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The Mobile Workshop

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Published by The MIT Press

Mavhunga, Clapperton Chakanetsa.

The Mobile Workshop: The Tsetse Fly and African Knowledge Production.

The MIT Press, 2018.

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Introducing *Mhesvi* and *Ruzivo Rwemhesvi*

How did it happen that an insect that is not itself harmful, bar its painful bite, forced *vachena* to defer to *vatema*'s knowledge and skills to control it? How do we tell this story of knowledge mobility from indigenous knowledge to the very core of *vachena*'s project to research and control a pestiferous mobile insect deadly to people and their livestock—an insect that virtually turned the space it occupied as it moved into a transient workspace?

Mhesvi is the name that *vedzimbahwe*—the people associated with the *zimbabwe* (stone building) culture from which the name Zimbabwe came—gave to the insect that *setswana* speakers (*vedzimbahwe*'s neighbors to the west) called *tsetse*. After encountering the insect for the first time and being told its name, white travelers then publicized *tsetse fly* as the official name of the insect. Of course, *vedzimbahwe* are only the majority language group in Zimbabwe, not the only people who know *mhesvi*. *Vedzimbahwe*'s neighbors to the southeast—the Hlengwe, who spoke *xitsonga*—called it *ndedzi*. Their *xitshangana*-speaking conquerors, the Gaza, called it *inthesi*, clearly a corruption of *ndedzi*. The Ndebele—speakers of *isindebele* who subjugated the western *vedzimbahwe* and raided and exacted tribute from those in the east—called the insect *mpukane*.

These terms will be deployed as actor categories (in the way the people themselves used them) whenever these neighbors of *vedzimbahwe* are discussed in the book. However, the central focus remains *mhesvi* as known and experienced among *vedzimbahwe*; *mhesvi* is the preferred analytical name of choice throughout the book, alongside *chipukanana* (insect), *mhuka* (forest animal), *zivpfuyo* (livestock), and *vanhu* (people). Other principal actors will be similarly referred to in *chidzimbahwe* (the language of *vedzimbahwe*) because that is where I am standing philosophically as an analyst and storyteller.

The name *mhesvi* comes from a longer one, *mhesvamukono*, “the one that drives the *mukono* (bull) crazy.” It is derived from two meanings. The

first is from the ideophone (*nyaudzosingwi*) *pesva* (the plunging action of a sharp object like a needle or thorn into flesh), referring to *mhesvi*'s amazing ability to penetrate human and animal flesh with its probing mouth. The second is a reference to the effect of this piercing action, that of *kupesvedzera* or *kupesva* (inciting) the bitten animal or person. The person instinctively attempts to swat the fly. The cow's response inspired the adage *kwadzinorohwa matumbu ndiko kwadzinomhanyira* (where their stomachs are lashed, that is where they run to), referring to the tendency of *mombe* (cattle) to stray and sometimes even gallop ahead of the herd toward the tall sweet grasses that lash their stomachs. There, *mhesvi* waits; once bitten, *mhuka* succumbs to *chirwere che mhesvi* (sickness of *mhesvi*, which translates to *chirwere chemhesvi* or *n'gana*, the Zulu for that which makes cattle "useless" or "powerless") and eventually dies, but not before being incited to erratic, frenzied behavior.

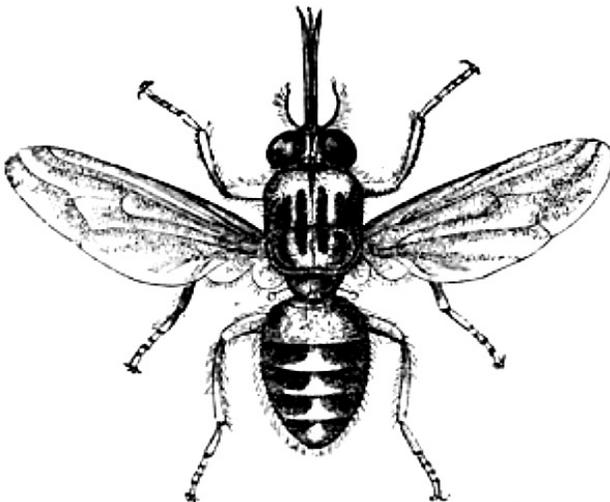
To be clear, *mhesvi* cannot be confused with *uo* or *mbuwe* (also called *mbuwo*), which incoming *vachena* called the blind fly. Unlike *mbuwe*, *mhesvi* is hard to crush. If you swat it, it remains intact; you must squeeze hard to crush it. And it is stealthy; by the time you feel that itchy sensation on your skin, it has already finished feeding on your blood and is flying away. You can't catch it with your bare hands. To kill it, you must be steady when it lands, relax, and then patiently make a move. You must use a knife, called *mhesvi* (from the word *kupesva*, this time meaning sharp and thin); slowly move the blade toward the engorged fly, then slash its legs off.¹

Two types of *mhesvi* have historically inhabited *dzimbahwe*. The first thrives in the forests (*matondo*). The second lives in savanna grassland. The third is generally found in vegetation along rivers or valleys. I found no distinction among *vedzimbahwe*, Hlengwe, Ndebele, Batswana, and other southern African groups concerning these three types; on the contrary, *vedzimbahwe* and Hlengwe saw one *chipukanana* that dwelled wherever it was conducive. These divisions are therefore analytical, as is the language I use to re-Africanize them.

Mhesvi is internationally known by the vexatious Latin surname that *varungu* gave it in the late-nineteenth century, *Glossina*, from the root *glōssa*, tongue. *Glōssana* (*G.*) thus means "of the tongue" and refers to the action of using the tongue to suck—in this specific case, the action of the bloodsucking fly. *Varungu* identified two principal groups of *mhesvi* in *dzimbahwe*: a savannah grassland variety they called *G. morsitans* and two riverine types, *G. pallidipes* and *G. palpalis*. *Morsitans* simply means "biting"; hence, *Glossina morsitans* is a biting *mhesvi*. *Pallidipes* is Latin for "pale-footed"—hence, a pale-footed *mhesvi*—while *palpalis* refers to having palps or feelers located near the mouth. Every time these terms are used, the reader must treat them as *vachena*'s categories, not words *vatemala* used.

Otherwise, I will refer to the grassland *morsitans* by its *chidzimbahwe* derivative *rutondo*—hence, *mhesvirutondo*. *Rutondo* is deep *chidzimbahwe* for *dondo*—a tract of uncultivated and uninhabited land that is either a forest or a wide grassland. I will use the term *mhesvirupani* to reference a *mhesvi* that lives in the valley, inclusive of rivers—that is, *bani* (*rupani* in deep *chidzimbahwe*). *Mhesvirutondo* and *mhesvirupani* thus substitute for the ubiquitous *Glossina morsitans* (in the first instance) and *Glossina pallidipes* and *Glossina palpalis* (in the second), which, as chapter 2 shows, have served to erase the African footprints of such knowledge in *ruzivo rwevachena*. This is one instance in which, as *vanhu vatema*, we need not treat our languages simply as archives or idioms, the applications of which are limited to those things that our ancestors coined them to refer. Instead, we must invent new applications and forms that enable us to specify and clarify what we mean to say.

Mhesvi (shown in figure 0.1) looks innocuous, and it is quite similar in size to *nhunzi* (the housefly). However, that is as far as the similarities go. When it bites you, that is when you know that this fly, which lives in the bush, is not your run-of-the-mill housefly—if you ever find out what has bitten you. Suppose you do: By the time you feel the pain, the *chipukanana*



Tsetsefliege (*Glossina morsitans*). ²/₁.
(Art. *Tsetsefliege*.)

Figure 0.1

Mhesvi the tsetse fly.

Source: Wikicommons.

has finished eating its meal (drawing your blood) and is on its way. When you catch or kill it, look at it closely. It has an unusually long mouth, which explains why it bites so deeply and extracts blood. Like *mbuwe*, its mouth pierces through a shirt into the skin.

Let's assume you are very smart and alert and you have seen it alight on your skin or noticed it after it has already engorged: What's your next step? To swat it? That's another difference compared to *mbuwe*; *mhesvi* is as hard as a rock, and the force you apply to kill *mbuwe* would at most cause *mhesvi* a slight annoyance before it dusts itself off and flies away, as though mocking your stupidity.

