



Substance and materiality? The archaeology of Talensi medicine shrines and medicinal practices

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Talensi *materia medica* is varied, encompassing plant, mineral, and animal substances. Healing, medicines, and medicinal practices and knowledge can be shrine-based and linked with ritual practices. This is explored utilising ethnographic data and from an archaeological perspective with reference to future possibilities for research both on Talensi medicine and, by implication, more generally through considering the archaeology of Talensi medicine preparation, use, storage, spread, and disposal. It is suggested that configuring the archaeology of medicine shrines and practices more broadly in terms of health would increase archaeological visibility and research potential.

Keywords: Talensi; medicine; shrines; archaeology; ethnography; substances; healing

Introduction

The Talensi have, famously, been the subject of extensive anthropological research (Fortes 1945, 1949, 1987), but no data on the plants, substances, shrines or treatments used in Talensi medicine are seemingly available in either published or unpublished form (Insoll 2010a). This paper is concerned with exploring the substance and materiality of Talensi medicine shrines and medicinal practices based both on ethnographic data and from an archaeological perspective, the latter with an emphasis placed upon possibilities for future study in relation to the Talensi but also, by more general implication, the archaeology of indigenous medicine in similar contexts elsewhere in sub-Saharan Africa.

Project background

The Tong Hills are located in the Upper East Region of northern Ghana (see Figure 1 in van Dongen, Fraser, and Insoll 2011). They are inhabited by the Talis subsection of the overall Talensi ethno-linguistic group (Insoll 2006; Allman and Parker 2005). No archaeological research had been completed in the area until the start of the current project in 2004, but the Talensi had been the focus of anthropological research, as described, and recently of historical study (Allman and Parker 2005; Parker 2011). The research on Talensi medicine was carried out in October–November 2008 and in July 2009, and the majority of the interviews were

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Table 1. Healers and healing knowledge in the Tong Hills.

Name	Gender	Number of Cures Known (Plant)	Number of Cures Known (Not Plant)	Notes
Tindaan Leebong	M	2	2	The informant is a <i>Tengdaana</i>
Baanab Kunkoe	M	2		
Kunangba Miyet	M	2		
Tee Tindaanzur	M	1		
Zanora Basana	M	1		
Boadnabzor	M	1		
Dok Bolg	M	1		
Bataama Gundaad	M	1		
Naamniya Doagzuk	M	1		
Mbamari Kongvi	M	1		
Boabil Kuug	M	1		
Hon. John Bawa Zuure	M	4		Chief of Tengzug and hence his knowledge is more extensive
Augustine Tabya	M	3		Educated man and closely associated with the Chief
Kwabena Tindaan	M	2	1	The informant is the son of a <i>Tengdaana</i>
Yinbil Lebime	M	1		
Cooper Atonga	M	1		
Saana Kolg	M	1		
Saataron Sungbaza	F	1		Only female healer recorded
Tindaanzor Yinbil	M	1		
Hanson Goldaan	M	2		
Bagnab Sortor-Yin Tengol	M	1		
Boarzor Mielumbe	M		1	
Meyer Kungangba	M		1	
Tibil Tindaan	M		1	
Songbaza Wuyanaya	M		2	The healer is either a blacksmith or related to one
Yin Tee	M		1	
Nabil Tuopan	M	1		
Naatoam Dakobil	M	1	1	Prominent elder

completed by the project research assistant, Elvis Aboluah, who although not Talensi is fluent in Gurunsi, with which the language Talen is cognate. In total, 28 healers were interviewed (Table 1).

The substance of Talensi medicine

The range of substances utilised in Talensi medicine is varied, encompassing minerals, plants, and animal parts and products. In total, 33 plant-based medicines, and 10 medicines predominantly made from other substances were identified (Tables 2 and 3). Of these, five of the plant-based and two of the other medicines were directly linked with shrines through source of medicine, shrine construction as part of the healing process, or shrine propitiation, and 36 were not (Table 2 – where

Table 2. Talensi plant-based medicine summary.

Specimen Number & Name of Medicine Plant(s) (Talen)	Botanical Name(s)	Summary of – (i) Shrine link (Y/N); (ii) No. of ingredients/species used; (iii) Non-plant ingredient; (iv) Mode of use; (v) No. of associated rituals; (vi) Type of associated rituals; (vii) Healing use; (viii) Preparation processes; (ix) Storage or part storage (Y/N); (x) Blood sprinkled (Y/N)
(1)		
a) <i>Lim Sampoo</i>	a) <i>Calotropis procera</i> Ait. F.	N; 4 (3 named, 1 unspecified – any 'plant that crosses the road'); 0; Eaten, bathed in; 1; Sacrifice; Swelling; Charring, mixing, infusing; N
b) <i>Go-on</i>	b) <i>Nauclea latifolia</i>	
c) <i>Tutucuncoma</i>	c) <i>Combretum ghasaleuse</i>	
(2)		
a) <i>Wa-r buur</i>	a) <i>Biophytum petersianum klotzsch</i>	N; 2; 0; Drunk; 0; 0; Stomach problems; Concocion, decoction, boiling, drying; Y
b) <i>Degber Nya-arg</i>	b) <i>Asparagus warnecke</i>	
(3)		
a) <i>Go-on</i>	a) <i>Nauclea latifolia</i>	N; 4; 0; Drunk, poultice or ointment; 0; 0; Stomach problems, Boils etc.; Grinding, pounding, sifting, moulding; Y
b) <i>Babuurg</i>	b) <i>Annona senegalensis</i> Pers.	
c) <i>Ma-an</i>	c) <i>Hibiscus esculentus</i>	
4) <i>Duo</i>	d) <i>Parkia biglobosa</i>	
(4) <i>Tintabg</i>	<i>Pupalia lappacea</i> (Linn.) Juss	N; 1; 0; Eaten, drunk; 0; 0; Coughs, hiccups; Infusing, charring, drying; Y
(5) <i>Nyuhunyuu</i>	<i>Ocimum canum</i> Sims	N; 2 (1 plant, 1 animal); Burnt bird bone; Inhaled, incised, drunk; 1; sacrifice; Convulsions; Charring, mixing, drying; Y
(6) <i>Duur-Teem</i>	<i>Hyptis suaveolens</i> Poit	N; 1; 0; Incised; 0; 0; Snake bites; Unspecified; Y
(7)		
a) <i>Kpantuur</i>	1) <i>Legume</i> (indet.)	N; 3 (2 plant, 1 mineral); Soil from an anthill; Poultice or ointment; 1; Sacrifice; Fractures, dislocations; Grinding; Y
b) <i>Kezi</i>	2) <i>Sorghum bicolor</i>	
(8) <i>Ta-ang</i>	<i>Vitellaria paradoxa</i>	N; 1; 0; Poultice or ointment; 2; Ritual movement, numerical ritual; Back & body pain; Grinding, mixing; Y

(continued)

Table 2. Continued.

