

Original paper

Peoples of central Mali and their grasshoppers: the good, the bad, and the cute

Ljudi iz centralnoj Mali i jih poljne koniky: dobry, zly i krasivy

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ABSTRACT

Grasshoppers of the families Acrididae and Pyrgomorphidae are common and well-known to the inhabitants of northern Dogon country and adjacent parts of central Mali in interior West Africa. Several species are notorious pests of crops including the staple cereal (pearl millet). In recent memory there was one notable locust invasion, in 2004, and two others occurred in the previous century. Species of seven genera of Acrididae (*Kraussaria*, *Kraussella*, *Acorypha*, *Hieroglyphus*, *Diabolocatantops*, *Anacridium*, and *Ornithacris*) are regularly consumed by Dogon after light cooking, while other large grasshopper species (notably those of subfamilies Eyprepocnemidinae and Oedipodinae) are eschewed. A link to a short documentary depicting a hunt for edible species is provided. A few species are recognized for their aesthetic attractiveness. The native nomenclature for one Dogon language (Toro Tegu) is given with detailed comments. Lists of native names for other Dogon languages, Bangime, and two montane Songhay languages are presented in an appendix with brief comments.

ABSTRAKCIJNY

Poljne koniky iz rodiny Acrididae i Pyrgomorphidae sūt obyčne i mnogo znajeme domoviteljam sěvernoj krajiny Dogonov i susednjih česti centralnogo Mali vo vnutrnoj Zapadnoj Afrikě. Nemnogo jih taksonomskih vidov notorično škodi rāstlinam vključajūci osnovnū hlěbnū rāstlinū (perlovo proso – *Pennisetum glaucum*). Nedavno byla jedna važna invazija poljnyh konikov, v 2004, a dvě ine byli v prošlom stolětji. Taksonomske vidy sedmi rodov Acrididae (*Kraussaria*, *Kraussella*, *Acorypha*, *Hěroglyphus*, *Diabolocatantops*, *Anacridium*, i *Ornithacris*) sūt regularno jedane Dogonami poslē malogo varjenja, hoti ine velike taksonomske vidy poljnyh konikov sūt njimi opuščane. Jest link k krātkomu dokumentu objavjajūcemu lovjenje jedlivyih vidov. Nemnoge taksonomske vidy sūt poznane kako estetično priťeglive. Davamo takože rodimo imenovanje jednogo iz dogonskyh językov (Toro Tegu) zajedno s detaljevanymi komentarami. Spis rodnyh imen iz inyh dogonskyh językov, Bangime i dvoh gorskyh językov Songhay sūt představjene v dodatku s krātkymi komentarami.

Keywords: Orthoptera, locusts, entomophagy, Dogon, Songhay, Bangande, Mali

Introduction

Ethnoentomology and cultural entomology

The relationship between arthropods (notably insects) and human societies is the subject of ethnoentomology. Cultural entomology has been defined as a subfield or offshoot thereof dealing with the role of arthropods in “literature, languages, music, the arts, interpretive history, religion, and recreation”¹ while excluding applied ethnoentomology and studies of the naturally occurring effects of arthropods on human food production and health. In practice, cultural entomology may understand “culture” in the educated western sense of refined aesthetic (re)creation, or it may adopt the anthropological notion of culture as a pervasive system of unconscious thought.

The present paper is inspired by the considerable interest in grasshoppers that Dogon and montane Songhay people themselves have, and by their elaborate taxonomies for these insects. It provides linguistic analysis of the taxonomies, and places them in the context of local ecology, practical activities, and historical events (locust plagues). It may be compared to other studies similarly inspired by similarly elaborate native taxonomies, such as Costa-Neto’s article on eusocial bees in a Brazilian native community².

Dogon country

The Dogon people, speakers of some 80 named varieties usually grouped by linguists into 20-25 languages, occupy a single territorial bloc in east central Mali. The zone is centered on the Dogon (or Bandiagara) plateau, whose perimeter consists of steep cliffs or boulder-strewn slopes on the west, north, and east. There are also a number of independent inselbergs especially to the north of the main plateau. The plateau (except in the south) and the inselbergs are surrounded by sandy plains.

Traditionally, Dogon settlements were located on the plateau, on inselberg summits, and on rocky slopes. These locations could be defended against raiders (including slave-snatchers) and had water resources. Especially over the last hundred years, as the sandy plains became safer, some Dogon broke away and established satellite villages in the plains. In some cases, entire villages moved down from the plateau edge or the mid slopes to the base where the plateau met the plains.

The climate is strongly seasonal with a rainy season from June to September. The primary staple crop in most of Dogon country is pearl millet (*Cenchrus spicatus*, formerly *Pennisetum glaucum*). Other rainy-season crops are sorghum (*Sorghum bicolor*), peanut, groundnut (*Vigna subterranea*), cowpea (*Vigna unguiculata*), sesame, and roselle (*Hibiscus sabdariffa*). Fonio (*Digitaria exilis*), formerly an important cereal, is still cultivated in spots. Cotton and maize are grown here and there in the southern part of Dogon country. The main harvest period is around October-November. Among the numerous off-season cash crops grown in gardens that have dry-season water resources (e.g. rocky areas and banks of drying rivers), onion is the most important. Many Dogon villages lack such gardens.

Climate change and population increase, the latter reflecting the eradication of smallpox (c. 1980) and improved anti-malaria programs, have combined to produce significant food deficits. After a suboptimal harvest, millet stored in granaries can run low during the summer months, precisely when the population needs energy to labor in the millet fields. The people therefore relish any opportunistic foods that become available during this period. For example, one cultivar of millet ripens early and its grain spikes can be quickly roasted for consumption by late August.



Fig. 1: Ravine at Beni village with sandy plains and inselbergs in background.

Obr. 1: Tesnina v sele Beni, s pesočnými ravninami i samotnými gorami na pozadji.

Neighboring ethnicities

Two Songhay populations living on the edges of inselbergs at Hombori and at Kikara (near Douentza) north of Dogon country, though linguistically unrelated to Dogon, have similar material cultures and similar interactions with grasshoppers.

In the plains along the southwestern periphery of the main plateau, neighbors of Dogon include Bangande (speakers of the Bangime language) and Bozo (speakers of Jenaama). Throughout Dogon country are pockets of Fulbe herders living in their own hamlets. The Bangande, Bozo, and Fulbe have little interest in grasshoppers.

Griaule on Dogon insects

A major body of ethnographic work on southeastern Dogon was produced in the mid-20th Century by Marcel Griaule (d. 1956). He was especially interested in Dogon cosmology and ritual. His and his team's work on natural species was accordingly focused on complex associations linking various types of flora and fauna to each other

as well as to living people and to ancestral beings.

Griaule's publication on the Dogon classification of insects³ was compiled after his death by his daughter and other surviving members of his team. It consists largely of long lists of Dogon terms for various classes of insects and associated fauna, with brief comments. Most if not all of the native taxa are undoubtedly from varieties of Toro So spoken in and around the Sangha village complex, but specific dialect information is rarely given. The inventory includes approximately one hundred terms for "sauterelles" (grasshoppers), or more accurately for insects that are subsumed under the Toro So hypernym *kaka*, which also includes some Hemiptera, Coleoptera, and miscellaneous arthropods. Griaule brought his collection back to France for study by entomologists, and genus or species determinations are given for some of the taxa.