Male or female, *mhesvi* is known to digest and assimilate ingested blood within two days. Most of it goes toward nutrition, with the surplus converted into fat that provides a reserve of energy in lean times. During feeding, *mhesvi* ingests the *hutachiwana* (trypanosomes), which attach themselves to the walls of the long mouth (with which it probes and sucks) and begin their developmental journey within *mhesvi*, ready for inoculation into its next bite victim.

Like several other *zvipukanana*, *mhesvi* has an internal protective lining in its middle stomach impenetrable to *hutachiwana*. Thus, it can carry infectious matter without being infected itself. As *mhesvi* pierces into flesh to draw blood, *hutachiwana* leave one carrier and enter others—from *mhesvi* into *nyati* (buffalo) into *vanhu* (people) into *chipfuyo* (domestic animal; plural *zvipfuyo*) (Ford 1971, 77–78, 88).

The passenger most critical to this book is *hutachiwana*, the unseen thing that causes illness and/or death in people, animals, or plants. *Hutachiwana* literally means “the we have found it,” in homage to the invisibility and elusiveness of the thing that cause death or illness. *Hutachiwana* is thus either contagious matter or poisonous material. On one hand, the name is ironic: a thing that can never be seen, never be found, difficult to confront and annihilate. On the other hand, the name is a declaration of the triumph of discovery: “*Tachiwana!*” (We have found it!). There is also a third dimension; after death, the immediate family of the deceased usually visits a healer to diagnose the cause, and will afterward remark: “*Tachiwana chauraya mufi*” (We have found what killed the deceased).

Two types of *hutachiwana* feature in this book. The first caused *gopé* or *hotsikotsi* (the disease of sleeping), which *vachena* called *sleeping sickness* or *human trypanosomiasis*. The second caused *hutachiwana hwen'gana* or *hutachiwana hwemhesvi* (also called *nagana*) in domestic animals; *vachena* called the disease *animal trypanosomiasis*, which translates to *chirwere chemhesvi* or *n'gana*, the Zulu for that which makes cattle “useless” or “powerless.” Both types of *hutachiwana* would become to *vachena* the “trypanosome”;

this book focuses exclusively on *hutachiwana hwen'gana*, shortened to just *hutachiwana* throughout, with *hutachiwana hwegopé* used when referring to sleeping sickness.

To put it another way, *hutachiwana* do not in themselves pose a threat to *zvipfuyo* or *vanhu* (people); they only do so when something transmits them. However, *hutachiwana* are engaged in microscopic journeys within *mhesvi* itself. In the most general terms, *hutachiwana* ingested in blood attach themselves to the walls of *mhesvi*'s long mouth and live there until they develop a tail, with which they swim into *mhesvi*'s throat, where they stay until ready to be inoculated into *mhuka* or *vanhu* during feeding. The younger the *mhesvi*, the more easily infected it is, especially when feeding on an infective host for its first meal (Ford 1971, 22–73; Bursell 1959). The site of that itchy *mhesvi* bite develops into a red spot, the periphery of which is pale. *Hutachiwana* stay here briefly before entering the bloodstream; the spot disappears gradually thereafter.

The first signs of infection when a person is bitten by *mhesvi* are the fever beginning, the heartbeat accelerating, and a temporary rash appearing. Next, the fever fluctuates, severe headaches begin, and glands begin swelling, becoming tender, smaller, and fibrous. Then, debility, insomnia, and edema of the eyelids take over, with frothing at the mouth, deep sleep by day, restlessness by night, and, rapidly thereafter, death (Ford 1971). *Mhuka* struck by *n'gana* first exhibit an intermittent fever, then anemia, edema, and lacrimation; the *mhuka*'s strained lymph nodes become enlarged, the cows abort pregnancies and struggle to become pregnant, and generally they lose appetite and rapidly lose weight, chronic diarrhea sets in, the nervous system collapses, and the *mhuka* dies.

By its movement or stillness, *mhuka* becomes (un)attractive and (in)visible as a host to *mhesvi*. Complacency or timidity under attack makes a perfect host—irritability (leg kicking, skin rippling, head shaking) a bad one.² *Nyati* the buffalo, with its love for chewing its cud under the cool breezy shade of a tree or in the shallow waters of the river, makes itself available to *mhesvi*. The little creature feeds as the *mhuka* feeds; “the slow, intermittent movements of grazing, browsing or foraging mammals allow large concentrations of ‘following’ flies to build up around the hosts” (Gatehouse 1972, 83).

Each *mhuka*'s behavior makes it tolerant, vulnerable, and even resistant to *mhesvi*. Regular hosts are larger browsers and grazers that permanently reside in one area all year; once they are eliminated or scattered, *mhesvi* cannot survive permanently on chance encounters with food hosts. Occasional hosts such as *mbeva* (mice), *majerenyenje* (anteaters), *tsoko* (monkeys),

makudo (baboons; singular *gudo*), *mashuramurove* (storks), *magora* (vultures; singular *gora*), *nguruve dzemusango* (bushpigs), *nzou* (elephants), and *vanhu* are selective and migratory and therefore poor feeds. *Mhesvi* labors to get its meal from these “accessory food animals” in winter; in summer, vegetation overabundance disperses *mhuka* and encumbers *mhesvi*’s hunt for food (Trypanosomiasis Committee of Southern Rhodesia 1946, 13–14). *Mhesvi*’s blood diet and its feeding mobilities are ecologically contingent.

Stops on the *mhuka*’s pathways to/from *hufuro* (pastures, or *mafuro*) and waterholes become points at which *mhesvi* catch rides, feed, and become vehicles for *hutachiwana*. The beaten track through open ground renders *mhuka* easily visible to *mhesvi* taking cover from its own predators (*shiri* [birds]). When *mhuka* come to the pool to drink, the female *mhesvi* lands on them to feed, with the male flies in tow, evidently intent on mating. Only *mhuka* whose drink and bath times coincide with *mhesvi*’s active (daylight) hours become its food source (Ford 1971, 21–32).³

Mhesvi lands on the animal, is carried around as it feeds, fills its stomach with blood, then flies away to rest in the tree branches nearby. When hungry, it indiscriminately follows and probes any darkish moving object for blood—even car tires. The mobile nature of its food source (*mhuka*) means that *mhesvi* must travel with and on its meal, on terms and with an itinerary the animal dictates and by the diurnal rhythms of light, temperature, and humidity. *Mhesvi* is “quiescent at night,” except warm, moonlit ones.⁴ When *mhuka* stops at waterholes, rivers, or lakes, or returns to graze, browse, or chew its cud in the tree shade, the *chipukanana* pounces and feeds upon it. In general, *mhesvi* is more active later in the day, especially during or right after peak temperature and minimum humidity, when the light intensity is declining and the silhouette effect improving (Jack 1939; Pilson and Pilson 1967).⁵

As noted earlier, the male *mhesvi* usually comes for mating, not feeding. It is a master tactician, deploying itself strategically in the grass or woods in such a way that the flying females and their movements are silhouetted against the sky. As the female *mhesvi* descends on an animal and engorges itself with its long mouth, the male pounces on her. The male can be seen settling on a human or animal, taking off after females, and settling again. So long as the females are around, the males ignore sucking blood altogether. Once the female is fertilized, it reproduces without sex for the rest of its life (Swynnerton 1921a).⁶

Mhesvi is a *chipukanana* known for accompanying moving objects for significant distances. It feeds on the blood of *zvinosvosvoma* (reptiles), *shiri*, *mhuka*, *vanhu*, and *mhuka dzomurukova* (animals that live in water); it draws

all its water from blood.⁷ The *chipukanana* tends to catch a ride “on the backs of pedestrians and cyclists, and under the hoods, etc., of motor cars, though [it] commonly pursue[s] fast-moving objects for a considerable distance on the wing” (Jack 1930, 493). The faster the moving object or vehicle, the more *mhesvi* is attracted to it and the further it is carried.

Altitude and climate—specifically, the movement of air masses that determine whether it rains—also determine the presence of *mhesvi*. Relief rainfall and cold temperatures create vegetational conditions unsuitable for its survival. The *chipukanana* normally thrives under warm to hot conditions (Ford 1971, 461). The vegetation that gives *mhesvi* shelter and the valleys where it breeds depend on the low-pressure air mass that moves north, south, and back again in response to the seasonal change, drawing in southeasterly trade winds and bringing rain. *Vachena* called this the *inter-tropical convergence zone* (ITCZ; Ford 1971, 116).