Specimen Number & Name of Medicine Plant(s) (Talen)	Botanical Name(s)	Summary of – (i) Shrine link (Y/N); (ii) No. of ingredients/species used; (iii) Non-plant ingredient; (iv) Mode of use; (v) No. of associated rituals; (vi) Type of associated rituals; (vii) Healing use; (viii) Preparation processes; (ix) Storage or part storage (Y/N); (x) Blood sprinkled (Y/N)
(9)		
a) <i>Duo</i>	a) <i>Parkia biglobosa</i>	Y; 3; 0; Drunk, eaten, bathed in, poultice, ointment; 2; Sacrifice, numerical ritual; Boils etc.; Pounding, drying, boiling, charring, mixing; N
b) <i>Aarik</i>	b) <i>Vitex doniana</i>	
c) <i>Yeblig</i>	c) Unident	
(10)		
a) <i>Bagn</i>	a) <i>Ptilostigma thonningii</i>	N; 3; 0; Poultice, ointment; 1; Sacrifice; Cuts & wounds; Pounding, drying, Y
b) <i>Gupielum</i>	b) <i>Acacia (hockii)</i>	
c) <i>Babuurg</i>	c) <i>Annona senegalensis Pers.</i>	
(11)		
<i>Nemaandor-Kpehet</i>	<i>Trichilia emetica</i>	N; 1; 0; Poultice, ointment; 1; Sacrifice; Back & body pain; Peeling, mixing, pounding; N
(12)		
a) <i>Go-on</i>	a) <i>Nauclea latifolia</i>	N; 4; 0; Drunk, eaten; 2; Sacrifice, numerical ritual; Stomach problems; Infusing, mixing, pounding; Y
b) <i>Campo-om</i>	b) <i>Strychos</i> sp.	
c) <i>Gupielum</i>	c) <i>Acacia (hockii)</i>	
d) <i>Bugla</i>	d) Unident	
(13)		
a) <i>Muhud</i>	a) <i>Pennisetum purpurum</i>	N; 2; 0; Poultice, ointment; 3; Sacrifice, ritual movement; incantation/invocation; Back & body pain; Charring, drying, grinding, mixing; Y
b) <i>Mood</i>	b) <i>Andropogon gayanus</i>	
(14)		
a) <i>Tusuuri-Dakomre</i>	a) <i>Dichrostachys cinerea</i>	Y; 2; 0; Drunk; 1; Numerical ritual; Stomach problems; Peeling, washing, pounding, infusing, drying; Y
b) <i>Nantamulg</i>	b) <i>Erythrina senegalensis D.C.</i>	

(15)	a) <i>Ta-ang</i> b) <i>Duo</i>	a) <i>Vitellaria paradoxa</i> b) <i>Parkia biglobosa</i>	N; 4 (2 plant, 1 animal; 1 mineral); Dry beef, soot; Incision; 3; Sacrifice, Incantation/invocation, Numerical ritual; Stomach problems; Grinding, mixing, N; Y
(16)	a) <i>Kokorikot</i> ('Scum') b) <i>Nanoblik</i>	a) NA b) <i>Sclerocarya birrea</i>	N; 2 (1 plant; 1 various); Scum; Drunk, bathed in, eaten, poultice, ointment; 2; Sacrifice; Incantation/invocation; Stomach problems, cholera; Boiling, concoction, decoction; N; Y
(17)	a) <i>Bama</i> b) <i>Zoe</i> ('Flies')	a) <i>Sansevieria liberica</i> b) NA	N; 2 (1 plant, 1 animal); Flies; Poultice, ointment; 1; Sacrifice; Boils etc.; Crushing, grinding, squeezing; Not known
(18)	a) <i>Duo</i> b) <i>Gung</i> c) <i>Muhud</i>	a) <i>Parkia biglobosa</i> b) <i>Celba pentandra</i> c) <i>Pennisetum purpurum</i>	N; 3; 0; Inhaled, poultice, ointment; 3; Sacrifice, Incantation/invocation, numerical ritual; Swelling; Moulding, boiling; Not known; Y
(19)	a) <i>Gu-opuolug</i> b) <i>Yebluk</i> c) <i>LeLeuk</i>	a) Unidentified tree species b) <i>Mitragyna inermis</i> c) Unidentified	N; 3; 0; Drunk; 0; NA; Stomach problems, swelling; Boiling, concoction, decoction, mixing; Not known
(20)	a) <i>Baatab-zariba</i> b) <i>Nanzoongelig</i>	a) <i>Portulaca oleracea</i> Linn. b) <i>Piper guineense</i>	N; 2; 0; Enema; 1; Ritual movement; Irregular menses, Back & body pain; Mixing, drying, pounding; Y
(21)	<i>Naayang</i>	<i>Schweinkia Americana</i>	N; 1; 0; Drunk, poultice, ointment; 0; NA; Swelling; Concoction, decoction, mixing, tying, hanging, pounding; Y
(22)	a) <i>Kenkyendiba</i> b) <i>Sangum</i>	a) <i>Labiale</i> (indet) b) Millipedes	N; 2; Millipedes; Poultice, ointment; 2; Sacrifice, numerical ritual; Toothache, stomach problems; Mixing, charring, pounding, drying; Y; Y
(23)	a) <i>Yogbaak</i> b) <i>Bakaar</i>	a) <i>Hymenocardia acida</i> b) Natron	N; 2; Natron; Inhalation; 1; Sacrifice; Coughs & hiccups; Boiling; N

(continued)

Table 2. Continued.