This material must be used with caution for several reasons: the lack of

location/dialect information, linguistic problems such as the absence of tone markings, and uncertainty about how determinations made by entomologists in the 1950's correspond to current taxonomy. Above all, it is sometimes not clear whether a multi-word term is a lexeme shared by a community or an informal description by an individual. Nevertheless, the explanations for several of the terms are a valuable counterpoint to my own data. Another value of the work is its inclusion of species that were still present in the zone in the middle of the 20th Century, prior to the disastrous droughts of the 1970's and subsequent desertification, which have pushed the ranges of many species westward (to the Niger River valley) and southward, outside of Dogon country.

Methods

This paper is a by-product of linguistic fieldwork by the author on Songhay languages mainly in the 1990's, and by him and other project members on Dogon languages and on the Bangime language isolate since 2004.

One important task of linguistic fieldworkers is lexicography, a significant proportion of which involves flora and fauna taxonomies. Much of the biotaxonomic work in the project was done by the author, even for languages whose grammars were studied by other project members. It quickly became apparent that Dogon and montane Songhay had an especially detailed taxonomy of and knowledge about grasshoppers, in contrast to their disinterest in butterflies, dragonflies, ant-lions, and some other insect groups. It also turned out that young people were just as knowledgeable about grasshoppers as their elders, in contrast to many other semantic domains where vocabulary loss has occurred.

As the fieldwork progressed, we developed a routine of dedicating the first 4-6 days in each new village to flora-fauna terminology. The author would sit with a few elders, his assistant and another elder would collect plant specimens, and children were commissioned to capture insect specimens.

Working with groups made it possible to confirm that the native terms were genuine lexemes, i.e. standardized names known to multiple villagers, rather than ad hoc descriptions by individuals.

The first few grasshopper specimens, from Songhay country, were taken to the Malian capital Bamako for determination by a government entomologist. In subsequent years, several trips were made to CIRAD in Montpellier, France, for determination of insect (and plant) specimens. At Montpellier the author obtained copies of published field guides to West African grasshoppers, particularly that of Mestre⁴. In subsequent fieldwork the author has made determinations following the keys and descriptions in these documents.

For the most common and distinctive species or groups such as *Kraussaria*, *Kraussella*, *Anacridium*, *Acrida*, *Hierogyphis*, and *Oedaleus*, beyond a certain point it became unnecessary to repeat the collection process while working on small-population Dogon languages. These species are well-known locally and are easily recognized from images (our own and those in the field guides) supplemented by comments about habitat and behavior. In addition, speakers know the lexical correspondences between their own varieties and at least one of the major Dogon languages (Jamsay, Tommo So, or Toro So), which were then used as touchstones.

The author takes responsibility for the determinations presented here, based on the taxonomy in⁴ and subsequent minor updates⁵.

Each of the many reference grammars produced to date by our project on Songhay and Dogon languages and on Bangime contains lengthy chapters on the structure of nominal compounds and that of noun phrases. This has provided a context for the analysis of grasshopper terms, many of which are composite, e.g. "horse grasshopper" or "Fulbe woman (grasshopper)."

Inventory of grasshopper species

Our work on grasshoppers has focused on the northern half of Dogon country and on nearby montane Songhay villages (Hombori,

Kikara). We have observed the following species, all of which were recorded for this literature.

Tab. 1: Grasshopper species.

Tab. 1: Taksonomske vidy poljnyh konikov.

Pyrgomorphidae		
Pyrgomorphinae		
	<i>Atractomorpha acutipennis</i> Guérin-Méneville	
	<i>Chrotogonus senegalensis</i> Krauss	
	<i>Poecilocerus bufonius hieroglyphicus</i> Klug	
	<i>Pyrgomorpha</i> group <i>cognata</i> Krauss	
	<i>Pyrgomorpha vignaudii</i> Guérin-Méneville	
Acrididae		
Acridinae		
	<i>Acrida</i> group <i>bicolor</i> Thunberg	
	<i>Sherifuria haningtoni</i> Uvarov	
	<i>Zacompsa festa</i> Karsch	
Calliptaminae		
	<i>Acorypha clara</i> Walker	
	<i>Acorypha glaucopsis</i> Walker	
Catantopinae		
	<i>Catantops stramineus</i> Walker	
	<i>Cryptocatantops haemorrhoidalis</i> Krauss	
	<i>Diabolocatantops axillaris</i> Thunberg	
	<i>Harpezocatantops stylifer</i> Krauss	
	<i>Oxycatantops spissus</i> Walker	
Cyrtacanthacridinae		
	<i>Acrodideres strenuus</i> Walker	
	<i>Anacridium melanorhodon</i> Walker	“tree locust”
	<i>Kraussaria angulifera</i> Krauss	
	<i>Ornithacris turbida cavroisi</i> Walker	
	<i>Orthacanthacris humilicrus</i> Karsch	
	<i>Schistocerca gregaria</i> Forskål	“desert locust”
Eyprepocnemidinae		
	<i>Cataloipus cymbiferus</i> Krauss	
	<i>Cataloipus fuscocoerulipes</i> Sjöstedt	
	<i>Heteracris annulosa</i> Walker	
	<i>Heteracris leani</i> Uvarov	
	<i>Tylotropidius</i> cf. <i>didymus</i> Thunberg	
Gomphocerinae		
	<i>Kraussella amabile</i> Krauss	
Hemiacridinae		
	<i>Hieroglyphus daganensis</i> Krauss	“African rice grasshopper”
Oedipodinae		
	<i>Acrotylus blondeli</i> Saussure	
	<i>Acrotylus patruensis</i> Herrich-Schäffer	
	<i>Aiolopus simulatrix simulatrix</i> Walker	
	<i>Eurysternacris brevipes</i> Chopard	
	<i>Gastrimargus africanus</i> Saussure	
	<i>Humbe tenuicornis</i> Schaum	
	<i>Locusta migratoria migratorioides</i> Reich & Fairmaire	“African migratory locust”
	<i>Oedaleus senegalensis</i> Krauss	“Senegalese grasshopper”
	<i>Pseudosphingonotus canariensis</i> Saussure	
	<i>Scintharista</i> cf. <i>notabilis</i> Walker	
Tropidopolinae		
	<i>Homoxyrhopes punctipennis</i> Walker	

Noxious species

Several species are effectively harmless to crops. Some of these (e.g. *Scintharista*, *Sherifuria*, and *Chrotogonus*) inhabit rocky and gravelly areas away from cultivated fields. Some feed on specific native plant hosts, such as *Poeciloceris* on the shrub *Calotropis procera* and to some extent on other Apocynaceae such as *Pergularia tomentosa*. The tree locust *Anacridium* can damage fruit-bearing trees but is not a cereal pest. Some species are too uncommon in the zone to do much damage.

