Forth 2004). Associations between putative hominoids and cats are found in various parts of Indonesia (see Forth 2008). Although the issue is complex and cannot be reintroduced here, it may be noted that East Manggarai people questioned in 2010 also described *ngiung* as having faces like cats.

14 If so, then we would again encounter a theme of human-hominoid reciprocity. Although not indicated in Verheijen's texts, the idea that in the earliest times relations between humans and *ngiung* were relatively peaceful is also found in the Nage tradition of the *ebu gogo* and Poma stories regarding the *ana ula*. In the second case, the hominoids are described as having once assisted Poma people in the construction of stone terraces (Forth 2008).

undiscovered species of ape, is similarly reputed to herd wild pigs (Forth 2008: 227). Once again, therefore, an idea which may initially seem to indicate a purely imaginary or supernatural being, on closer inspection reveals a different possibility, based in local zoological and ecological experience.

Before concluding, attention should be given to a peculiarity of Verheijen's Rajong corpus. In addition to the three stories about *ngiung*, there is another which, although Verheijen gives it the Indonesian title "Dongeng ngiung dan manusia" (Story of *Ngiung* and Humans), does not concern *ngiung* but refers instead a sort of malevolent spirit called *bapuq* (translated by Verheijen with Indonesian *setan*, that is, "satan, devil"). In fact, there is no reference to *ngiung* anywhere in the narrative, and compounding the curiosity is its Rajong title, "Tombo bapuq néqé ata" (Story of [a] Bapuq and Humans). The *bapuq* featured in the story takes the form of a human female, and is moreover able to assume the guise of the human hero's own mother. However, her true identity is revealed by her inverted feet, a characteristic which, like shape-shifting, is attributed to other fantastic beings on Flores and in other parts of the world. Although inverted feet have also been reported for the Sumatran "orang pendek," none of these features or abilities is reported for *ngiung*. Nevertheless, the female *bapuq* in the Rajong narrative resembles *ngiung* insofar as she endeavours, unsuccessfully, to abduct the hero, a boy, in order to kill and consume him, and it is probably this similarity which accounts for what can only be construed as a slip of Verheijen's pen. It may also be relevant that, in other parts of Flores, categories largely comparable to *ngiung* appear to conflate an image of a small hairy hominoid with features of malevolent spirits like *bapuq*, and indeed of human witches. It is further noteworthy that the practice of employing a long beard as a cable, attributed to a *ngiung* in another Rajong story (Text 3), is one Nage people attribute to male witches (*polo*; Forth 1998: 60). Indeed, the image of an elderly man with a long beard is a form assumed by several spirit categories in central Flores (Forth 1998: 113, 148, 208), including some which Nage designate as *bapu*. Spiritual beings and *ngiung*, or similar hominoids reported from other parts of Flores, may therefore not be entirely distinct. But then, as I have had occasion to point out previously (Forth 2008), in many parts of the world scientifically attested natural species also are not entirely distinguished from spirits.

Conclusion

Partly informed by Verheijen's Rajong texts, ethnographic evidence suggests there is, or has been until recently, something empirical in central Flores that steals and consumes charcoal, and furthermore that this creature has contributed to the representation of hominoid categories like the Rajong *ngiung*. If no longer in existence – as the same evidence would suggest – then it may have been present in the culturally remembered past. The empirical status of the category is supported by evidence for charcoal ingestion as an adaptive behaviour among both humans, including present residents of Flores, and nonhuman primates.

What the referent of such a category might be is of course another matter. It could be a known animal or it could be *Homo sapiens*. Humans, however, would seem highly unlikely, for the being in question, obtaining charcoal by theft, evidently lacked fire. As noted, besides modern humans, the only known primates on Flores are Long-tailed Macaques, but these monkeys, very common and familiar to local people throughout the island, are not known to consume charcoal, or for that matter, eggplants. Owing to their small size and long tails, it is unlikely in any case that these monkeys would be mistaken for, or fantastically represented as, tailless, erect, and furthermore extinct hominoids like the *ngiung*.