Specimen Number & Name of Medicine Plant(s) (Talen)	Botanical Name(s)	Summary of – (i) Shrine link (Y/N); (ii) No. of ingredients/species used; (iii) Non-plant ingredient; (iv) Mode of use; (v) No. of associated rituals; (vi) Type of associated rituals; (vii) Healing use; (viii) Preparation processes; (ix) Storage or part storage (Y/N); (x) Blood sprinkled (Y/N)
(24) <i>Nolik</i>	<i>Dialium</i> species	N; 3; Egg, salt; Eaten; 0; NA; Nutritional supplement; Roasting, hollowing; N
(25) a) <i>Muhud</i> b) <i>Mood</i> c) <i>Yognao-saparik</i>	a) <i>Pennisetum purpurum</i> b) <i>Andropogon</i> species c) Buffalo rib	N; 3; Burnt bone; Poultice, ointment; 3; Sacrifice, ritual movement; incantation/invocation; Back & body pain; Charring, grinding, mixing; N; Y
(26) a) <i>Bugla</i> b) <i>Nuom</i> c) <i>Sabina</i>	a) <i>Cochlospermum tinctorium</i> b) <i>Celtis Africana</i> c) Iron Slag d) Stirring stick = <i>Diospyros mespiliformis</i>	N; 4; Iron slag; Poultice, ointment, drunk, eaten; 1; Sacrifice; Piles; Concoction, decoction; Not known; Y
(27) a) <i>Pumpum</i> b) <i>Dabirik</i>	a) <i>Sterculia setigera</i> b) <i>Waltheria indica</i>	N; 2; 0; Drunk; 3; Sacrifice, ritual movement, numerical ritual; Coughs & hiccups; Peeling, concoction, decoction, drying; Y
(28) a) <i>Norifug</i> b) <i>Getsablik</i> c) <i>Gmaan-uut</i>	a) <i>Dichapetalum madagascariensis</i> b) <i>Salacia</i> species c) <i>Dodder</i>	N; 3; 0; Drunk, bathed in; 1; Numerical ritual; Nutritional supplement; Concoction, decoction, tying, folding; Not known
(29) a) <i>Sopiema</i> b) <i>Guvuri</i> c) <i>Dabarik</i>	a) <i>Hygrophilia auriculata</i> b) <i>Bauhinia rufescens</i> c) <i>Waltheria indica</i>	N; 5; 0; Drunk, bathed in; 3; Sacrifice, ritual movement, numerical ritual; Nutritional supplement; Boiling; N

d) <i>Jinkara</i>	d) Unidentified	
e) <i>Titorik</i>	e) Unidentified	
(30)		
a) <i>Nanoblik</i>	a) <i>Sclerocarya</i>	Y; 2; 0; Drunk, eaten; 1; Sacrifice; Cholera; Concoction, decoction; Not known; Y
b) <i>Gbeik</i>	b) Unidentified	
(31)		
a) <i>Nantamulg</i>	a) <i>Erythrina senegalensis</i>	Y; 4; 0; Eaten; 0; NA; Piles; Charring, grinding; Not known
b) <i>Babiurg</i>	b) <i>Annona senegalensis Pers.</i>	
c) <i>Kezi</i>	c) Guinea corn	
d) <i>Cariyen-daan</i>	d) Red corn stock	
(32)		
a) <i>Toupal</i>	a) Baobab fruit	N; 2; 0; Poultice, ointment; 2; Sacrifice, ritual movement; Swelling, boils etc.; Piercing, pounding, grinding, warming, mixing; N
b) <i>Kezi</i>	b) Guinea corn	
(33) <i>Ti-sablim</i> ('The Black Medicine')	a) Bark charcoal	Y; Not Known; N; Drunk; Complex/unspecified; Not known; Spiritual sickness, back & body pains; Charring, grinding; Y
	b) cf. <i>Petrocarpus erinaceus</i>	
	c) <i>Sapotaceae</i> (<i>Vitellaria/Manilkara</i> type).	
	d) indet.	

Table 3. Talensi non-plant based medicine summary.

Specimen Number & Medicine(s) Name (Talen)	Components	Summary of – (i) Shrine link (Y/N); (ii) No. of ingredients/components used; (iii) Mode of use; (iv) No. of associated rituals; (v) Type of associated rituals; (vi) Healing use; (vii) Preparation processes; (viii) Storage or part storage (Y/N)
(1) a) <i>Piem</i> b) <i>Ngman</i> c) <i>Bugsaan</i> d) <i>Ki</i> e) <i>Noa</i>	a) An arrow b) A new calabash c) Charcoal d) Millet e) A fowl	N; 5; Brushing; 4; Sacrifice, ritual movement, numerical ritual, incantations/invocations; Headaches; 0 other than collecting & carrying components; N
(2) a) <i>Suon koba</i> b) <i>Nimbie koba</i>	a) Rabbit bone b) Bird bone	N; 2 (1); Incision, inhalation; 0; NA; Convulsions; Charring, grinding; Y
(3) <i>Kurugbia</i>	Stone	N; 1; Incision, eaten, poultice, ointment; 0; NA; Cuts & wounds; Grinding, infusing; N
(4) <i>Kpilikpire-kuga (Sabina)</i>	Iron slag	N; 1; Eaten, poultice, ointment; 0; NA; Back & body pains, breathing difficulties; Pounding, mixing; Y
(5) <i>Ngmerik-tang</i>	Termite clay	N; 1; Poultice, ointment; 0; NA; Fractures & dislocations; Grinding, mixing; Y
(6) <i>Bagre Tan</i>	Clay from the Kusanaab shrine	Y; 1; Drunk; Complex/unspecified; Complex/unspecified; Multiple (6+); Grinding, mixing; N
(7) <i>Kurug-Zom</i>	Iron powder	N; 1; Incision; 0; NA; Cuts & wounds; Sorting, pounding; Y

(8) <i>Sabina</i>	Iron slag	N; 1; Eaten; 1; Numerical ritual; Piles; Concoction, decoction, boiling; Y
(9) a) <i>Yarum</i> b) <i>Naho numzeo</i> c) <i>Kpolug</i>	a) Salt b) Beef c) Dawadawa seeds (<i>Parkia biglobosa</i>)	N; 3; Drunk, poultice, ointment; 2; Ritual movement, sacrifice; Purification after lightening strikes; Concoction, decoction; Not known
(10) <i>Bagre Tan</i>	Clay ('Red' medicine) from the Tonna'ab Yaane shrine	Y; 1; drunk, poultice, ointment; Complex/unspecified; Multiple (6+); Dissolving, moulding; Y

supplementary data are referred to in the discussion, this is linked into the table by specimen number so the medicine can be identified).

Plants

Eleven medicinal plants were utilised individually, 21 were mixed with other plant species, and in one instance the number of species constituting the medicine is unknown. In ten instances, two species were mixed; in six instances, three species; in four instances, four species, and in one instance, five species. In ten instances, medicine plants, either singularly or in combination, were used with non-plant based substances to create medicines but these were still defined as plant-based medicines by the healers themselves (Table 2).