Crop pests and biological and chemical mechanisms to control them have been focal to entomological study of grasshoppers in West Africa, e.g.^{6,7}. For *Oedaleus* specifically, see⁸.

Comments by Dogon on the relative noxiousness of the larger and more common species, excluding locusts, are summarized in Table 2.

Locust plagues

In 2004, a rare outbreak of the desert locust *Schistocerca gregaria* (also called pilgrim locust, cf. French *criquet pèlerin*) devastated the millet fields in northern Dogon country and points farther north, including montane and riverine Songhay country⁹. The infestation spared southern Dogon country. *Schistocerca* is always present in the area in relatively small numbers, in its dark-colored solitary phase, which is not distinguished by Dogon from the visually similar and more common *Anacridium*. In its gregarious phase it is reddish when immature, becoming yellow with black markings when mature. For the biology see¹⁰. Dogon and Songhay languages lacked a specific term for *Schistocerca* prior to the plague. The locust invasion came in two phases, a relatively innocuous one involving adults in June-July, and a devastating one just before the millet harvest in October.

Tab. 2: Dogon ranking of crop pests.

Tab. 2: Dogonsky spis škodnikov urodžajev.

a. significant crop pests	
<i>Diablocatantops axillaris</i>	major pest of millet heads and other field crops, also infests millet heads stored in granaries
<i>Oedaleus senegalensis</i>	major pest of millet heads and other field crops
<i>Kraussaria angulifera</i>	can damage crops by eating leaves if crops are not well tended: millet, roselle, cow-pea
b. minor crop pests	
<i>Aiolopus simulatrix simulatrix</i>	a crop pest, but infrequent in the zone
<i>Cataloipus cymbiferus</i>	omnivorous, pest mainly on Cucurbitaceae and cow-pea, less often cereals
<i>Gastrimargus africanus</i>	a crop pest, but infrequent in the zone
<i>Hieroglyphus daganensis</i>	a minor pest for millet and sorghum, a more serious rice pest farther south
<i>Kraussella amabile</i>	consumes leaves of millet, cow-pea, and roselle
c. insignificant as crop pests (examples)	
<i>Acrida</i> group <i>bicolor</i>	
<i>Acorypha</i> spp.	
<i>Acrodideres strenuus</i>	
<i>Heteracris</i> spp.	
<i>Humbe tenuicornis</i>	
d. other	
<i>Anacridium melanorhodon</i>	dry-season swarms infest trees including fruit and shade trees, now less often than in the past

The Malian authorities did their best to fight the plague, but the belated chemical spraying from aircraft loaned by Colonel Gaddafi of Libya was not up to the task (we observed clouds of locusts flying well above the aircraft). In village after village, as word came of the locusts' approach, imams led community prayers. When the second wave of locusts arrived, panic-stricken farmers ran to their fields, vainly attempting to shoo the insects away or to salvage some of the grain. Usually one night of feeding was enough to destroy the millet crop. Sorghum, planted in smaller amounts in the lower and moister parts of fields, was generally spared. When the President of Mali came to Bandiagara to supervise food relief, he was greeted by Dogon who performed a makeshift dance brandishing the nearly bare millet heads left by the locusts. The government and international aid organizations did provide substantial food relief in the ensuing months.

Other African crop-eating locusts are the red (or nomadic) locust *Nomadacris septemfasciata*, whose last outbreak in Mali occurred in 1957, and the migratory locust *Locusta migratoria migratorioides*, which broke out for several years beginning in Mali in 1929. Both are primarily threats to eastern and southern Africa, but have populations in the Niger Delta area in Mali.

Capture and consumption of edible species

Simple hunts are nowadays carried out by parties of a few children or young adults. The millet fields are especially infested with grasshoppers and other non-boring insect pests when the plants have reached maximum height and when their grains are soft and milky, around September. (The grains must harden before they can be harvested and stored in granaries.)

Grasshoppers are spotted on vegetation and either snatched with one hand, or (especially on thicker stems) caught by clapping together the palms of two hands. The posterior legs are generally removed at once, not only to immobilize the insects but also to avoid hand injuries from spiny tibias. A thin grass stem is cleared of foliage, and is

passed under the pronotum of the insects to string them up for temporary storage. When the hunt is completed, the insects are taken to the village. A pot is heated with a little oil. The insects are de-winged and gutted, then popped into the pot. When crisp from light frying they are consumed.

A short documentary video entitled "grasshopper hunt" illustrating the hunt and frying is available at:

<http://dogonlanguages.org/movies>

with backup at

https://deepblue.lib.umich.edu/data/concern/generic_works/4m90dw25m?locale=en

The grasshopper species in Table 3 are currently favored for consumption by most northern Dogon (e.g. Jamsay).

Kraussaria can be found in dense vegetation (grasses, acacias, stands of *Senna obtusifolia*), for example in ravines, and sometimes on cereal plants in fields. It flies short distances and can be run down. Females are easily caught in numbers of twenty or so when laying eggs (or just after), often under *Balanites*, *Guiera*, *Boscia senegalensis*, or *Tamarindus*. At this stage the females are too weak to fly strongly. With the decline of *Anacridium* populations, *Kraussaria* is now the most popular of the species.

Hieroglyphis is generally found in cultivated fields (millet, sorghum, cow-pea, roselle). It is not mobile, though males can fly short distances. It is the most easily caught of the edible species. When disturbed on the upper stem of a plant, it usually shifts to the far side of the stem or moves lower on the same plant rather than taking flight.

Acorypha spp. are good to eat but are hard to collect in large numbers. The species most common in the north, *A. glaucopsis*, is gravel-colored and occurs in gravelly and rocky terrain, so it is usually not caught during grasshopper hunts in the millet fields. It has extremely powerful femurs which make it difficult to hold in the hand. When it flies, it often lands awkwardly on the ground and can sometimes be pursued and caught in this condition.

Diabolocatantops is said to be the tastiest of the edible grasshoppers. It is found in various habitats including cultivated fields and trees (small acacias, *Balanites*). When disturbed while on a plant stem, it tends to hide on the far side of the stem, where it can be caught. It is a strong flyer and difficult to catch once it takes to the air.

Kraussella is among the grasshoppers hunted in some but not all parts of northern Dogon country. It is considered less appetizing than other edible species. Its small size is another factor against it, and it does not occur in concentrated numbers. Individuals are found here and there in cultivated and fallow fields and in meadows.

In times past when the large tree locust *Anacridium* was more abundant, grass and herbs would be piled up next to a small tree containing large numbers of the insects around December or January. The tree itself would be felled, landing on the fire. This would lightly roast the insects, which were then collected and brought home for consumption, sometimes over a period of weeks. This is no longer widely practiced due to the much reduced population of *Anacridium*. All other edible grasshoppers are caught by hand one at a time.

Also eaten when available is the closely related and equally large *Ornithacris turbida cavroisi*. In the Jamsay-speaking area it is said to be edible by fatherless persons but

taboo to those whose fathers are alive, hence the Jamsay name *bă: sá-n dōwⁿú*, literally ‘totem of one who has a father’. Griaule gives a similar explanation for the Toro So name of a quite different species, *Catantops axillaris*³ (now *Diabolocatantops axillaris*).