Geological and climatic mobilities determine a third factor critical to the presence of *mhesvi*: vegetation. Rainfall distribution determines the distribution of plant life; plant life determines forest animal populations, some of them vehicles and food sources for *mhesvi*; and all *mhesvi* essentially are forest *zvipukanana*. They mainly inhabit the *mupani* and stream bank forests, all composed of close thicket. *Mhesvi*'s distribution in all four seasons varies according to leaf fall and releafing times; trees in good leaf offer cover from predators and the sun. The hotter the day, the closer *mhesvi* stays to the trees, only leaving the shade when temperatures decline (Jack 1971, 9).

Mhesvi in *Dzimbahwe*

Fewer *zvipukanana* terrorized the white man more than *mhesvi*. There are over twenty-three known species of this *chipukanana* throughout Africa. The United Nations' Food and Agriculture Organization (FAO) estimates the total value lost to infestation by *mhesvi* in Africa's so-called green deserts to be \$4.5 billion per annum. *Gopé/hotsikotsi* infects an estimated fifty thousand to seventy thousand people each year. There is no vaccine, and the available drugs are toxic and ineffective (Enserink 2007, 311).

Two types of *mhesvi* terrorized Southern Rhodesia (now the Republic of Zimbabwe) throughout the duration of and even after British settler rule (1890–1980). The most widespread was *mhesvirutondo* (forest *mhesvi*), which *vachena* called *Glossina morsitans*, found in the country's Zambezi Valley and the southeastern borderlands of Zambia and Mozambique, respectively. The other type was *mhesvirupani* (valley *mhesvi*), which *vachena* divided into *Glossina pallidipes* and *Glossina brevipalpis*, found in the Sebungwe (to the

northwest) and Chipinge (southeast) districts, respectively.⁸ The historical limits of *mhesvi* are shown in figure 0.2.

For nearly two decades after the great *chirwere chemombe* (cattle plague) known in German as *rinderpest* (1896–1897), Southern Rhodesian authorities did not need to worry about *mhesvi*—and they didn't. *Vachena's* ox wagons introduced a devastating *hutachiwana* against which *chipfuyo* (livestock) and *mhuka* had no natural immunity. They died en masse, denying *mhesvi* its most versatile means of transport and food source (Spinage 2003; cf. Crosby 1986). Only those *mhuka* in the remote borderlands along the Zambezi, Limpopo, and Savé River Valleys survived. In the vast acres of the now-*mhesvi*-free land, *vachena* established their *mapurazi* and mines (Mavhunga 2014).

As the herds of *mhuka* began recovering and returning to their old haunts, so did *mhesvi*. In 1909, two cases of *gopé* were confirmed in the

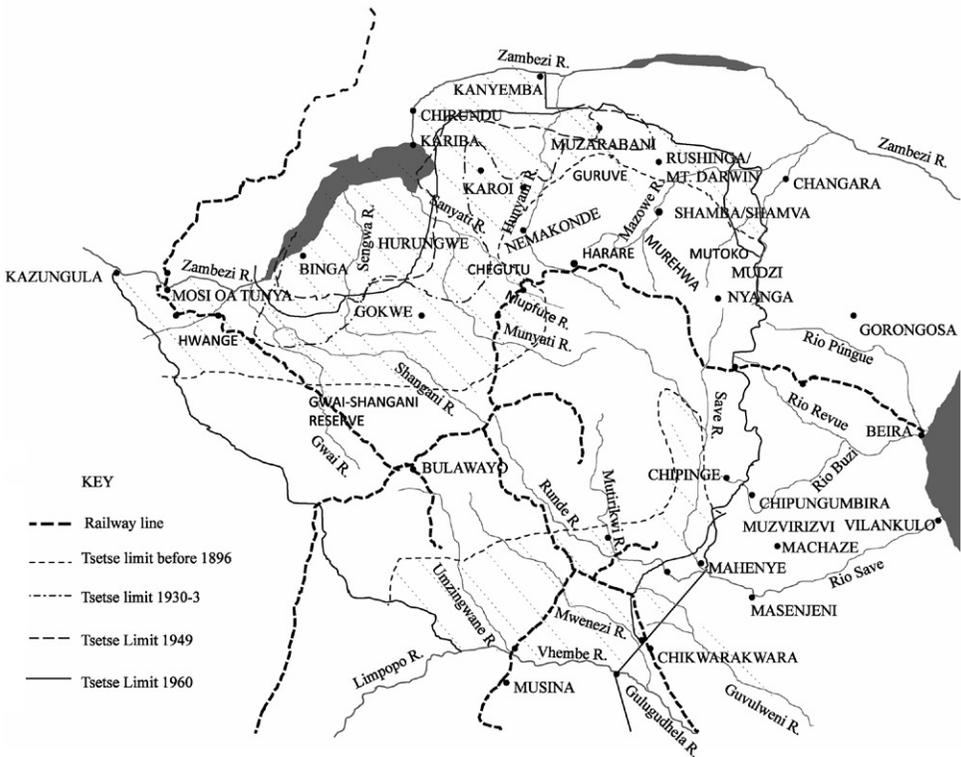


Figure 0.2

Known historical limits of *mhesvi* in what is now Zimbabwe.

Source: Mavhunga 2014.

district of Sebungwe (Fleming 1910, 1913; Stephens and Fantham 1910). The number of cases increased in the 1920s and 1930s (Blair 1939). In 1923, the chief entomologist warned that “the continued steady advance of this pest [was] ... creating a very grave situation.”⁹ By 1949, *mhesvi* had become “one of man’s worst enemies over the greater part of Africa south of the Sahara.”¹⁰ Only with the introduction and intensification of spraying of *chepfu* (poisons) that *vachena* called *organochlorine pesticides* (OCPs) in the 1950s was the scourge finally brought under control.

During this period since 1900, extensive field research has been undertaken “to know how, when, why, where tsetse does what it does, and [apply] this *ruzivo* to practical control and combat” of *mhesvi* and the *hutachiwana* it spread (Phillips 1929, 438). The white men who studied insects in general called themselves *entomologists*; later, these *vachena* who focused their studies on *mhesvi* (*Glossina*) specified their job title as *glossinologist* (Jack 1930, 1933, 1934).¹¹

The object of their experiments was to know in a thorough way the “life economy” of this *chipukanana*, the bite of which was deadly to *vanhu* and *zvipfuyo*. This entailed knowing not just *mhesvi* and its animal associates, but also the vegetation and physical environment within which it lived, refuged, bred, and hunted, thus providing a “scientific basis” for its control (Trypanosomiasis Committee of Southern Rhodesia 1946). The researchers talked about “a lifetime of affectionate study” of *mhesvi*—that is, “to live and breathe and think with it.”¹²

Of course, these *vachena* were newcomers to *mhesvi*, and though they had political power, designed activities, and directed what, how, and where information was to be gathered, they could not personally *live with mhesvi* for sustained periods without falling victim to the bite of another *chipukanana*: *hutunga* (the one that gores), which *vachena* called *mosquito*. Only African men recruited as “flyboys” (fly catchers) could make the regular fly rounds or inspections of the targeted areas. They produced the information that the white entomologists compiled into “scientific reports,” the object of which was to know the pestiferous mobilities of the insect.

Pestiferous Mobilities of *Mhesvi*

As a mobile *chipukanana*, *mhesvi* interacts with many different environments and actors that are subjects of multiple disciplines. First, it allows us to enter a conversation about *zvakatikomberedza* (surroundings) or *zvisikwa* (creations), not just referring to “nature” or “the environment” around us in *vachena*’s sense, but including social, economic, and political components

as well (Ngulube 2017; Mutasa, Nyota, and Mapara 2008). *Dondo* or *sango* (forest) becomes the home of *mhesvi*, and *mhesvi* itself becomes a *nyongororo* (parasite) that pounces to feed on any *mhuka* that moves within *dondo*. A large body of scholarship has explored *sango* (and spaces within it) as a site of the hunt (Mavhunga 2014), resource conflict (Murombedzi 1994; Mutimukuru-Maravanyika 2010), warfare (Daneel 1995; Alexander, McGregor, and Ranger 2000; Le Billon 2001; Draulans and van Krunkelsven 2002), game reserves (Carruthers 1995), sacred space (Daneel 1970; Ranger 1999; Werbner 1989; Bourdillon 1978; Rennie 1978), and the source of veterinary disease that *vachena* solve (Brown and Gilfoyle 2010).