Trees, bushes, herbs and grasses, and wild, semi-cultivated, and cultivated plants were all represented in the medicinal botanical species recorded (D. Abbiw, personal communication 25 October 2008). The environments exploited were also varied, including those immediate to the healer's compound, or far out in the bush. Diversity in the plant parts utilised was also evident. These could include the whole plant, the juice, stem, bark, leaves, seeds and grains, and roots. Fortes (1949, 189) notes that the Talen term for 'root', *Nyeah*, is often utilised as a 'generic term for any vegetable products used in Tale leechcraft and medicine', and this is an observation supported by the recent data.

The plant parts were treated in various ways according to the healers (Table 2). Mixing of ingredients was the most frequently specified preparation process in 14 instances (the actual number of mixed medicines exceeds this, as can be seen from the data already presented, but was only specified as a preparation process this number of times). This was followed by drying (ten instances), often associated with storage (considered below), and pounding (ten), grinding (ten) and charring (nine), the latter three preparation processes used to produce a powder, and then concocting or decocting (eight). Sixteen other preparation processes were also specified (Table 2). Sprinkling blood from the toe or leg of a fowl 'on' the plant-based medicine or its ingredients was described as part of the preparation process in six instances and described as sprinkled 'in' the medicine in one instance, but it was not classified as an ingredient of the medicine, although it explicitly formed part of the preparation process according to the informants. This was not a practice associated with the non-plant based medicines.

The mode of use of the plant-based medicines was also various and often in combination (Table 2). The most common was by drinking (16). This would seem to be a characteristic mode of use associated with Northern Ghana for Field (1960, 88) refers to the 'drinking medicine' type of shrine found in Ashanti (Akan) as coming from the 'Northern Territories' of Ghana. Drinking was followed by external application as a poultice or ointment (15). Application through incision was recorded in three instances. This was around the navel, on the cheek, wrist, or ankle, and in the third instance anywhere on the body that needed treating. This is potentially significant because, as ethnic scarification marks (see Rattray 1932, 329–30) have largely disappeared, the continued use of incision with associated formation of scar tissue for medicinal purposes needs recognising as such, and not misclassified as 'ethnic'. Similar practices have been recorded elsewhere in West Africa as with the Yoruba *gbere*, described by MacLean (1974, 78–9) as a 'series

Table 4. Summary of references to active properties in plants utilised.

Medicine Specimen No.	Botanical Name	Active Property Ref.
1	<i>Calotropis procera</i> Ait. F.	Oliver-Bever (O-B) 1986: 24; Abbiw 1990: 120
1, 3, 12	<i>Nauclea latifolia</i>	O-B 1986: 62; Busia 2007: 170
3, 10, 31	<i>Annona senegalensis</i> Pers.	O-B 1986: 182
3, 9, 15, 18	<i>Parkia biglobosa</i>	Abbiw 1990: 120
5	<i>Ocimum canum</i> Sims	O-B 1986: 66
6	<i>Hyptis suaveolens</i> Poit	O-B 1986: 225
10	<i>Piliostigma thonningii</i>	Abbiw 1990: 120
11	<i>Trichilia emetica</i>	O-B 1986: 164
12	<i>Strychnos</i> sp.	O-B 1986: 68
14, 31	<i>Erythrina senegalensis</i> D.C.	O-B 1986: 100
16, 30	<i>Sclerocarya birrea</i>	O-B 1986: 259
18	<i>Ceiba pentandra</i>	O-B 1986: 258
19	<i>Mitragyna inermis</i>	O-B 1986: 40; Abbiw 1990: 120
20	<i>Piper guineense</i>	O-B 1986: 91; Abbiw 1990: 120; Busia 2007: 138
21	<i>Schweinkia Americana</i>	O-B 1986: 27
23	<i>Hymenocardia acida</i>	O-B 1986: 184
26	<i>Diospyros mespiliformis</i>	O-B 1986: 53; Abbiw 1990: 120
27, 29	<i>Waltheria indica</i>	O-B 1986: 91
29	<i>Hygrophilia auriculata</i>	O-B 1986: 248

of small cuts' made in the scalp and wrists 'into which powdered preparations are rubbed'.

Oliver-Bever (1983, 111) has described the 'Doctrine' or 'Law of "Signatures"' whereby 'the shape of a plant or one of its components may suggest a cure' (Oliver-Bever 1986, 5). Hence, for instance, a plant with white latex could be used to encourage milk production; or for a sprained knee 'the stems of *Palisota thursifolia*, the joints of which are always swollen and bent like a knee, are crushed and rubbed on the skin' (Oliver-Bever 1983, 111). Talensi medicinal botany does not reflect this, except possibly in one instance, where the roots of any plant that 'crosses the road' were mixed into a medicine (Specimen no. 1), perhaps to encourage, in this instance, the swelling to leave the patient.

In terms of health, the diseases, ailments, and injuries at which the plant-based medicines were directed were various (Table 2). Stomach problems were the most common (eight instances), followed by what was generically described as 'back and body pain' (six), then 'swelling' (five). Two instances of 'spiritual sickness' were the only directly non-physiological illnesses referred to. In comparison with the use of plant-based medicines in other areas of Ghana and West Africa, 22 of the Talensi plant-based medicines utilised plants with active properties that have been recognised elsewhere. *Parkia biglobosa* was the species containing active properties that was most frequently used, in four medicines (Table 4).

Non-plant Medicines

The second group of ten medicines is those made from non-plant based substances. The substances and objects utilised are various (Table 3). Minerals predominate

in seven instances, with burnt bone used in one medicine, and a combination of substances and/or objects in two medicines (Specimen nos. 1, 9, Table 3). All the non-plant medicine substances can still be obtained, except the buffalo rib used in one of the plant-based medicines (Specimen no. 25, Table 2), as the animal has been hunted to extinction and thus the source of supply has ended. In one instance (Specimen no. 2, Table 3) there was a discrepancy between the ingredients of the medicine described and their subsequent identification. Specifically, these were stated to be 'rabbit' and 'bird' bone but faunal analysis indicated they were from the hare or rabbit (metapodal) and hare (proximal femur) (V. Linseele, personal communication, 25 November 2009).

Clay, and slag and iron powder, were equally represented as the constituents of three medicines each. Termitic clay, one of the types of clay used, is widely found, but clay also forms a primary medicinal substance obtained from shrines. This is collected from natural deposits close to various Earth shrines as, for example, at Tonna'ab Yaane, and Kusanaab. In both these instances its collection was ascribed human agency even if its provenance was described as 'divine', and evident in the name given to the clay at both Tonna'ab Yaane and Kusanaab – *Bagre Tan* – 'God's Soil'.