In the neighboring Republic of Niger it is reported that *Anacridium* and *Ornithacris*, along with another large grasshopper *Acanthacris ruficornis citrina*, are the favored species for consumption¹¹.

The species that are large enough, but disfavored and generally not eaten, are those of the subfamilies Acridinae (e.g. *Acrida*), Eyprepocnemidinae (e.g. *Cataloipus*) and Oedipodinae (including *Oedaleus*), as well as all pyrgomorphids.

As one moves from northern Dogon country (and montane Songhay) toward the south, interest in consuming grasshoppers declines sharply. In locations where only one species is occasionally consumed, it is usually *Kraussaria*.

Aesthetic and magical attributes

Among the more common grasshoppers, those considered by many Dogon to be visually attractive include *Kraussaria*, *Kraussella*, *Cataloipus*, *Poekilocerus*, and *Diabolocatantops*. There is no correlation between edibility and beauty; some edible species did not make this list, and *Cataloipus* and *Poekilocerus* are not consumed.

Tab. 3: Species regularly consumed by Dogon and montane Songhay.

Tab. 3: Vidy rędno jedane Dogonami i gorskymi Songhayami.

Calliptaminae	<i>Acorypha</i> spp.
Catantopinae	<i>Diabolocatantops axillaris</i>
Cyrtacanthacridinae	<i>Anacridium melanorhodon</i> <i>Kraussaria angulifera</i> <i>Ornithacris turbida cavroisi</i>
Gomphocerinae	<i>Kraussella amabile</i>
Hemiacridinae	<i>Hieroglyphus daganensis</i>

The linguistic device to connect a species with beauty is to call it “pretty girl (grasshopper)”, “Fulbe woman (grasshopper)”, or “girl/woman of [name of a village].” The especially attractive *Homoxyrrhepes punctipennis* was collected only at Walo village, at the base of a large inselberg, where it was brought to our attention by speakers of Bankan Tey (Dogon). See Fig. 3, below. A few speakers of other Dogon languages claimed to recognize it when images were subsequently shown to them. It is called “girl of Lamorde (village)” in Najamba.

The colorful *Zonocerus variegatus* is currently unknown in the areas studied, though common and conspicuous farther south. It must once have occurred in the Sangha area since it is included in Griaule’s list³. We have also not encountered the distinctively colored *Staurocleis magnifica* in the zone.

That beauty is only a secondary consideration in local Dogon/Songhay insect taxonomy is suggested by the lack of interest in butterflies, of which numerous brightly colored species are frequently observed in the zone.

Scintharista cf. *notabilis*, found in rocky areas, presents when stationary with a cryptic gravel-colored exterior, but reveals bright scarlet wings in flight. Its cryptic and self-transforming nature has led to an association with sorcery. Other cryptic species found in gravelly habitats, including *Chrotogonus senegalensis* and *Acrotylus blondeli*, are also connected with sorcery in some languages. (See comments on native names in the following section and in the Appendix.) Griaule³ gives terms of the type ‘sorcerer(s) grasshopper’ to *Acrotylus* as well as to *Stenohippus bonneti* (now synonymized with *S. mundus*), a species we have not encountered.

A few Toro So terms are, according to Griaule, reflections of homologies between grasshopper color patterns and those of reference entities. For example, he explains the compound “rice grasshopper” applied to

Acanthacris as based not on a host plant or habitat, rather on fortuitous similarities between spots and thin stripes on this species’ wings and the grains and stems of rice plants³. Indeed, the habitat of this species is wooded savanna, not rice fields. What is unclear is whether such a term (and basis) was widely known to a Dogon community or was a clever observation by an individual.

Northern Dogon (Toro Tegu) grasshopper vocabulary

Of some fifteen Dogon communities we have worked with, the one that showed the most detailed overall knowledge of local grasshoppers was Tupere (near Boni), where the local language is Toro Tegu. The village, formerly atop a large inselberg, moved to the plains at the base of the inselberg in the 1970’s. Individual speakers were able to name, describe, and identify up to around 18 taxa.

The hypernym denoting all grasshoppers in Toro Tegu is kàyá, and this or a variant occurs in many of the specific terms, which are presented in Table 4.

Only one Toro Tegu term is a simple, uncompounded noun (a). Two are a unique type of reduplication, with L.<HL> toned initial C̀̀C̀̀m- followed by an H.L.(H) toned final. This is an example of how flora-fauna vocabulary can reveal a language’s otherwise unsuspected linguistic morphology. The remainder of the terms in the table are compounds, or (if the components are not identifiable with lexical items) long words that are pronounced like compounds (c).

(d) in Table 4 has compounds, not including kàyá ‘grasshopper’, of which at least one component is recognizable. bó:ní-sèlè-là:wà begins with the name of the largest town in the vicinity, Boni. Its medial element is connected to the expressive adverbial sé:lì→ ‘long and thin’, and one variant of its final is dà:wⁿá ‘totemic being’. bà:bà-númlé begins with a variant term for ‘father’ used in personal names; its final may be obscurely related to verb núm ‘die’.

Tab. 4
Tab. 4

a. uncompounded lúpì	<i>Acorypha</i> spp.
b. reduplicative sègùm-ségìré ¹ pèrêm-pémme	<i>Kraussella amabile</i> <i>Oedaleus senegalensis</i>
c. opaque compound zìnhâ-gòhghùró kòmbùrù-kòyó gòròhghò:sì-tàpìní: ² núm-tóki: dàhghá-péri: ³ yókúm-dó:rèy	<i>Hieroglyphus daganensis</i> <i>Kraussaria angulifera</i> <i>Cataloipus cymbiferus</i> <i>Cryptocatantops haemorrhoidalis</i> <i>Zacompsa festa</i> <i>Pyrgomorpha</i> spp.
d. partially opaque compound bó:ní-sélé-là:wà ⁴ bà:bà-númlé sóm-pólóm ⁵	<i>Sherifuria haningtoni</i> <i>Gastrimargus africanus</i> <i>Acrida</i> group <i>bicolor</i>
e. compound with kàyá (-kàyà) ‘grasshopper’ as final <i>initial denotes terrain</i> ìsòsúmèy kàyà ⁶ (“sand-”) tóró kàyà (“mountain-”) <i>initial denotes host plant species</i> sé:kèy kàyà (“ <i>Calotropis</i> -”) èrérè kàyà (“ <i>Boscia</i> -”) ⁷ mònó kàyà (“ <i>Balanites</i> -”) gútú kàyà (“ <i>Guiera</i> -”) nátì(ri) kàyà (“sesame-”) <i>initial denotes its “owner”</i> dùhghùnù káyà (“sorcerer’s”) <i>initial unknown</i> bò:r ⁿ kàyà	<i>Pyrgomorpha</i> group <i>cognata</i> , <i>Acrotylus blondeli</i> <i>Scintharista</i> cf. <i>notabilis</i> <i>Poeciloceris bufonius hieroglyphicus</i> <i>Heteracris annulosa</i> <i>Heteracris annulosa</i> <i>Acrodideres strenuus</i> <i>Diabolocatantops axillaris</i> , <i>Cryptocatantops haemorrhoidalis</i> <i>Acrotylus blondeli</i> <i>Harpezocatantops styliifer</i>
f. kàyá (kàyà-) ‘grasshopper’ followed by modifier kàyà kòfú (“-plain”) kàyà mòsú (“-nasty”) kà:-y ⁿ àhghá (“-go.past”) kàyà yèrú ⁸ (“-dye-er”) kàyà kú-kópi: ⁹ (“-head-plain”) kàyá òhghù-nú (“-chief”)	<i>Chrotogonus senegalensis</i> <i>Schistocera gregarius</i> (locust phase) <i>Ornithacris turbida cavroisi</i> <i>Anacridium melanorhodon</i> <i>Eurysternacris brevipes</i> <i>Tylotropidius</i> cf. <i>didymus</i>

¹ variant sègùm-ségèy.