What passes as the history of science in Africa is still made up of social and political histories of disease and medicine. In most of these, *vatemala* are either victims of *vachena*'s policies or those who must be saved from disease by Europe's medical advances. Although they illuminate the pathologicomedical aspects, these studies do not consider Africans as intellectual agents before or during *vachena*'s encounter with *mhesvi* (Lyons 1992; Hoppe 2003; Packard 2007; Herbert 1975). Scholars have also addressed comprehensively the disruptive effect of the movement of *vanhu* and *zviphuyo*, but not mobility itself as a historical force producing such disruption (Giblin 1990; Lyons 1992).

This book addresses *sango* as a mobile *pabasa* or *nzimboshandwa* (workspace) where what *vedzimbahwe* call *ruzivo rwemhesvi* (knowledge of tsetse) was produced and applied. *Mhesvi* was a resident of and a traveler within *sango*, and *sango* allows us to shift the conversation about *zvipukanana*, including *mhesvi* itself, from considering a mere epidemiological or environmental problem to the production of *ruzivo*. *Zvipukanana*'s presence and movement in and out of *sango* constitutes a serious risk to *vanhu* because of the *hutachiwana* it carries and transmits through its bite.

Mhesvi opens a space in which an African can say something about the increasing global circulation of biological material that presents serious health issues. The (likely) presence of deadly *zvipukanana* and *nyongororo* forces political, military, legal, scientific, and other bodies to come together and confront this issue (Mitchell 2002). Recent studies explore both the negative and positive aspects of deliberate usage of insects as weaponry. On one hand, security agencies worry about the potential of individuals or groups deliberately mobilizing *hutachiwana* for a harmful purpose (Ginsburg 2000). On the other, there is a positive deployment of *zvipukanana*, first sterilized and then released into *zvakatikomberedza* to exterminate their own kind or to act as early warning equipment when their kind invade (Beisel and Boëte 2013; Beisel, Kelly, and Tousignant 2013; Tousignant

2013). Still, a sense of foreboding exists: what if those insects (read “deadly biological weapons”) get into the wrong hands?

The development of means to enhance the speed and distance of transportation and communication has increased capacities for the spread of *hutachiwana* such as SARS (severe acute respiratory syndrome) and electronic viruses such as various types of ransomware. Others have called such outbreaks “networked diseases” (Ryan and Glarum 2008; Wenger and Wollenmann 2007); I focus instead on the modes and work of mobilities—not just those that are human made, but especially mobilities concerned with natural transport, such as growing interest in transcontinental bird migrations and avian flu transmission has highlighted (Chen et al. 2005).

These mobilities have been understood as “mobile life” (Clark 2013) and “the biology of life on the move” (Dingle 1996) and their study as “multispecies ethnography” (Kirksey and Helmreich 2010). My investments in *mhesvi* lie elsewhere: the mobility of *vedzimbahwe*’s knowledge of the pestiferous movements of a peripatetic *chipukanana* that carries *hutachiwana* deadly to *vanhu* and *zivpfuyo*.

Pestiferous animals are not just *any* living beings; they are vermin beings (Mavhunga 2011). They can be “exterminate[d] ... with an easy conscience” (Mamdani 2001, 13): pests, weeds, terrorists—one living thing intruding into the space of others, becoming “matter out of place”—*dirt* (Douglas [1966] 2002, xvii, 2).

Dirt in *chidzimbahwe* is *tsvina*; the meaning is the same as in English. As a concept, dirt is the “bridge between our own contemporary culture and those other cultures where behaviour that blurs the great classifications of the universe is tabooed. We denounce it by calling it dirty and dangerous; they taboo it.” The beholders invoke harm to whip the defiant into submission (Douglas [1966] 2002, xi). Because each kind has its own environment, those that don’t fit in become “anomalous creatures” (xii–xvi). As Douglas says, “there is no such thing as dirt; no single item is dirty apart from a particular system of classification in which it does not fit.” Dirt “exists in the eye of the beholder” (xvii, 2). “Dirt offends against order. Eliminating it is not a negative movement, but a positive effort to organize the environment” (2).

Dirt must be stopped, cleansed. *Nzira* (ways) and *maitiro* (means) must be found to clean the dirt. *Nzira nemaitiro* (ways and means) constitute *ruzivo* (knowledge) deployed to make (*kugadzira*) dirty spaces clean (*kuchenesa*). *Vanhu vatema* created numerous stratagems to manage and coexist with *mhesvi* that *vachena* later borrowed and deployed to control the insect. These included *moto* (fire), specifically late burning of forests; *manhuwe*

(repellents); *miteyo* (traps); *kugarisika kwevanhu* (human settlement); *rusosa/ruzhowa* (fences); the use of *muchetura* (poisons) or *mishonga yezvipukanana* (pesticides); and so on. The advent of Rhodesian rule introduced a new dynamic to relations between *mhuka* and *vanhu*: from coexistence to exterminating the insect, along with any *mhuka* and *sango* associated with it.

Thingification

Writing *in Black Skin, White Masks* in 1952, Fanon compared the discrimination and persecution of Jewish and black people and their relegation to the role of pests in a most illuminating way. The Jew, he said, is suspect “because he wants to own the wealth or take over the positions of power. But the Negro is fixated at the genital. ... Two realms: the intellectual and the sexual. ... The Negro symbolizes the biological danger; the Jew, the intellectual danger. To suffer from a phobia of Negroes is to be afraid of the biological. For the Negro is only biological. The Negroes are animals. ... They go about naked” (Fanon [1952] 1967, 157–165).

When people are seen as vermin, the instruments designed for verminous animals also can be extended to them. The Nazi described genocide against the Jewish people as delousing, performing an act of hygiene, removing dirt (Raffles 2010, 141). When talking about *nyongororo* (parasites), the high-ranking Nazi Heinrich Himmler said in 1943: “They suck our blood (as do Jews). They carry disease (as do Jews). They enter our most intimate parts (as do Jews). They cause us harm without our knowing it (as do Jews). They signify filth (as do Jews). They are everywhere (as are Jews). They are disgusting. There is no reason they should live” (Raffles 2010, 144).

The Nazis called it *Rassenhygiene* (race hygiene) against *Judenfieber* (Jewish sickness), *nyongororo* to be eliminated in “delousing facilities” equipped for eliminating them not *like* but *as* actual lice and other bugs, with hydrogen cyanide in gas chambers (Raffles 2010, 155–157). The boundaries between human and animal collapse; the dehumanized is eliminated as a pest. It can be subjected to experiments, as in the Tuskegee syphilis case, in which infected blacks were deliberately not treated to study the effects and progression of the disease (Reverby 2009); and the Guatemala syphilis experiment of 1946–1948, in which doctors infected soldiers, prostitutes, prisoners, and mental patients with syphilis and other sexually transmitted diseases to examine the effects of specific drugs (Reverby 2011).

We often make the mistake of thinking in terms of comparison rather than connection; however, consider the case of locusts and insurgents as

terrorists, acting not separately but together, creating overlapping terrors. Locusts that originate in places made inaccessible by war—in Mauritania, eastern Mali, northern Niger, northern Chad, Sudan, Somalia, Iraq, Afghanistan, and western Pakistan (Raffles 2010, 209–222).

The othered must be made to look threatening if violence against him/her is to be justified. The Guinea Bissau revolutionary Amílcar Cabral would sum up the black existence under what *vatema* called *hunhapwa* (slavery) at the hands of *vachena* thus: “To co-exist one must first of all exist” (Cabral 1974). Aime Césaire called this *thingification*: the transformation of the black person into a thing—in this case, a machine or “an instrument of production” (Césaire [1955] 2000, 42–43).

The fullest extent of thingification can be seen in the deployment of *vanhu vatema* as instruments to know and eliminate *mhesvi* (as flyboys, hunters, spraymen) and their exposure to *chepfu* in the name of antitsetse operations. No study to my knowledge has yet fully grappled with the harmful effects of such *chepfu* sprayed to eradicate either *mhesvi* or other pestiferous *zvipukanana*, like *hutunga*, *hwiza*, and *mhundururu* (swarming, green crop-destroying worms *vachena* called *armyworms*), as well as *zvimo-koto* (swarming, small, grain-eating birds *vachena* called *quelea birds*).

Deintellectualization

Dehumanization is not merely about being made a tool or a pest; it is also a reduction to a nonthinking thing, or deintellectualization. The deliberations of scientific associations and scientists of the 1890s to the 1950s—all of them *vachena*—show *vatema* as objects of study, not agentive participants in the production of *ruzivo*. Anthropology became an instrument for revealing the structure of *vatema*'s societies and functions of custom so that the Rhodesian authorities and the church could better effect subservience. Because no university existed anywhere else in Southern Africa until the University College of Rhodesia and Nyasaland in 1957, South Africa becomes an important site for understanding the prejudiced intellectual milieu responsible for deformatizing and delegitimizing knowledge produced by *vatema*.