XRF analysis of three clay samples, termite, Kusanaab, and Tonna'ab Yaane clays, indicated that they had not been altered or mixed by anthropogenic action. There was nothing anomalous about the clays, no unusually high elemental concentrations, and the latter were comparable between the samples (Fraser 2009; see also van Dongen, Fraser, and Insoll 2011). Some minor variations were evident. For instance, the termite clay had higher concentrations of sodium, potassium, calcium and strontium than the other clay samples but this accords with studies indicating that termite action increases the concentration of some elements (Fraser 2009: 56; and see Iroko 1996). The Tonna'ab Yaane shrine clay sample also contained slightly more iron than the other two, hence its red colour (Fraser 2009) and other name, the 'red medicine'. Other aspects of the organic geochemical analysis of the medicine clays are discussed by van Dongen, Fraser, and Insoll (2011), and again indicate an absence of anthropogenic input into their preparation. This is in contrast to the 'black medicine', a plant-based medicine from the Tonna'ab Yaane shrine, which is definitely mixed by anthropogenic action from a variety of bark and true wood charcoals (B. Eichorn, personal Communication, 11 June 2010) (Table 2).

The absence of obvious pharmacological agents in the shrine clay medicines is not a hindrance to beliefs in their efficacy. On the contrary, they are perceived of as very powerful and able to cure many illnesses and ailments, including female infertility, insanity, any earthly contracted sickness, headaches and joint pains, as well as having protective functions. This cannot, however, be described as geophagy as defined by Geissler (2000, 653), 'the deliberate and regular ingestion of earth', or discussed by Ferme (2001, 191), where among pregnant Mende women in Sierra Leone clay is eaten because of its perceived cooling properties and thus ability to relieve heartburn. Rather than its mineral benefits or material properties, it is seemingly the belief in the efficacy of the clay medicine that is important. To draw upon Hardin and Arnoldi (1996, 11), a theory of agency is perhaps important to consider in that the medicinal clays are used 'in ways that bring together questions of structure and tradition with human desires, goals and aspirations' and in which health can be seen to be implicitly embedded.

The non-plant medicinal substances were prepared and administered in similar ways to those already described for plant-based medicines but in both instances fewer processes and healing uses were involved, in part correlating with the smaller sample. Besides storing (six instances), grinding was the dominant specified preparation process recorded (four). This would accord with the materiality of the substances – clays, stone, and bone – which might require such processing to make them usable.

External application by poultice/ointment dominated modes of use (five instances). Drinking is less frequent (three) numerically than in relation to plant-based medicines, but meaningfully separating the two groups of medicines on the basis of modes of use is not really possible, although in one instance the sickness was described as being brushed away without actual physical contact or medicine consumption, a mode of use lacking in the latter group. Healing uses were also broadly comparable, and cannot be said to be lesser in number for non-plant based medicines owing to the presence of the two clay samples ascribed multiple healing purposes (Table 3).

The ritual dimension

Of the 33 plant-based medicines, ritual actions were involved with 25, and with five of the 10 non-plant based medicines (Tables 2 and 3). These rituals took various forms and were completed either singularly or in combination, with the largest number of specified rituals being four, associated in one instance with a non-plant based medicine (Table 3). The most important ritual associated with plant-based medicines was sacrifice (20 instances), followed by numerical ritual (10), then ritual movements and facing cardinal directions (seven), and the use of incantations and invocations (five). In one instance, the ritual involved was unspecified, and in eight instances no rituals were involved. The incorporation of sacrifice as the most frequent ritual action mirrors its importance in other Talensi contexts (Insoll 2010b). Ritual was less significant in relation to non-plant based medicines being absent in five instances. Numerical rituals, ritual movement/directions, sacrifice, and unspecified ritual were equally represented at two instances each, and incantations and invocations in one instance.

Based on the data presented, it can be stated that ritual links in with Talensi medicinal practice but does not wholly define it. This conclusion would seem to differ, slightly, from Fortes' (1987, 22) assertion that 'medicines, for example, whether overtly magical or supposedly physical in action, are believed to be impotent without the concurrence of the ancestors and the Earth'. This was not specified as significant, although could certainly underpin the frequent incorporation of sacrifice as a key ritual. Alternatively, it might exist as an implicit rationale underpinning the efficacy of all medicinal substances and thus was felt not to need stating as such by informants, and if so then Fortes would be entirely correct.

It is actually difficult to wholly divorce any aspect of Talensi medicine from a ritual dimension or, indeed, a link with shrines, and here it should be noted that the absence of an explicit link between medicines and shrines is not necessarily an indicator of an absence of shrine importance. Specified links with shrines were infrequent, at two instances of non-plant based medicines and five plant-based shrine and medicine links recorded, but it is possible that in many other instances diagnosis

could be linked with a ritual dimension and potentially also with shrines through the operation of divination, for instance, whereas the medicine prescribed could lack any ritual association itself either in relation to preparation or use.

Defining Talensi medicinal practices

Fortes (1949, 174) refers to almost everyone owning roots for some sickness, in which he says the importance lies 'not so much in their physical properties as in the fact that the owner is able, by right of ownership, to mobilize magical virtue in their support'. Potentially, this is a simplification in over-emphasising the magical properties of Talensi medicinal practice, but he is correct in identifying the widespread patterns of medicinal knowledge that exist. This differs considerably from southern Ghana where medicine specialists commonly cure many more than one or two ailments, and according to the project ethnobotanist, they lack the wider knowledge found in the south of Ghana about the healing properties of plants (D. Abbiw, personal communication 25 October 2008; and see Abbiw 1990). Instead, in the Tong Hills, the majority of healers, a term preferable to Fortes' (1987, 31) 'doctors', know only about one or two medicines. Of the 28 people interviewed, 19 knew one medicine, five knew two, two knew three, and two knew four. Both the latter were prominent individuals, one an Earth Priest and the other the Chief of Tengzug.

Overall, Talensi medicine practitioners would appear comparable to what Buxton (1973, 314) describes in the Mandari context of southern Sudan as 'medicine owners' or 'owners of simple remedies'. Talensi healers hold what could be described as family remedies. These were either developed through drawing upon local experiment and the environment or by bringing in knowledge from elsewhere, perhaps experienced first hand by being cured themselves, and then this medicinal knowledge was curated by the patients family in the Tong Hills. This was what occurred, for example, with a plant-based medicine *Ta-ang* (Specimen no. 8, Table 2) that was obtained from a fisherman by the healer's brother and then passed on to him.