² variants gòròhghò:sì-tàpìné, gòròhghò:sì-tàmne.

³ variant dàhghá-péli: .

⁴ variant bó:ní-sélé-dà:wⁿá.

⁵ variant sém-pólóm.

⁶ variant ìsòsúmèy káyà.

⁷ *Boscia senegalensis*, one of three *Boscia* spp. in the zone. The other wild plant genera in the list are locally monotypic: *Calotropis procera*, *Balanites aegyptiaca* (‘wild date’), *Guiera senegalensis*.

⁸ variant kà: yèrú.

⁹ variant kàyá kú-kófi: .

The initial of *sóm-pólǒm* (~ *sém-pólǒm*) for *Acrida* refers to its thin, elongated, mantis-like body, cf. verb *sémú* 'be(come) pointed'.

In (e) are possessor-possessum type compounds with *kàyá* 'grasshopper' following a possessor, which may denote terrain, a host plant species, or an "owner."

The appendix lists native terms with brief commentary for the most important grasshopper species in Dogon languages, Bangime, and two montane Songhay languages.

Taxonomic issues

Most of the species which we have observed in the field are well-known to entomologists and fully described in the manuals^{4,5} and field guides^{12,13}. This section discusses a few rarities for the zone that were collected by us only in one location.

Of the species that are named in Toro Tegu, two appear to be unknown to other Dogon, and we did not observe or collect them elsewhere in the zone. There is no doubt about the identification of the first of these, *Zacompsa festa*. Our specimen is shown in (Fig. 2).

Our *Tylotropidius* cf. *didymus* specimen (Fig. 3) is a nymph with very short elytra. Based on the pinched sides of the lateral pronotum, it is most likely *T. didymus*. Other species in the zone under this genus listed in⁴ were *T. gracilipes* (very long hind legs) and *T. patagiatus* (adults remain micropterous). Both *gracilipes* and *patagiatus* have since been moved to the genus *Metaxymecus*^{14,5}.

Homoxyrrhepes punctipennis is another species for which we obtained a single specimen (Fig. 4). There is no doubt about the determination.

There is a long-running issue as to the taxonomic relationship of *Scintharista notabilis* Walker and *S. zolotarevskyi* Uvarov. The manuals^{4,5} indicate that the validity as a separate species of *S. zolotarevskyi* remains in doubt. If this species is validated, most of

the Malian population belongs to it. One of our specimens is shown in Fig. 5.

Northern Dogon talk about grasshoppers

Since Toro Tegu speakers from Tupere village showed considerable knowledge of grasshoppers, grasshoppers were among the topics included in recordings that were transcribed in the course of regular linguistic study. Speakers commented on physical appearance, habitat, feeding habits, form of locomotion, and edibility. The material is available online¹⁵, transcriptions pp. 21-28 and English translations pp. 59-67. The texts speak for themselves and no summary of them will be attempted here.

Conclusion

Northern Dogon and montane Songhay, to a lesser extent Bangime and southern Dogon, have a special interest in grasshoppers. The damage to crops done annually by granivorous species pales in comparison to periodic locust plagues that can wipe out a year's harvest. Seven species are captured and consumed after light frying. Some can be hunted in numbers on millet before the grains harden (often a time of famine as granaries run low), others are caught opportunistically in various habitats and seasons, and in the past large quantities of *Anacridium* were collected in the dry season using fire. Given the practical importance of grasshoppers, it is no wonder that individual speakers can distinguish up to eighteen species or species groups and are knowledgeable about their habitat, seasonality, and behavior.

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Fig. 2: *Zacompsa festa* (lateral view) from Tupere village near Boni, Mali.
Obr. 2: Světòk *Zacompsa* (pogled iz bočnoj strány) iz sela Tupere okolo Boni, Mali.



Fig. 3: *Tylotropidius cf. didymus* larva (3-quarter), Tupere.
Obr. 3: *Tylotropidius cf. didymus* ličinka (tri četvrtiny), Tupere.



Fig. 4: *Homoxyrrhepes punctipennis* (lateral), Walo village near Douentza, Mali.
Obr. 4: *Homoxyrrhepes punctipennis* (bočný), selo Walo blizko Douentza, Mali.



Fig. 5: *Scintharista notabilis* (or *zlotarevskyi*), Tupere village.

Obr. 5: *Scintharista notabilis* (ili *zlotarevskyi*), selo Tupere.

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Appendix: Names for grasshopper species in languages of central Mali

Dogon (except Toro Tegu, already presented above), Bangime, and montane Songhay native names are given below for the most important local species. Some terms from Tommo So and Mombo were first uncovered by Laura McPherson and Kirill Prokhorov, respectively. In languages such as Jamsay and Tommo So that are spoken in many different villages, further terms and variants beyond those recorded here can be expected. It is hoped that this vocabulary will assist future fieldworkers who work with native populations in the area.

Abbreviations are as follows (Bangime is not abbreviated):

Dogon:

Am	Ampari
Bng	Bunoge
BnT	Ben Tey
BkT	Bankan Tey
DgD	Dogul Dom
DnS	Donno So
Jm	Jamsay
Jm-P	Jamsay, Perge dialect
Mb	Mombo
Ng	Nanga
Nj	Najamba
Pn	Penange
TbU	Tebul Ure
TgK	Togo Kan
TmK	Tomo Kan
TmS	Tommo So
Trn	Tiranige
TrS-YS	Toro So group, Yorno So dialect
YnD	Yanda Dom

Songhay:

HS	Humburi Senni
TSK	Tondi Songway Kiini

The general term for ‘grasshopper’ is as follows: Dogon: Am káyá, Bng kà:yⁿà, BnT kì-kã:-m, BkT kàkà bùmbarⁿú-m, DgD kà:-gú, DnS ká:-kâ:, Jm kã: ~ kì-kã:, Jm-P kà-kã:, Mb ká:wé, Ng kà-kã:, Nj kà-kâ: ~ kã:, Pn káyá, TbU kã:, TgK kã:, TmK ká:, TmS kàà-kàá, Trn kà:, TrS-YS kà-kã: ~ kì-kã:, YnD kà:; Bangime: dɛŋkyé; Songhay: HS kòf-iyà, TSK dòw. These nouns appear in some of the species terms presented below along with modifiers.