The reduction of people into “species” in the Enlightenment tradition rests upon their gradation based on race, the white being deemed civilized and blacks savages. In the 1920s, Lévy-Bruhl's concept of the “primitive mentality” was particularly influential in the white anthropological community in South Africa. In his presidential address to the South African Association for the Advancement of Science (SAAAS) in 1926, J. D. Rheinallt-Jones cited Lévy-Bruhl's concept when referring to “the absence

of the scientific point of view" among "the natives." He claimed that when faced with a situation, instead of following *vachena's* course of "order and reason" and "calm and complete confidence in the immutability of natural laws," the primitive mind instead sought the guidance of "the mystic," "the occult," and "invisible power." Hence, Rheinallt-Jones said: "The intricate arrangement of a combination of methods appropriate to the end pursued, does not necessarily imply deliberate activity of the understanding, nor the possession of knowledge capable of being analysed, generalised, and adapted to unforeseen cases. It may be merely practical skill, formed and developed by use, and thus maintained—a skill comparable with that of a good billiard player who, without knowing anything either of geometry or mechanics, has acquired a ready and accurate intuition of the movement required in a given position, without needing to reflect upon his stroke" (Rheinallt-Jones 1926, 86). *Vatema's* knowledge, according to this view, was merely "experiential," as opposed to formed from thought and abstraction.

Darwin's *On the Origin of Species* (1859) was also used to mark the African's place in the unilineal "development" of culture and thought, from simple to complex, "culminating in the full flower of Western European civilization" (Hoernlé 1933, 77). *Ruzivo rwevatema* thus became mere raw material for *vachena*, who produced *ruzivo chairwo* (true knowledge). At best, elements of *tsika dzevatema* (what *vachena* derogatorily called "native culture") mattered only as examples of early (primitive) stages of development toward *tsika dzevatema* (white civilization), which was pure (77). *Vatema* had modes of thought, yes, but ordered within—never independent of—"superior" culture (Driberg 1928).

The ability to express ideas in ways that only *vachena* adjudged as writing became the measure of a society's capacity to be scientific. In the 1920s, a distinction was arbitrarily drawn "between peoples whose culture includes records of their own past, and who ... are historically-minded and may have their own written history, and *recordless people* who are not historically-minded and whose history, if such it can be called, is little more than legendary tradition" (Hoernlé 1933, 79; my italics). "Proper" historians studied people with written history; ethnologists studied recordless people (79–80). The latter's task was to render "the natives" legible for *hurumende* (the government) to cook them (*kubika*) into governable subjects. "The natives" became samples, specimens, data, and, at best, informants, rather than intellectual agents in their own right.

Indeed, in his presidential address in 1920, the Swiss missionary and ethnologist, the Reverend Henri A. Junod, declared before the SAAAS that

“for the present the white race has to rule and guide the black race” (Junod 1920, 76). No science could emerge from such a race; the reverend restated as a matter of fact what another reverend, Johannes Winter, had said in 1914: “Sentiment has no place in science. Science is cold and dry as the moon” (Winter 1914, 371). Junod was even blunter: “We Europeans of the twentieth century possess what I may call the *scientific spirit*, while Bantus are still plunged in the *magic conception of Nature*” (Junod 1920, 79). According to Junod, “the Bantu” did not ask who had made it the way it was; he just accepted it as it was. Only in times of illness or crisis did he seek to understand the sources of the malice, which “he at once believes ... are produced by spiritual agents like ... ancestor spirits [and] witchcraft,” all cured by “magic” (79). To our pious reverend here, *vatema* equals magic; *vachena* equals knowledge.

The 1920s was also the era of eugenics in Southern Africa for this bigoted class of intellectuals. Harold B. Fantham, a prominent eugenicist professor of zoology at the University of the Witwatersrand (Wits), for example, was convinced that to maintain “racial fitness ... physically and mentally” in South Africa, the boundaries of intimacy between whites and blacks had to be policed ruthlessly (Fantham 1925, 1927). He considered *vanhu vatema* mentally unfit but physically fit and therefore good for menial labor, and whites mentally and physically fit and therefore intellectual, scientific, and civilized. The white gene pool had to be defended against contamination by the “feeble-minded,” lest “a lower level of civilization” drag it down (Fantham 1925, 405).

Vatema were no more than zoological material, studied as primates—or something close thereto. Possibly the crassest racist writer of his generation was the Rhodes University College professor James Edwin Duerden, after whom the annual Duerden Lecture at the university is named. In a 1925 paper, Duerden made a call for “controlling the quality and quantity of humanity” using eugenics (Duerden 1925, 60). Referring to *vanhu vatema*, Duerden said: “Their hereditary factors appear to have reached their maximum response under their particular surroundings. ... They appear to have become stationary at a very low level of achievement regarded from a European standard” (67). “We are here to do our best for the Bantu, and to give him as many rights and privileges as he can wisely use,” Duerden said, in a condescending, paternalistic tone, rejecting that racial prejudice had anything to do with his “scientific” observation. “We have given him peaceful settled conditions of life. ... Schools for elementary education and for industrial instruction, Schools of Agriculture, Training Colleges, and finally, a University College. He has everything which the European has.”

One question now remained: “How will his hereditary factors respond to these changed conditions? Will he rise to the level of the white in mental, moral, and spiritual values?” (68–69).

“Bantu studies” (later sanitized as “African Studies”) in Southern Africa was born as a eugenic project, to ensure that “the Bantu” or “the native” was “now for the first time being studied on the spot, not by theorists overseas,” but by local, university-trained *vachena* in ways that addressed critical issues of “native behavior” that might affect their white lot. By 1925, Wits and University of Cape Town had Bantu Studies Departments, and Rhodes’s was on its way. Duerden declared: “These should supply data to enable the white to understand the native in all his aspects, material and psychological” and aid him in “expressing his good will” to “the native” (Duerden 1925, 69).

The “high point” of *vachena*’s reduction of *vatemala* into objects of study was the establishment in 1921 of *Bantu Studies, A Journal Devoted to the Scientific Study of Bantu, Hottentot & Bushman* (see figure 0.3). In 1942, when *Bantu Studies* became *African Studies*, only the linguistic hygiene improved; the subject and object of research remained the same (Biesheuvel 1952).

To repeat, *vatemala* came to *vachena*’s “science” as objects of study, not producers of knowledge. Just as *vachena* had done using anthropology, they now extended what they called “natural sciences” to dehumanize and deintellectualize *vatemala*. For a case in point, consider Lawrence Wells, Wits student and lecturer, and later chair of the University of Cape Town’s Department of Anatomy, and then founding head of the University of the Western Cape’s Anatomy Department. His master of science thesis was titled “The Foot of the South African Native,” which he described as follows in a SAAAS presentation in 1929: “Undoubted atavism occurs in the following cases: the varieties of the flexor digitorum brevis in which a deep head is present, arising from the long flexor tendon (22 cases); the abductor hallucis slip of the extensor hallucis longus muscle (8 cases); the absence or extreme reduction of the peroneus tertius (10 cases); the insertion of the peroneus longus into the first metatarsal only (6 cases); the presence of vestiges of the peroneus digiti quinti and peroneus digiti quarti muscles (8 cases); and the disposition of the interossei about an axis passing through the third digit (2 cases)” (Wells 1929, 796; also Wells 1938, 1952).