The holders of medicinal knowledge are almost always male, only in one instance was a medicine linked with a woman (Specimen no. 25, Table 2). This was a treatment for rib pain utilising two plant species and burnt buffalo rib. The lack of female healers cannot be interpreted as an absence of gender concerns in Talensi medicine. Medicinal substances were heavily engendered through the repeat numerical significance evident in both their preparation and administration. Recurrently the number three was associated with male and four with female. Thus, for example in relation to plant-based medicines, one or more of the following might be relevant – prior to healing, three coins would be provided by a male, four by a female; medicine would be allowed to sit for three days for a male, four for a female; pain would be brushed away three times for a male, four for a female; or treatment would last for three days for a male and four for a female.

Why this association exists is unclear but it would not appear to be unconnected with a similar numerical significance recorded with reference to post-sacrifice animal

division (Insoll 2010b). In relation to the latter, Kankpeyeng has proposed the interesting interpretation (personal communication 17 July 2009) that animals are butchered differently according to sex because females have a larger pelvic region. Hence, the torso of a female animal is butchered after four ribs and a male after three to create equal upper and lower torso portions. The other gender and healing association recorded was also sacrifice linked in that, in one instance of non-plant based medicines and three instances of plant-based medicines, the patient had to provide a red cock if male and a red hen if female. In general, the colour of the animal offered for sacrifice can be significant (Insoll 2010b). Following patterns recorded through many parts of sub-Saharan Africa, notably by Turner (1966), red, white, and black are symbolically important. Thus, for example, in relation to sacrifice at the Tonna'ab Yaane shrine, white was described as meaning purity, black darkness or evil, and red as symbolic of danger (Sortor-Yin Tengol personal communication 4 November 2008).

Shrine based knowledge constitutes the other tier of medicine knowledge in the Tong Hills. For instance, at Tonna'ab Yaane, the shrine, besides being a source of medicinal clay as described, might tell the patient via the elders which medicinal 'herbs' to collect and mix, perhaps from the trees protected within its surroundings, which were dominated by *Bombax buonopozense*, *Diospyros mespiliformis* and *Trychoscypha arborea* (Insoll 2007, 147). This is not, however, comparable to the shrine-based medicine practices described by, for example, Field (1960) for 'Ashanti' (Akan) territory in South Central Ghana.

Household shrines can also function for what was described as 'medicine' purposes. These were all referred to as *tii* but are of six types. Four of these types of household shrine were recorded. Three were in the room of the patriarch of the Yin family in Tamboog section but functioned for protection rather than for healing purposes, serving to protect children and whilst hunting, and providing protection in the bush. The first was formed of a natural lump of granite (43 cm × 28 cm × 13 cm) supported on three sticks of 25 cm height and propped in the corner of the room (Figure 1, top right). On the granite block was a small pot containing the protective medicine and capped with a potsherd forming a lid. The second was in another corner of the room and was formed of a medium sized pot, capped with a potsherd and surmounted by a basketry ring of the type used to support head loads, which in turn held a lump of granite covered in sacrificial residue. The base of the shrine (50 cm in height) was ringed with sheep, goat, and dog skulls linked together by a rope threaded through their eye sockets. Two sticks driven into the ground served to support the shrine (Figure 1, bottom left). The third shrine was formed of a calabash supported on three short (5 cm) sticks and containing a lump of granite with a dog skull behind it. This shrine was against the wall and not in the corner (Figure 1, bottom right).

The fourth type, Kumalbeog Tii, was recorded in the Goldaana compound, Bonchiog section. It was very different, being formed of a clay pillar c.140 cm height surmounted by a pot capped with another smaller pot, upturned and functioning as a lid (Figure 1, top left). This larger pot contained water and 'herbs', the use of which was described as formerly drunk if going to war but now used to cure the insane. It thus had a definite healing association. The other two types of household medicine shrine are rare and information on these was not forthcoming, as both seem to be

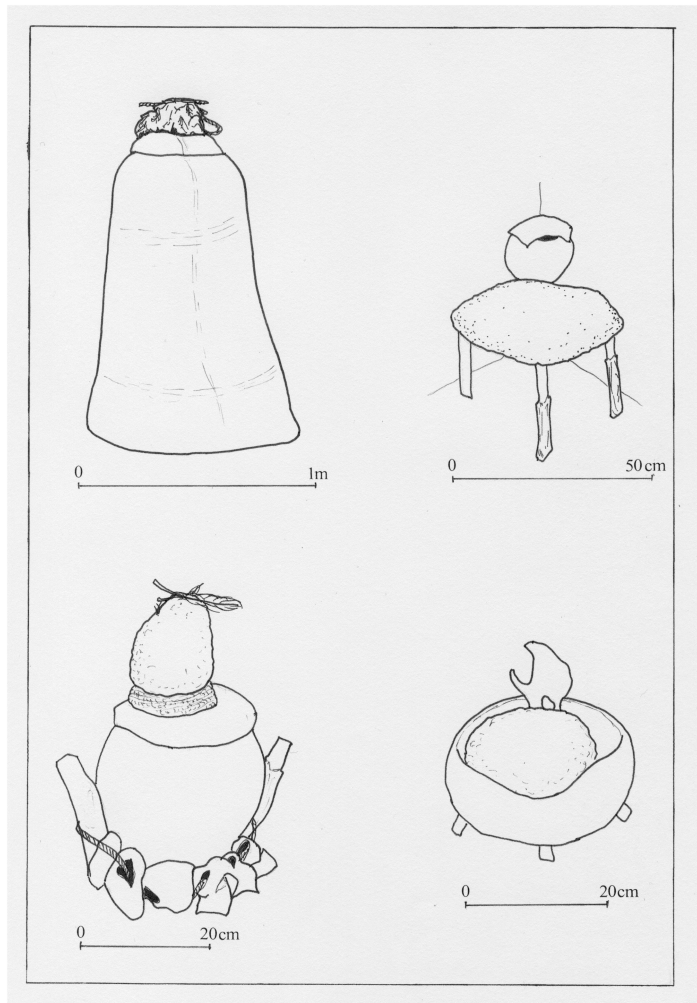


Figure 1. 'Medicine' shrines.

linked with spiritually 'tying people up' or witchcraft, rather than healing. These were cursorily described as formed of an animal tail, otherwise unspecified, and a calabash filled with stones and rope.

The archaeology of Talensi medicine

The archaeology of Talensi medicine shrines and substances can be subdivided into six categories of investigation, some of which serve to indicate research possibilities rather than results achieved.