Pyrgomorphidae

Chrotogonus and *Poecillocerus* are the two pyrgomorphids best known to central Malians. Most of the languages have a term for *Chrotogonus senegalensis*, a small, dull-colored diamond-shaped species that is common in gravelly areas. It is sometimes thought to have mystical or magical properties and in several languages it is called ‘sorcerer’s grasshopper’. **Dogon:** Am —, Bng —, BnT kì-kà: yàmó-m (< yàmó woman’s name) or kì-ká: pótópô:-m, BkT kàkà pòm-pô-m, DgD àndumbulé ká:-gù, DnS —, Jm nújúrⁿú-[kí-kâ:] (“Hereafter-grasshopper”), Jm-G —, Jm-P kà-kà: búgúrú-bûy, Mb kàyá démbè, Ng nèrⁿi-sùgó ká-kâ:, Nj kà:-[dùgà-dùgé] (“grasshopper-sorcerer”), Pn dómbè, TbU kà: yàbôy, TgK yè-ná: ká:, TmK kà: dù-dùgú (“grasshopper sorcerer”) or [dù-dùgùⁿ]-kâ: (“sorcerer grasshopper”), TmS sègèy kà-kàà (“gravel grasshopper”) or kàà-kàà dùmbú, Trn —, TrS-YS kín-òmbò, YnD kà:-bôy; **Bangime:** à dɛŋkyè-pògò-pógè:; **Songhay:** HS bèl-èy kóf-iyà (“Bellas’ grasshopper”) or hà:fù-lúkkíyá, TSK kúmbèy-dôw (“Dogon-grasshopper”).

The other well-known pyrgomorphid is *Poecillocerus bufonius hieroglyphicus*. Unless otherwise specified below, it is called “*Calotropis* grasshopper” because of its primary host plant. In one case *Pergularia tomentosa* replaces *Calotropis* (both are Apocynaceae). **Dogon:** Am bàmbà-pôy káyá, Bng —, BnT gù:-gũ: kí-kâ:-m, BkT gù:-gú: kákà-m, DgD pòpé: kà:-gù, DnS —, Jm pów-[kí-kâ:], Jm-P pù-púlùm ká-kâ:, Mb pùbéŋ kà:wè, Ng sàpòmbô kà-kâ:, Nj kà:-jòmbò (“grasshopper-antenna”), Pn pògú-pògú káyá, TbU émbùlò ká: (“*Pergularia* grasshopper”), TgK pùⁿpúⁿ ká:, TmK hùhù-ká: ~ fùfù-ká:, TmS kàà-kàà pòlì-y (“grasshopper sesame,” because of color pattern), Trn pùmùnù kã:, TrS-YS pòbù-[kà-kã:], TrT —, YnD —; **Bangime:** —; **Songhay:** HS sé:g-ò kófiyà or cèrk-èy kófiyà (“sorcerer’s grasshopper”), TSK —.

Acrididae

a. Acridinae

Most of the languages have a term for *Acrida*. A few have a term for the montane

species *Sherifuria*. We obtained a term for *Zacompsa* only for Toro Tegu as noted above.

Acrida group *bicolor* is an apparently polyspecific clade whose taxonomy remains to be worked out. In the local languages it constitutes a single distinctive taxon. The thin, elongated body has an elegant, mantis-like appearance. Some of the terms allude to either prettiness (like a young woman) or delicateness (unable to carry a load on the head). Others associate the species with Fulbe people who are often tall and thin. **Dogon:** Am *kà yà nàrà*, Bng —, BnT *ògò-yérú yà-pùlò-m* (“girl from Ogoyeru village,” because pretty), BkT —, DgD *àntùndùŋ-[ká:gù]*, DnS *sõŋ kà-kà*: (“horse grasshopper”), Jm *són-ná:sòrù* (reduplication of “stick out”) or *[[à yà-yà:]-dú:]-[dè:-gò-m]* (“I won't carry the load of my co-wife,” since the head is long and thin), Jm-P *àrⁿá ká-ká*: (“rice grasshopper”) Mb *kà:wè kè:rè*, Ng *sómbórí*, Nj *kà:-pùlándè:\kà:-pùlándò*: (“grasshopper-Fulbe”), Pn *bòŋgò-tùgùl káyà* (“mantis grasshopper”), TbU *àmbà-kà*: (“God-grasshopper”), TgK *kà: sèrù-nà:-sérú*, TmK *iyèlè-ká*: (“groundnut grasshopper”), TmS *kàà-kàà pùlò-yààná* (“grasshopper Fulbe-woman”) or *kàà-kàà módí-módí* (“grasshopper holy.man”) or *kàà-kàà sórómbé*, Trn —, TrS-YS *pùlò-yⁿá:rⁿà*, YnD *pùlà-kà*: (“Fulbe-grasshopper”); **Bangime:** *pùndé-n-dèŋkyè* (“Fulbe-grasshopper”); **Songhay:** HS *hàr-bóŋ-sù-gáwr-ú-jérè* (“man's head doesn't carry a waterjar”) or *sùlúm-mú:l-ó*, TSK *bàwná-dôw* (“rain-...”) or *túfá:dò-bòn-sèmbíyá* (“...-head-pointed”).

b. Calliptaminae

Acorypha glaucopsis and *A. clara* are easily distinguished by the color (red versus yellow) of the large blotch on the inner femur. The two are usually called by the same native term. **Dogon:** Am *sõŋ kàyà* or *sù:ⁿ ká:yà*, Bng —, BnT *tém-dúgù nàwⁿá-érù*, BkT —, DgD —, DnS —, Jm *[tém-dúgù]-[nòwⁿó-érù]* (“hind.leg-fat meat-delicious”), Jm-P *tém-dúgù*, Mb —, Ng *kà-kà: bǎ:dàrà* or *[tèw-dúgù]-[nàwⁿá-érù]*, Nj *kà:-[àn-dènjé]* (“grasshopper-[man-stocky]”), Pn —, TbU *[injè-sùgà:]-jè*: (“dog-shit-eat”), TgK *dùmí:tè:rè*, TmK *ʔèbè-dúkírí* (“eldest.son-short”) or *sòⁿ-kà*: (“horse-grasshopper”), TmS

dùdùgùŋ-kà-kàá (“sorcerer-grasshopper” because of red blotches on femurs) or *kàà-kàà sòntàmbà*, Trn —, TrS-YS *yà-dùmí*, YnD —; **Bangime:** *à-dèŋkyè-à-tá:šèⁿ*; **Songhay:** HS *[[ʔán-zél]-bòŋ]-[wàrg-íyà]* (“[spindle-on]-[fat-DIMIN]”), TSK *hú:-bè:rì-gáŋgì* (“house-big-forked.stick”).