Even if it could be shown that macaques (contrary to the claims of local people) account for charcoal stealing and eating as a component of the representation of *ngiung* and similar Florenese hominoids, this would only confirm the representation's naturalistic character, its grounding in an empirical creature. But there is of course an alternative hypothesis. The *ngiung*, and the behaviours attributed to them, could be entirely or partly imaginary. In that case, however, one would need to explain why a very specific and somewhat peculiar yet completely plausible behaviour like charcoal consumption should be comprised in a largely or completely fictitious image. As discussed elsewhere (Forth 2008, chap. 10), the idea that *Homo floresiensis* survived long enough to make an impression on local *sapiens* cultures which has been sustained to the present day may seem improbable. Nevertheless, stealing and consuming charcoal from human hearths could be one hypothetical component of interaction between the two hominin genera, and one that regularly brought them into contact. It is, therefore, a hypothesis that should be borne in mind by archaeologists and palaeoanthropologists in their future investigations of the recently discovered chrono-species.

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Appendix: Synopses of Verheijen's Rajong texts

Text 1: *Ngiung* and Humans (Verheijen's text number 7)

A woman once left her baby in a field hut while harvesting vegetables. When she returned and went to suckle her child, she found another sort of creature in its place and immediately threw it into the fire. She then heard a *ngiung* in a nearby ravine, singing "my child is perfect, whereas your child is covered in hair." The woman then realized that the *ngiung* had exchanged its child for her own. Returning to her village, she informed the inhabitants, who fetched forked bamboo combs and readied their dogs in order to attack the *ngiung*. Using a ladder to climb to the cave in a cliff face where the *ngiung* lived, they released their dogs, but the animals could only enter halfway. So the villagers went in search of bees and wasps, which they bundled up in cloths and inserted in the cave mouth. Stung by the insects, the screaming *ngiung* fled from the cave and were all struck dead by the villagers waiting outside. None survived, not even a female that was pregnant. (Author's note: This last detail is illuminated by a Poma tradition in which a pregnant female survived a similar holocaust [Forth 2008: 53 f.].)

Text 2: *Ngiung* and the Buffalo Tenders (Verheijen's text number 8)

Two young boys were once tending water buffalo when they were approached by a *ngiung*. The *ngiung* proposed they enter into a trading relationship: the boys would bring charcoal and eggplants, in return for which his band of *ngiung* would provide two sorts of tubers. The boys and the *ngiung* then engaged in a lifting competition. They were unable to lift the *ngiung* but he was able to lift them, because *ngiung* are able to pick up even water buffalo. As they had tried to lift the creature, the boys' bodies took on the typical putrid smell of *ngiung* bodies; this was noticed by their parents when they later returned to their village. The next morning the boys took charcoal and eggplants for the *ngiung* to eat; in return the *ngiung* (plural) gave the boys tubers. On the following day the parents, made suspicious by their children's body odour, went to see what they were doing. When they found them consorting with *ngiung*, they informed fellow villagers. All then set out to wage war on the *ngiung*, taking along their dogs and forked bamboo combs with which to spear the creatures. As a result of the attack, all the *ngiung* were killed. None survived; hence there are no longer *ngiung* on the face of the earth. All that remain are the flying creatures called *ngiung raé*.

Text 3: *Ngiung* and Humans (Verheijen's text number 18)

An elderly man who lived alone in an old garden site would always sleep embracing a young dog he was raising. One night a *ngiung* came along looking for charcoal to eat with eggplants. As the door of the old man's hut was shuttered, the creature climbed to the roof top and let down its long beard in an attempt to take charcoal from the hearth. When the *ngiung* saw the sleeping man, however, it forgot about the charcoal and instead wound its beard around him and pulled him up onto the roof. The *ngiung* then carried the sleeping man off to a cave where a group of *ngiung* lived. Only after reaching the cave did the old man wake up. He then discovered that the puppy which he had embraced as he slept was still under his arm. The *ngiung* intended to kill and eat the old man, so they made preparations for a feast. They invited other *ngiung*, including ones living in distant places, to attend. When all had arrived, they performed a war dance around the elderly man. But just as they were about to slaughter him, he twisted the ear of his puppy dog, which gave a loud yelp. This startled the *ngiung*. The creatures then fetched implements to strike the old man, and bamboo containers in which to collect his blood. But the man again twisted the dog's ear, at the same time revealing the animal. Being much afraid of dogs, all the *ngiung* fled from their cave and fell into the ravine below. Only one *ngiung*, who was unable to run, remained behind. Being incapable himself of descending the steep cliff from the *ngiung*'s cave, the elderly man forced this *ngiung* to carry him down by threatening the creature with his dog. However, when they reached the foot of the ravine, the man declared, "All of you are *ngiung* of the worst kind, always preying on us." He then struck the *ngiung* dead, left the body for his dog to eat, and returned directly to his garden.