Preparation

It is possible that the preparation of some medicines will be evident archaeologically. A particular pot, an undecorated vessel akin to a flared mouth bowl in the

Tong Hills archaeological ceramic typology (Ashley 2006), the *Yanba-dok*, was recorded in the Tengdaana's House in Tamboog as used exclusively for medicine preparation. This was utilised together with a *laa* or lid, in reality another small flat-bottomed vessel with a simple open rim. Neither was produced in the Tong Hills and both were bought in the regional market centre of Bolgatanga, reflecting the absence of potting traditions today in Taleland (Eyifa 2007, 85–6).

The grinding stones used to prepare medicinal substances offer another possibility for archaeological investigation. The example recorded used in conjunction with the *Yanba-dok* and *laa* was described as not having a special name and was referred to as *kuba* – 'stone'. It was a small (c.7 cm) spherical grey granite grinding stone worn smooth with use and does not fit with the three types of Talensi grinding stones recorded during this research in Talensi domestic compounds, the *nmaarig*, *ziba'axneer* and *baarig* (see also Fortes and Fortes 1936, 262, where it would accord with their different description of the *ziba'axneer*). The *Laa* constitutes an exclusive context for medicine grinding, as it is used for this purpose, although it is uncertain to what extent medicines are also ground in non-exclusive grinding contexts such as in the compound grinding room or on the Bongo granite boulders or outcrops usually found outside the compound, and frequently extensively used for grinding purposes as their associated deep grinding hollows often indicate.

Use

Identifying primary use via archaeology of Talensi medicinal substances and practices has been unsuccessful. A single burial was recorded inside a collapsed earthen house and OSL dated by the Research Laboratory for Archaeology and History of Art (RLAHA [X3335]) at the University of Oxford to 435 ± 50 (AD 1523–1623). Dental indications are that the individual represented was a young adult as no wisdom teeth were present. The wear on the teeth was also not significant, and there were no signs of gum disease, both also concurring with a suggested younger age (P. Burrows, personal communication 17 June 2008). Whether medicines were used in an attempt to heal the deceased, if appropriate, is unknown. Some flecks of red ochre were noted under the jaw, behind the skull and at the top of the thigh (Insoll, MacLean, and Kankpeyeng 2008: 13). These cannot be associated with any medicinal practice and chemical analyses of the skeletal material and the surrounding deposits are unlikely to indicate anything medicinally related. Moreover, soft tissues do not survive so practices such as applying medicines by incision, or the application of medicinal clay will not be evident archaeologically. Palaeopathology is not the focus of this discussion but traditional bone-setting practices could be apparent on skeletal remains, although the associated equipment, primarily wooden splints, is unlikely to survive.

Storage (and shrines)

In 15 instances plant ingredients were stored, in the other instances they were collected as required. The primary rationale for storage was to compensate for the unavailability of the plant in the dry season. It is unlikely that, excluding theoretically ideal conditions of preservation, which the Tong Hills do not provide, medicinal plant remains could be identified archaeologically. Prepared plant-based

medicines were only infrequently stored, in one instance moulded into balls (Specimen no. 3, Table 2), in five others as a powder (Specimen nos. 6, 8, 12, 20, 33, Table 2). In one instance (Specimen no. 9, Table 2) it was explicitly stated that there was no storage as the disease might be attracted to the healer's house by the presence of the 'herbs'. A higher percentage of non-plant based medicine substances were stored at six out of ten instances (Table 3).

The storage of a drinking medicine in the Kumalbeog Tii shrine has already been referred to. The medicine would obviously not survive and is unlikely to be detected by residue analysis. The shrine itself would, if encountered archaeologically, be indistinguishable from the *Yaab* (ancestral shrine) or *Bakolog* (divination shrine) both of which incorporate earthen pillars, and in the *Yaab* a pot in a similar position. Extant shrines – whether pillar *Tii*, *Yaab*, or *Bakolog* shrines – differ, but this subtlety would be lost in the archaeological record, making the identification of this type of medicine shrine very difficult except in exceptional circumstances. This point can be extended to the other types of medicine shrine recorded in Tamboog section. These, in archaeological contexts, would be difficult to distinguish from, for example, certain types of *Yin* or destiny shrines (see Insoll 2008).

Spread

The most extensively stored medicine and one that has been widely spread beyond the Tong Hills is the red clay medicine from the Tonna'ab Yaane shrine that is kept moulded into balls (Specimen no. 10, Table 3). This is because it is supplied alongside the right to operate Tonna'ab Yaane elsewhere – i.e. the 'franchise' right (Insoll 2006). This is a broad term used to imply what the Talensi refer to as *yihiyii*, described by Allman and Parker (2005, 49) as 'the "shade" or "shadow" of an existing source of ritual power' and which could be granted by the custodians of Tongnaab 'in order that they might carry it back to their homes' (Allman and Parker 2005, 49). The results of the organic geochemical analysis of this and the other clay medicines have been mentioned (and see van Dongen, Fraser, and Insoll 2011). The absence of additives to the clay means that tracking the spread of this medicine archaeologically would be impossible without the geology radically differing. The clay is, however, usually supplied along with the *boarbii*, 'the Shrine's Child', a type of shrine franchised from Tonna'ab Yaane. This occurs on a very large scale, as a survey within a c.110 km (70 mile) radius of the Tong Hills has indicated its presence amongst many ethno-linguistic groups neighbouring the Talensi, including the Mamprusi, Kusasi, Builsa, and Kassena-Nankani (Table 5).

In five of seven instances recorded, the 'red' clay medicine from Tonna'ab Yaane was also kept. In the other two instances no information was provided, which was seemingly due to a general reticence to specify what medicines were associated with the *boarbii* rather than, perhaps, its absence.

Disposal

The disposal of medicines and associated equipment also holds potential archaeological implications (see Kankpeyeng, Nkumbaan, and Insoll 2011). In some instances the medicine substances were considered dangerous or capable, once healing was complete, of transferring the disease either to the healer or someone else.

Table 5. Examples of franchised *boarbii* shrines.