c. Catantopinae

The titular species in this group is *Diabolocatantops axillarís*. It is sometimes called by a compound beginning with ‘horse’, reflecting its brown color (not its size). Similar ‘horse’ compounds are also common for *Cataloipus cymbiferus*, see below. **Dogon:** Am —, Bng —, BnT *sòm-pírì-m* (“horse-...”), BkT *pélèpê-m* (= *Oedaleus*), DgD *sòmù-tàmbùŋ* (“horse-...”, also *Tylootropidius*), DnS —, Jm *nám-ségè*, Jm-P *sòm-pírí* (“horse-...”), Mb —, Ng *sòm-pírí* (“horse-...”), Nj *kà:-nègé* (“grasshopper-oily”, secretes a liquid when caught), Pn —, TbU *kà: pòlé:*, TgK *[bò:ýⁿ]-[kó:-rò]*, TmK *kèlì-ká*: (“enclosure-grasshopper,” found among straw in dry season), TmS *nàmbán kà-kàà* (“dry.season's grasshopper. also *Scintharista*) or *pòlíl kàà-kàà*, Trn —, TrS-YS *téŋjé:mè*, YnD *sòm-ká*: (“horse-...”); **Bangime:** *nùgè:-n-dèŋkyè*; **Songhay:** HS *dòŋ-kà:r-íyá ~ dò-kà:r-íyá*, TSK *hàmàŋ-[kà:níy-ǎ:]* (“?-sweet-Dimin”).

The other Catantopinae in the zone (*Cryptocatantops haemorrhoidalis*, *Harpezocatantops stylifer*, *Catantops stramineus*, and *Oxycatantops spissus*) are smaller and less conspicuous. They are often referred to as ‘slave’ of *Diabolocatantops*.

d. Cyrtacanthacridinae

Two species (*Kraussaria*, *Anacridium*) are more or less universally known in the zone. Most terms for *Kraussaria angulifera* are semantically opaque, like personal names. **Dogon:** Am *bójí*, Bng —, BnT *ná-bògòrò-m*, BkT *kàkà ná: bó:rù-m*, DgD *wèlkúmò*, DnS *gùlò-kúmò*, Jm *án-cèré* or *yà-màŋá ~ yè-màŋá*, Jm-P *ná-bògòrò*, Mb *kògòròⁿ kà:wè ~ kògòlòⁿ ká:wè*, Ng *kà-kà: ná-pò:rè*, Nj *jìŋ-kǎ*, Pn —, TbU *kà: zójè:*, TgK *yèmàŋá*, TmK *yà:jògú ~ yà:-jògú*, TmS *gòlò-kúmó*, Trn *kà:dú:dù*, TrS-YS *nàbôy* or *án-kègèrè* (male), YnD *kà:-bôy*; **Bangime:** *à dèŋkyè-à-támákè*;

Songhay: HS hà:f-ù-gùnd-íyà (“?-belly-Dimin”), TSK kàrbàsúrí ~ kàlbàsúrí.

Terms for the tree locust *Anacridium melanorhodon* are readily elicited throughout the zone. One term of the approximate form koRo-kaJa with R = {r l} and J = {j s d} is widely distributed among Dogon, and the Bangime term resembles it. It is sometimes adjusted to a reduplicative form, schematically koRo-kaRa, in southern and southwestern Dogon languages. **Dogon:** Am tòróntàrà, Bng —, BnT kí-kà: gúrgúsù-m (“grasshopper-trap”), BkT kórúkàsâ-m, DgD kórúkàsà, DnS —, Jm kórú-kàjà, Jm-P kórókàsàrà, Mb kà:wè kòlókájá, Ng kórókò:sì, Nj kóló-kà:, Pn kó:ló-ŋ-kà:là, TbU kà:-kúgùdè:, TgK kórú-kàjà, TmK kà: kóló-kálá, TmS bààlá kà-kàà (“*Vachellia* [ex-*Acacia*] *nilotica* grasshopper”) or ùríyó kàà-kàà, Trn kòlò-kálá, TrS-YS kóró-kàjà, YnD kà:-kúgùzù; **Bangime:** kóróŋgò-ŋkyè:; **Songhay:** HS dò:bíŋ-ká:l-ó, TSK dòw-bí: (“grasshopper-black”).

Acrodideres strenuus, *Orthacanthacris humilicrus*, and especially *Ornithacris turbida cavroisi* are known to some groups. The desert locust *Schistocerca gregaria* was largely unknown prior to its outbreak in 2004 and is now referred to as ‘evil grasshopper’ or the like.

e. Eypreopcnemidinae

Even the large species in this subfamily are generally not eaten in spite of their size. For *Cataloipus cymbiferus* the most common names are “horse-grasshopper” (cf. *Diabolocatantops*, above) and “rice-grasshopper.” **Dogon:** Am kàyá yà jìrìwè, Bng —, BnT bǎ:-dàwⁿâ-m (“father-totem”, i.e. totem of sb who has a living father), BkT kàkà bádámâ-m or kàkà bǎ:dámâ-m (cf. BnT) or kàkà sisì-ŋǎ-m, DgD [àrà-àrà]-[kà:-gú] (“rice-grasshopper,” also *Heteracris*), DnS àrà kà:-kà: (“rice grasshopper”), Jm sǎm-[kí-kâ:] (“horse-grasshopper”), Jm-P árá ká-kâ: (“rice grasshopper”), Mb sǎŋ kà:wè (“tamarind-grasshopper”), Ng è:njí ká-kâ:, Nj ànjì-kǎ:\\ànjì-kǎ:-mbò (“roselle-grasshopper”), Pn —, TbU —, TgK sòⁿ-ká: (“horse-grasshopper”), TmK sòⁿ-ká: (“horse-grasshopper”), TmS sòn-támá (“horse-...”),

Trn —, TrS-YS sòŋ-[kí-kǎ:] (“horse-grasshopper”), YnD —; **Bangime:** ?àlŋkùsùn-tà:bà; **Songhay:** HS —, TSK —.

Cataloipus fuscoerulipes is less well-known. It reportedly prefers moist habitats, and it may be the species denoted by Jamsay òròwó kí-kâ: ‘pond-scum grasshopper’.

Heteracris annulosa is widely but not universally known. It is sometimes terminologically merged with *Cataloipus*. **Dogon:** Am sǎŋ káyà, Bng —, BnT àn-kásàrá-m\\àn-kásàrá (“man-highway.robbling”) or sǎm kí-kà:-m\\kí-kà: (“horse’s grasshopper”), BkT —, DgD [àrà-àrà]-[kà:-gú] (“rice-grasshopper,” also *Cataloipus*), DnS —, Jm —, Jm-P mò:rⁿó ká-kâ: (“*Balanites* grasshopper”), Mb —, Ng è:njí ká-kâ: (“roselle grasshopper”), Nj —, Pn —, TbU àndí kàmzàràndà, TgK —, TmK —, TmS kàà-kàà jàmà-yórò (“grasshopper short-lived”), Trn —, TrS-YS —, YnD —; **Bangime:** à-dèŋkyè-tòn-tán-tò:; **Songhay:** HS bà:bù-ká or bà:lúkkíyá, TSK —.

Heteracris leani is less well-known in the zone.