Wells’s contemporary, Simon Biesheuvel, summed up *vachena*’s perception and treatment of *vatemala* as experimental objects a decade later: “African society ... provides a natural laboratory for students of the social

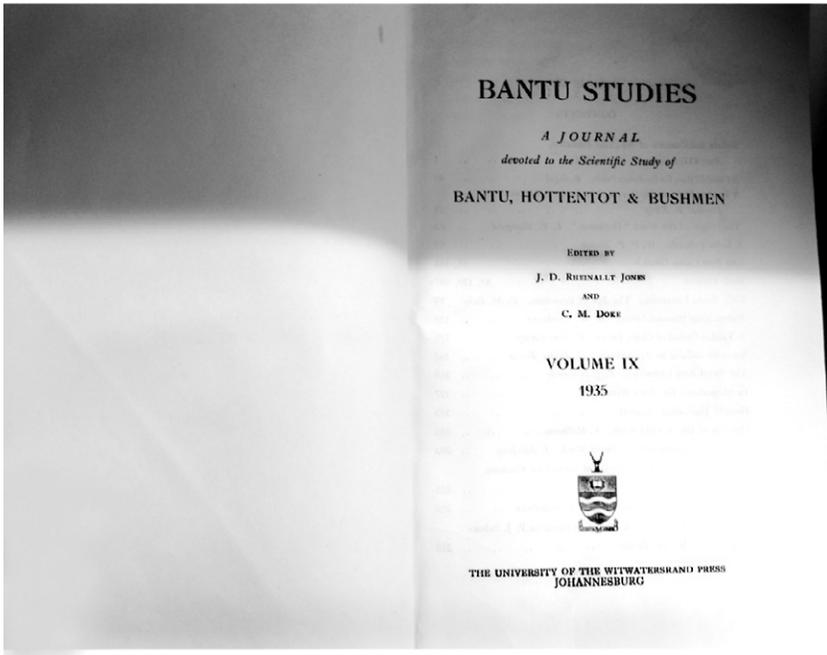


Figure 0.3

Bantu Studies, published as *African Studies* from 1943 on.

Source: *Bantu Studies* 9 (1935).

sciences” (Biesheuvel 1952, 45). Africa was “an imperial living laboratory,” with white males from Europe front and center, and *vatema* as objects of study (Tilley 2011). *Vatema* could not be experimenters themselves.

Self-Reintellectualization

Strangely, even influential black intellectuals bought into this narrative of the unscientific African and found black pride elsewhere. Recall Rev. Johannes Winter’s words from 1914: “Sentiment has no place in science. Science is cold and dry as the moon” (Winter 1914, 371). Leopold Senghor (intellectual and first president of Senegal) cast *vatema* in the same light—as full of the “warmth of human feeling—some joy and much pain” and “superior without invention and conquest”—while the whites were “hard and cold,” with all their technology and science (Le Baron 1966, 268). His compatriot in negritude, David Diop, added that the black man “would teach rhythm to the world that has died of machines and cannons” (269).

In 1963 when enunciating negritude, Senghor stressed that “man does not live by millet and rice alone; he lives truly and solely on the myths that are his spiritual nourishment” (Senghor 1963, 250).

In perhaps his most infamous statement, Senghor said the black man is “a field of pure sensation”; that he does not measure or observe, but “lives” a situation. This, he said, was the black man’s way of acquiring “knowledge”—by confrontation and intuition—whereas the acquisition of knowledge by reason was “Hellenic” and white: “In contrast to the classic European, the Negro-African does not draw a line between himself and the object, he does not hold it at a distance, nor does he merely look at it and analyse it. After holding it at a distance, after scanning it without analysing it, he takes it vibrant in his hands, careful not to kill or fix it. He touches it, feels it, smells it. The Negro-African is like one of those Third Day Worms, a pure field of sensations” (Senghor 1964, 72).

Senghor inspires me in every other way but that: his critique of Karl Marx as never having governed a country and therefore of little application to the African situation; the foundational role of pride in what is best about our African cultures; and of course the genius of negritude, of taking the black skin, the object and target of dehumanization and deintellectualization, as the ultimate symbol of pride, self-rehumanization, self-reintellectualization, and self-liberation. On the matter of science and technology, I declare my profuse disagreement. I am not alone. Ayi Kwei Armah certainly had Senghor in mind when lamenting *vachena*’s education system, which encourages us “to describe our society as thoughtless, rhythmic, playful, child-like, and irrational ... to make us incapable of reasoning” (Armah 2010).

Armah’s ire was also directed at scholars like Abiola Irele, who declared in 1983 that the only future for Africa lay in following Western culture and civilization. “It is of no practical significance now to us,” Irele said, “to be told that our forefathers constructed the Pyramids if today we can’t build and maintain by ourselves the roads and bridges we require to facilitate communication between ourselves, if we still have to depend on the alien to provide us for necessities of modern civilization, and if we can’t bring the required level of efficiency and imagination to the management of our environment” (Irele 1983, 3; echoing Towa 1971, 1979).

Armah unleashed his anger at such Irele-esque thinking:

We have helped cover up the fact that the European claim of proprietary rights over rationality is ahistorical. ...Worse, there are African intellectuals [who] not only swallowed the hoax about ‘Western rationality,’ but actually took to arguing, straight-faced, that (a) since African culture was essentially irrational, and (b) since

life in the modern world, modernisation, depended on the mastery of rational routines, (c) therefore for Africa to move into the modern world, Africa would have to borrow rationality from the West—Europe and United States of America. It is a formula that consecrates the partnership of deceitful teaching and gullible apprenticeship. (Armah 2010)

Armah circles in on a theme he first developed in *The Beautiful Ones Are Not Yet Born* (1968): When we talk about liberation, “what, precisely, are we talking about?” He hears people celebrating Kwame Nkrumah, Kenneth Kaunda, Julius Nyerere, Patrice Lumumba, Modibo Keita, and Sékou Touré as heroes who led *vanhu vatema* to freedom from foreign oppression—but he has one question: “If they freed us, why are we still talking about our liberation as if it still lay in the future?” (Armah 2010).

Ngugi wa Thiong’o answers that question rather well: “Unfortunately, the colonial phase of imperialism did produce an African elite with the mentality that was in harmony with the needs of the ruling classes of the imperialist countries. And often it was this African elite, nurtured in the womb of imperialism, with the cultural eyeglasses from Europe, that came to power or who held the reins of power during the neo-colonial phase of imperialism” (wa Thiong’o 1985, 18–19).

This book takes up Ngugi’s challenge. *Self-reintellectualization* refers to *vanhu vatema* home and abroad researching, reinstalling, reasserting, and revaluing themselves not just as eaters of other people’s knowledge, but producers of their own. In this way, conversations become possible with others who see from elsewhere, who should not be expected to see from our experiences and locations, whose perspectives we have no mastery over, nor they ours. That knowledge humility paves the way for a reconsideration of *vanhu vatema* as intellectual agents, engaged in their own journey of *ruzivo* and coming to the encounter with *vachena* not as blank slates, but as intellectual agents.

Mhesvi is one space from which I have chosen to embark on this journey, this reintellectualization of my own past, a declaration of independence, not just for myself, but every African who feels more comfortable thinking in their own language and keywords. I seek to reclaim my own humanity through an insect—seemingly innocuous, inconspicuous, grossly underestimated, and yet ... My point is a simple one: if a tiny insect can be that powerful, that unignorable, and that indefatigable, what more *vatema* whom *vachena* reduced to a thing just like the fly?

Zvipukanana (insects) have been reasonably well studied from other angles before. Some accounts meticulously detail the environmental management regimes that controlled pests with or without disturbing the natural

environment, but then generalize *vachena's* destruction of such indigenous practices when they could fruitfully engage with how such *ruzivo* became a critical ingredient (at the very least) and the foundation (as this book argues) of "*vachena's*" pest control itself. Helge Kjekshus (1977) investigated indigenous modes of ecology control in his influential book *Ecology Control and Economic Development in East African History*. However, he may have moved too quickly to declare that the rule of *vachena* ended these indigenous forms of environmentally friendly management of *mhesvi*. At the level of practice, that is true in many cases; when the spaces to practice certain forms of *ruzivo* are removed, the knowledge dies. I did not see that in *Transient Workspaces*, where the hunt continued—retaining its essence, but elastic enough for inbound repertoires. I do not see that in this book, either, because *vachena* did not bring any readymade stratagems against *mhesvi*; they relied on *ruzivo rwevatema* both for survival and for the basic premises from which they began constructing "tsetse science."

The Mobile Workshop

How do we position *mhesvi* so that we can recover the trajectory of knowledge production concerning it? In other words, where can I start to see *mhesvi* from a *mudzimbahwe's* point of view? How did people know *mhesvi*? What did they know about it? What happened to this *ruzivo*? Why is it important, at this moment, to know this information?

The Mobile Workshop is a serious consideration of the movement of ideas, of the things to be known, the people that seek to know and produce knowledge, and the materials with which they do so. In its basic form, *kufamba* (mobility) is to be in action or in motion, to act or to move (about). *Kufamba* and *vafambi* (travelers) refer to something more specific: the conveyance, transporting, re-moving, or re-placing of something from one thing or place to another, bringing into analytical relief the passenger carried, the vehicles, and the pathways, or pathlessness.