Location and Date Recorded	Co-Ordinates	Ethno-Linguistic Group	'Red' Clay Medicine present
Nagboo, nr. Nalerigu, Northern Region, 3/11/08	N10°28.368' W000°21.233'	Mamprusi	Y
Korang-Vaa, Northern Region, 3/11/08	N10°23.986' W000°18.075'	Mamprusi	Not known
Kandiga Longo, Upper East Region, 23/7/09	N10°53.590' W000°58.474'	Kassena- Nankani	Y
Kandiga Longo, Upper East Region, 23/7/09	N10°53.645' W000°58.506'	Kassena- Nankani	Y
Kori, Sandema, Upper East Region, 23/7/09	N10°43.981' W001°14.657'	Builsa	Y
Tanmalgu, Bawku, Upper East Region, 27/7/09	N10°58.251' W001°11.117'	Kusasi	Y
Yikpabongo, Northern Region, 16/1/10	N10°14.512' W001°34.061'	Mamprusi	Not known



Figure 2. Medicine pot disposal feature, Touwang (photograph T. Insoll).

Hence, care was taken with the disposal of these medicines, through pouring into a flowing stream or gutter (Specimens nos. 15, 16, 29, Table 2; Specimen no. 8, Table 3) or leaving the residue by a black or driver ant hole (Specimens nos. 15, 29, Table 2; Specimen no. 8, Table 3). This will not be evident archaeologically.

Other instances of what has been interpreted as medicine-related disposal were preserved archaeologically. In the Tamboog section of the Tong Hills, a feature composed of multiple layered broken potsherds was recorded deliberately inserted and thus hidden under a large Bongo granite boulder (Insoll, MacLean, and Kankpeyeng 2008, 16) (Figure 2). This was described by a Talensi colleague as a means of disposing of medicine pots, a mechanism for getting rid of vessels that you

did not want people necessarily to see (K. Tendaan personal communication 19 March 2008). The context was OSL dated by RLAHA (X3336) to 500 ± 45 (AD 1463–1553) and samples from the vessels recovered are undergoing residue analysis. A second instance of what was interpreted as the disposal of a medicine pot was recorded on a relatively inaccessible ledge 25 m below Yenzee or Red Cave, also in Tamboog section. This, unlike other examples of Talensi medicine pots, was more analogous to shrine or medicine pots recorded elsewhere in West Africa, which sometimes employ prominent applied clay ‘warnings’ in the form of protruding clay bosses or spikes (e.g. Berzock 2005, 73; Eyifa 2007, 96), as it was decorated with a ring of prominent clay bumps running around the vessel c.4 cm below the rim.

Re-thinking medicinal contexts

Viewing ‘medicine’ as a concept not related solely to substance but in broader terms of health, i.e. as a ‘sociocultural’ (Fabrega 1974, 96) phenomenon as well, makes it potentially more visible archaeologically. For example, in one unit (B) excavated in the Nyoo Earth shrine, 12 clusters of either paired or single standing stones were recorded, immediately adjacent to which were found a variety of objects, including eight complete iron bracelets, seven iron bracelet fragments, one iron finger ring, and 16 complete and one partially complete pots, possibly pito or ‘beer’ pots (Insoll, Kankpeyeng, and MacLean 2009, 51–5). This unit provided two OSL dates of (RLAHA [X2846]) 1234 ± 121 (AD 650–895) and (RLAHA [X2847]) 1752 ± 176 (AD 80–430), with the first date contextually associated with one of the complete pots.

The presence of the bracelets was described by Talensi informants as the interring of ‘personal gods’ associated with the dead, i.e. intimate personal possessions, and possibly undertaken following the instructions of diviners to carry out such actions (R. Naatoam, personal communication 24 July 2006, Insoll, Kankpeyeng, and MacLean 2009, 51). If viewed in such a way, they can be suggested as being representative of mental health concerns, whereby ancestral association and ritual relationships help in negotiating destiny and wellbeing, and, based on modern understandings, neglecting such relationships can have profound consequences, including the descent into madness (Fortes 1987, 277; Sow 1980, 6–7; Insoll 2008, 384). Interrelated with this, however, from an ethnographic perspective, is substance, i.e. the iron itself, for as Garrard (1986, 251) notes, ‘objects which contain magical powers or medicine are invariably of iron’. Alternatively, they may be analogous to the Frafra *tiim banse*, bracelets used to avert both spiritual and physical danger, which are also described by Garrard (1986, 252). These are often in the form of ‘a smooth or twisted iron ring’ and ‘imbued with *tiim* by being soaked in a liquid or rubbed with a medicinal powder’. Both interpretations are plausible, but based on contemporary understandings of their context, form and materiality, it can be suggested that the bracelets too perhaps function within the context of medicine and as the archaeological residue of health-related processes.

Similarly, excavations immediately to the north of the entrance to the Tonna’ab Yaane shrine recovered material linked with curing women of witchcraft. Part of this process involved – and to a seemingly lesser extent still involves – leaving the personal possessions perceived as tainted by evil or witchcraft at the shrine as part of the curative process. Hence, various categories of material were found during

excavation, including *Cypraea annulus* and *Cypraea moneta* cowries, glass, clay, and agate beads, plastic buttons, jewellery such as earrings and pendants, hair combs, iron cans and enamel vessel fragments, as well as cloth/clothing rotted in situ on the surface level. Various coins, including two with dates of 1967 and 1958 and a metal Gonja chief's token with the impressed date of (1954–55), indicate the recent nature of this material. However, further excavations 4 m below this unit and to the west of the terminus of the path leading to Tonna'ab Yaane provided an OSL date (RLAHA [X3542]) of 440 ± 55 (AD 1514–1624) and suggests that the shrine has been in earlier operation. Unfortunately, the link between the archaeology and the exploitation of the Tonna'ab Yaane clay deposits as the source of 'red' medicine cannot be made, as excavation in the rockshelter, i.e. the shrine itself, is forbidden.

These examples serve to indicate that configuring the archaeology of medicine shrines and medicinal practices more broadly in terms of 'health' serve to increase the possibilities for archaeological visibility and thus research.

Conclusions

Investigating the substance and materiality of Talensi medicine shrines and medicinal practices in archaeological contexts has been shown to be difficult. Much of the material and its associated ritual behaviours and preparation practices is ephemeral and will elude identification. Complex understandings of the environment and its products and substances – plant and non-plant – are apparent ethnographically, but this would not be recognisable, in, for instance, the residues inside archaeological ceramics. These are negative points, but more optimistically the archaeology of Talensi medicine, medicine shrines, and medicinal practices does offer great potential if it is viewed holistically as slotting in with other areas of life. Talensi medicinal substance does not seem to represent an esoteric area beyond the domain of experience of all but a few, but represents, in the main, practices and substances drawn upon by all strata of the population. Considered thus it should be an integral part of archaeological endeavour, perhaps more successfully approached if configured, as stated, more broadly in terms of health rather than through a narrower substance-based perspective.

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