For *Tylotropidius* see Table 4 above for Toro Tegu.

f. Gomphocerinae

Kraussella amabile, a small but colorful grasshopper, is widely known in the zone. Several Dogon languages (including Toro Tegu, see above) share a special reduplicative stem based on a root with sɛN-, sɛŋɛN-, or the like. The Songhay forms might also be more distantly related. A similar reduplicative pattern occurs with *Oedaleus* (see below). **Dogon:** Am ànjì:-kàyà (“roselle-grasshopper”) or ká:yá pèrì, Bng —, BnT sǎŋérⁿé-sè:-m, BkT ìbèrì gó:gò-m, DgD sènjen-sènyò, DnS sèn-nà:-sèni, Jm mén-[kí-kâ:] (“bracelet grasshopper”), Jm-P sǎŋèrⁿè-sèwⁿ, Mb bùjú:ⁿ, Ng sǎŋérⁿé-sè:ⁿ, Nj dǎy-[sènè-sènè], Pn kànyá káyà (“lamp grasshopper”), TbU sèr-kǎ:, TgK mén ká:, TmK ?òlò-ká: (“*Loudetia* [grass] grasshopper”), TmS sèy-màà-séy, Trn —, TrS-YS tél-bàmàrà (also *Homoxyrhopes*), YnD kà: sǎŋèrⁿè sèyⁿ; **Bangime:** —; **Songhay:** HS sì:rín-séŋk-ò, TSK sìrín-sikíyá.

g. Hemiacridinae

Hieroglyphis daganensis (“African rice grasshopper”) is generally well-known in the area. Some native terms are compounds meaning ‘rice grasshopper’. Some others refer to this grasshopper’s tendency to twist its body around millet stalks when threatened. Another form is a reduplication of a base d̄r(ù)- or the like, with a separating element -mà(:)-. Several Dogon languages have from two to four such reduplicative flora-fauna terms, generally denoting insects or prickly weeds. **Dogon:** Am sũ:ⁿ káyà, Bng —, BnT yá-bǎ:rà-m (“come-turn”), BkT árá kákà-m or d̄r:jú, DgD d̄r-mà-ndórù, DnS d̄r-nà:-dórù, Jm d̄r:jú, Jm-P nábǎngà, Mb kà:wè pèrèdé, Ng á:rà ká-kâ: (“rice grasshopper”), Nj b̄rò-kâ: or t̄aná-bónónó, Pn —, TbU p̄èndè-kâ:, TgK —, TmK ʔùbáⁿ-jì:rí (also *Homoxyrhopes*), TmS d̄rù-màà-dórú, Trn èrègè-ká: (“rice-grasshopper”), TrS-YS p̄òl-[kâ-kâ:] (“sesame-grasshopper”), YnD —; **Bangime:** à-tù:rè-n-dèŋkyé (“wild.rice-grasshopper”); **Songhay:** HS kòwri-jìndán-^gól-ò (“stem-neck-...”), TSK b̄érè-b̄érè-wòyzá (“twist-twist-...”, it twists when caught).

h. Oedipodinae

The prominent species in this subfamily is *Oedaleus senegalensis*, a small grasshopper found in large numbers in the zone and arguably the most significant crop pest. Several Dogon languages denote this species with a reduplicative form approximately of the form p̄Tɛ-p̄ɛ(w) with T = {l, t}. A variant on this is a form (reduplicative or simple) based on p̄ÉTé with T = {t, r}, which extends to Bangime. **Dogon:** Am káyá p̄éré, Bng —, BnT p̄été-p̄è:-m, BkT p̄élé-p̄é-m, DgD p̄éllàgà, DnS —, Jm p̄élé-p̄êw, Jm-P p̄été-p̄êw, Mb p̄ùbè ká:wè (“*Calotropis* grasshopper,” cf. *Poecilocerus*), Ng p̄été-p̄êy, Nj kà:-[p̄érè-p̄érè], Pn —, TbU p̄élé-m-p̄èy, TgK kà:p̄ògòrò-p̄ó, TmK ʔènjlⁿ-ká: (“roselle grasshopper”), TmS kàà-kàà p̄ílú (“white grasshopper”), Trn kà:-p̄érédè, TrS-YS bá:-dámá or p̄èlè-m-p̄êy, YnD p̄èlè-m-p̄êy; **Bangime:** à-dèŋkyè-à-p̄èrè-p̄érè; **Songhay:** HS mà:lám-fént-ò, TSK m̄élém-gèndíyà ~ m̄éréⁿ-f̄èndíyà.

Small species similar in general appearance to the more common *Oedaleus*

(i.e., *Acrotylus*, *Aiolopus*, *Eurysternacris*, and *Pseudosphingonotus*) are called by the same term or sometimes “slave of *Oedaleus*.”

The other well-known species of this subfamily is *Scintharista* cf. *notabilis*. For the taxonomy see §9 above. Some of the native terms refer to its habitat (rocks, gravel), others to its fiery scarlet wings which are seen only in flight, or to its sorcerer-like ability to transform its color. **Dogon:** Am káyá-p̄èrè, Bng —, BnT k̄i-kà: ȳèriyǎ-m (“grasshopper dye-er,” because of its black wings) or p̄ètè-p̄è: ȳè:-k̄ú:-m\\-k̄ú: (“*Oedaleus*.grasshopper-sorcerer”), BkT kàkà: s̄èŋgi kòsù-kòsú-m, DgD bà:là-kà:-gú, DnS n̄ǎj kà:-kà: (“sun grasshopper”) or bánù kà:-kà: (“redness grsshopper”), Jm t̄óró-[k̄i-k̄i:] (“mountain grasshopper”) or t̄ùmó-[k̄i-k̄i:] (“rock grasshopper”), Jm-P b̄è: ká-kâ: (“shit grasshopper”) or t̄óró ká-kâ: (“mountain grasshopper”), Mb kà:wè p̄úrúdu, Ng kà-kà: ȳè-k̄úw, t̄órò kà-kà: (“mountain grasshopper”), Nj kà: kàkàrê:-bànè (“grasshopper wing-red”) or kà:-gólò (“grasshopper-fire”), Pn —, TbU kà:-d̄ujé (“grasshopper sorcerer”), TgK —, TmK kà:d̄ù-d̄ugú (“grasshopper sorcerer”), TmS d̄ùd̄ugùn kàà-kàá (“sorcerer grasshopper”) or n̄àmbán kà-kàà (“dry.season grasshopper,” also *Diabolocatantops*), Trn —, TrS-YS —, YnD d̄ujù-kà: (“sorcerer grasshopper”); **Bangime:** s̄ímè-n-dèŋkyé (“hill-grasshopper”); **Songhay:** HS z̄ìnd-ò kóf-iyà (“pebble grasshopper”), TSK d̄òw-kúsúbí.

More distinctive species (*Gastrimargus*, *Humbe*) are named in a few Dogon languages.

i. Tropidopolinae

Homoxyrhopes punctipennis is known to a few Dogon groups, but some of them call it by the same term as another species. In Najamba it is òmbìrà-gùlâ: “young girl of Lamorde village” alluding to its beauty.