Positioned within mobility, *ruzivo* shows that *vachena's* moment in power in Africa was never a monodirectional transfer of knowledge but a *kusangana kweruzivo* (knowledge encounter). *Kusangana* is the coming into contact of two things coming from different directions. Applied to *ruzivo*, *kusangana* captures two knowledge systems, the endogenous and the inbound, each engaged in its own itinerary, which is then fundamentally shaped, altered, diverted, or ended because of the encounter. In other words, the encounter provides a site where we can observe *kufamba kweruzivo* (the mobility of knowledge) between cultures. *Vachena's* project in Africa—whether political,

economic, or ecumenical—is often portrayed as a civilizing mission, as a massive tidal wave that swept in and flooded all indigenous *ruzivo*. The narrative of this historical moment as not as encounter (between peoples) but conquest (hence the privileging of *colonization* and *colonialism*)—wherein *kuziva kwevachena* (white knowing) replaced *kuziva kwevanhu* or *maziviro avatema* (how [black] people know) and black people under “colonial” rule simply followed—is a false narrative. Repositioned as *kusangana kweruzivo*, the moment of encounter represents instead a front-to-front engagement, albeit one that occurred within unequal relations of power.

This book is therefore a quest for an African spirit of *ruzivo* with *mhesvi* as a site of *kuziva* (knowing). It is a story of how a mobile *chipukanana* carrying deadly *hutachiwana* pulled all kinds of actors—physicians from Europe and North America, *vadzvanyiriri* and their government, and *vatema* and their *ruzivo*—to engage in the work of controlling and eradicating it, thereby producing a salubrious, *mhesvi*-free environment and *ruzivo*. This knowledge was a knowledge of *mhesvi*—specifically, the role of mobility in its pestiferous actions and, hence, *mhesvi* as a mobile workshop of pestilence.

Conventionally, a workshop is limited to *people*, more specifically to a group that meets to engage in intensive discussion and activity on a particular subject or project; or to a *room* or *building* in which people use specific skills to perform mechanical work, usually manufacturing; or to an unspecified *place* where the making or repairing of things happens. *Mobile workshop* usually refers to a portable or wheelable toolbox; a workshop on wheels, mounted on a truck; a meeting inside/on a moving automobile or bicycle; or a mobile clinic.

The element of *work* in *workshop* normally refers to people—hence, workers or laborers. This book extends the concept of work beyond people engaged in productive or operative activity, occupying a space of employment, or *people at work*—beyond work as exertion. It draws attention initially to the task itself or that which is subject to intellectual and physical exertion or labor—and, indeed, to work as a product of such exertion, labor, or activity. The word *works* also refers to working parts, usually an assemblage of machines (hence waterworks or steelworks), but in this book it is extended to organic body parts and systems.

Hence, in the first sense, the mobile workshop becomes an assembly of circulatory, digestive, endocrine, immune, lymphatic, muscular, nervous, reproductive, respiratory, skeletal, and urinary systems. What makes the body a workshop is not just the existence of interdependent systems but the fact of their constant mobility throughout life until the body is either comatose or clinically dead. The bodies in question are the *mhesvi*,

hutachiwana, *vanhu*, *zvipfuyo*, and *mhuka*, as well as inanimate elements of the biotic and abiotic environments. These are *bodies at work*. An outbreak of *gopé/n'gana* is a sign of bodies working; work is also discovering what is going on and stamping out *hutachiwana*, *n'gana*, the *mhesvi* that transmit *hutachiwana*, and the infective *mhuka*.

In this second (operational) sense of work, a mobile workshop is an assembly and mobilization (i.e., making mobile) of men, skills, research, knowledge, tools, social and political relations, institutions, and faith to accomplish the objective of controlling the *mhesvi* and *hutachiwana*, which also determines where these elements are deployed. The *mhesvi* becomes a worksite, where men earn means of livelihood—hence the idea of work as employment (*basa*), a task or work to be done (*basa*, *mushando*), working or doing work (*kushanda* or *kuita basa*), and the workplace or being at work (*pabasa*).

The individual becomes part of a state machine to rid the countryside of a pestiferous *chipukanana*; the work of *kuziva*/knowing *mhesvi* (the fly rounds), starving it (by killing *mhuka* that it feeds on predominantly), and vegetation clearance (to deny it shelter) are just a few examples of mobility as work. *Working* (*kushanda*) denotes performing an activity, the moving of limbs or unfolding of thinking that results in knowledge. *To work* the gun, the sprayer, or the trap denotes the handling of the tools that operationalizes intent into actual execution. Results do not simply happen; they must be *worked for*. Sometimes, people do not just *do work*; they may have to *be worked*—that is, driven into *chibharo* (forced labor), as was often the case under *vachena*.

The *shop* in *workshop* conventionally stems from a store that sells things, a carpenter's shop, or any factory or workspace. Where *work* denotes the activity, *shop* denotes the place, the site of working. To shop is to go to this site looking for something, usually to buy goods stored or manufactured therein. In the past, shopping could only be performed by going or sending someone in person to the floor. That is no longer the case with the advent of online shopping platforms and door-to-door delivery services. The sense of *shop* examined in this book is that of a place where a specified type of work is performed. Workshop in this sense is not tethered to a fixed workplace, but is a transient *workspace*—a site of work produced through and because of movement.

The difference between *Transient Workspaces* and *The Mobile Workshop* is not only that the former focused on means and ways and the latter focuses on the mobility of knowledge (*kufamba kweruzivo*). More importantly, the one focused on the hunt as workspace, untethered to fixed physical

space, whereas *The Mobile Workshop* takes the *mhesvi* itself as the primary one of several workshops that are mobile, the others being *hutachiwana*, *mhuka*, *zvipfuyo*, *vanhu*, and *zvakanakomberedza* (surroundings), with the term *vedzimbahwe* used to describe the environment. Operationally, that entails locating our analytical space in, on, and around the mobile *chipukanana* that bites infective *mhuka* and ingests, carries, and inoculates *hutachiwana* into *zvipfuyo* or *vanhu* as it bites them, leading to the outbreak of *n'gana* and *gopé*, respectively. *Vanhu's* responses to *gopé/n'gana* cannot escape dealing with the transport and pestiferous work that an indefatigable, unignorable *chipukanana* performs through its mobilities. Once the mobile work *mhesvi* performs is understood, it becomes possible to see why the work of controlling *mhesvi* was organized and executed in a specific way and why so much focus was devoted to the *chipukanana's* mobilities.

That story, told through and through as a story about stopping or managing the mobility of the *mhesvi* and its dangerous microscopic passenger, can now be told.

Outline of the Book Chapters

The Mobile Workshop is composed of fifteen chapters. The story begins in chapter 1, "How *Vanhu* Managed Tsetse," which shows that *vanhu vatema* understood mobility as the centerpiece of their interactions with the insect. It commences from a view of *vatema's* management of *mhesvi* as a site of innovation, illustrating the centrality of mobility in interactions between *vanhu* and *zvipukanana*. The chapter strategically deploys the travel accounts of *vachena* writing in the nineteenth century about their encounters with people living with and despite *mhesvi*. The strategy herein is to read these travel accounts as acts of witnessing to, and confessions about, *ruzivo rwemhesvi* (knowledge of tsetse) among the people living in the lands between and along the Zambezi and Limpopo Rivers. The chapter will map *mhesvi*-infested areas and *mhesvi* management techniques—namely, forest clearance, selective culling of *mhuka*, strategic settlement of *vanhu*, use of repellents, movement by night, and inoculation. At the end of the day, African *mhesvi* management was about mobilities management.

Chapter 2, "Translation into Science and Policy," explores the processes of translation through which this *ruzivo rwevatema* (knowledge of black people) entered the pantheon of *ruzivo rwevarungu* (knowledge of *varungu* or *vachena*) and, later, state tsetse and trypanosomiasis control and research policy. This chapter first examines European travelogues, which show that such *ruzivo* and practices were the foundation of what became

science and means and ways of tsetse control. It makes a more general statement: Certain *ruzivo rwevatema* and practices formed the foundations of what *vachena* then called *science*, even while dismissing *vatema* as only good at creating and peddling myths and legends. Empirically, the specific stratagems that *vachena* built on were controlled *moto* (fire), specifically, *kupisa sora* or burning grass, forest clearance, prophylactic settlement, erecting buffer zones, cleansing chambers, and tsetse gates. The white entomologists in charge of Southern Rhodesia's *mhesvi* and *n'gana* control effort say so themselves. The concept of *cleansing* is used in the *chidzimbahwe* sense of *kuchenura*, from the root word *chena* (clean, white), in contradistinction to *tsvina* (dirt) or *chakasviba* (dark).

The rationale for centralizing *vedzimbahwe* is not that they alone had *ruzivo rwemhesvi* or knew of it more than other *vanhu vatema*. It is rather a methodological choice for managing the archive; otherwise, the *ruzivo* and practices were not hermetically sealed in geopolitical or geolinguistic boundaries but widespread throughout the region. *Chidzimbahwe* serves as a linguistic archive and a thought space from which I am descended and to which I am heir, and therefore one among several optics from which this shared *ruzivo* can be explained. This book is not necessarily the history of *vedzimbahwe* as *vanhu*; it is an exploration of their *ruzivo rwemhesvi*.

Chapter 3, "Knowing a Fly," examines what one government official appropriately called "an intelligence system of tsetse"—a thoroughly intrusive infrastructure and procedure of knowing this *chipukanana* (principally its mobilities) in the most complete way possible. This anthropomorphic formula for intrusive knowing sought "to live and breathe and think with" *mhesvi*; to do so entailed "a lifetime of affectionate study."¹³ This meant placing a peripatetic *chipukanana* under surveillance, to know how much time it spent in different parts of the habitat at different times of the year; how much time it spent feeding, sleeping, or simply in vigilant mode, waiting to pounce on anything that moved.¹⁴ Maps—of where it slept, bred, roamed, ate; its boundaries; strong points and weak points—were essential to successful operations against it.

Chapter 4, "How to Trap a Fly," considers one of the stratagems developing out of an intelligence system of *mhesvi*: trapping systems. This approach was based on the underlying principle that the *chipukanana* had very small reproductive potential, that a slight reduction in the *chipukanana's* reproductive rate or increase in its mortality rate was enough to control its entire population. To do so, *mhesvi* had to be attracted to artificial baits laced with killing or sterilizing agents. These "attractant studies" targeted *mhesvi's*

mobilities, sensory system, and feeding behavior; once attracted, the next step was to trap the flies and, once trapped, kill or sterilize them.

Chapter 5, “Attacking the Fly from Within: Parasitization and Sterilization,” discusses the method of killing the *mhesvi* from within its body. The first section deals with research (from the 1920s to the 1970s) on *parasitization*—the destruction of the *mhesvi* through deliberately promoting the proliferation of *nyongororo* naturally found in its body. These *hutachiwana* either were naturally lethal to *mhesvi* or could be genetically engineered to be so. The second type of research focused on sterilizing the *chipukanana* through the capture and release of sterile males by means of chemical sterilants and gamma radiation.

Chapter 6, “Exposing the Fly to Its Enemies,” considers two stratagems, both derived from past and prevailing practices of *vanhu vatema* of killing *mhesvi* and exposing it to its predators. One involved using *moto* (fire)—specifically, late-season burning—to achieve maximum destruction and expose to predation all *mhesvi* in their adult phase, their *zvukwa* (the insect at its worm or pupa stage, what *vachena* called *puparia*; singular *chikukwa*), and their *ziguraura* (literally, “the one that has cut off its intestines,” what *vachena* called *larva*; singular *chiguraura*). The second strategy was the mechanical clearance and chemical phytocides of the forest for the same purpose.

Chapter 7, “*Cordon Sanitaire*: Prophylactic Settlement,” focuses on the use of fencing and forced resettlement of *vatema* as methods of “tsetse control.” The argument is that *vatema* and their *zvipfuyo* were deployed as methods of pest control and to act as an outer ring of early warning systems to protect *vachena*’s cattle ranches (*mapurazi*, from the Portuguese word *prazos*). The chapter reflects on the meaning of a humanity (*hunhu*) experienced and lived under conditions of animalization, wherein *vatema* are dumped at the unhealthy margins, to live not just *like* but *with* other *mhuka* as *vachena* helped themselves to their healthy lands on the watershed.

Chapter 8, “Traffic Control: A Surveillance System for Unwanted Passengers,” is concerned with the surveillance and cleansing infrastructure installed to stop “carried fly.” On the surface, *traffic* might be interpreted as automobiles, bicycles, and foot movements—yet such movement is, at any other time, innocuous. What rendered it worth controlling was *mhesvi*, the real “traffic” that had to be controlled because it carried *hutachiwana*.

Chapter 9, “Starving the Fly,” focuses on the deployment of huntsmen called *magocha* to eliminate *mhuka*, the primary bloodmeal source of *mhesvi*, and thus starve it. The chapter opens with an interview with one such *magocha*. These huntsmen were known in society as *magocha* (the ones

who are always roasting meat) due to the massive amounts of meat at their disposal. Next, the chapter examines the relationship between *magocha* and the white tsetse field officers (TFOs) who supervised them and the work of indiscriminate and discriminate hunting. Because many technical aspects of the hunting itself have already been discussed elsewhere (Mavhunga 2014, 125–150), chapter 9 instead focuses on the perspectives of *vatema* covered only thinly or not covered in the earlier work.

Dirt is also a pollutant in the sense of chemical poisons, as chapters 10 to 13 show in their discussions of the deployment of organochlorine pesticides (OCPs) to destroy *mhesvi*. Chapter 10, “The Coming of the Organochlorine Pesticide,” introduces the three OCPs that were most widely used in Rhodesia: DDT (dichlorodiphenyltrichloroethane), lindane (gamma-hexachlorocyclohexane), and dieldrin. Later, these were largely replaced with two other OCPs: thiodan (also called endosulfan) and deltamethrin. The chapter first explains what these chemicals were and how and for what they were originally designed in the United States and Europe, as well as the circumstances of their travel and deployment in *mhesvi*-occupied Africa, narrowing it down to Southern Rhodesia (later Zimbabwe).

Chapter 11, “Bombing Flies,” explores the use of *ndege* (aircraft) to spray OCPs. The origins of the practice in KwaZulu, South Africa, are traced first. (*Ndege* is the *kiswahili* word for bird and thus is used throughout to refer alternately to both the flying animals and airplanes.) In the second section, the technical aspects of aerial spraying are examined as an example of the extension of methods designed in the United States for agricultural or military purposes to deal with *zvipukanana* and with conditions for which they were not originally designed. In the final sections—the bulk of the chapter—the deployment and performance of first fixed-wing *ndege* and then *zvikopokopo* (helicopters) are closely examined. *Vedzimbahwe* do not refer to a helicopter as *ndege* or *shiri*, but as *chikopokopo*—or, in deeper parlance, as *mukonikoni* (dragonfly) on account of its hovering and landing behavior.

The objective of chapter 12, “The Work of Ground Spraying: Incoming Machines in *Vatema*’s Hands,” is self-evident. The chapter is organized into three sections. The first concerns the strategic deployment of inbound spraying equipment to perform or operationalize specific objectives and outcomes. The second section takes us inside the work of spraying, focusing on the meeting point between *mushonga wezvipukanana* (pesticide; hereafter just *mushonga*), *mushini* (spraying machine), and sprayman, known in the villages as *mafrayi* (fly man; singular *mufrayi*). The final section is a case study of a spraying campaign involving three neighboring countries: Southern

Rhodesia, Portuguese East Africa, and the Union of South Africa. The purpose of the campaign was to stop the advance of *mhesvi* from the Rio Savé region of Mozambique into the Savé-Runde area, potentially threatening northeastern South Africa.

The final two chapters deal with the fallout from chemicals deployed to deal with *n'gana* in cattle. Chapter 13, "DDT, Pollution, and *Gomarara*: A Muted Debate," begins to ask questions about the link between *vachena's* OCP use and the high incidence of many types of cancer, a condition known in *chidzimbahwe* as *gomarara*. The word derives from *gomarara*, a plant that usually grows on other plants, deposited in the fecal droppings of birds roosting or stopping over. This *nyongororo* (parasite) takes over the tree, slowly replacing the branches and then the stem. Some *gomarara* kill the plant; others are just malignant. The condition of cancer is the same.

The rise in profile of *gomarara* in Zimbabwe raises two questions: Could the massive aerial and ground spraying of the Zimbabwean countryside be catching up with us? Is there a connection between *gomarara* and OCPs? The reader should note that this chapter is not a detailed treatment of the question; all it seeks is to bring together the global discussion of OCP carcinogenicity and the staggering statistics of *gomarara* in Zimbabwe, where the environmental pollution discussion is muted. First, a brief exploration of the state of *gomarara* in Zimbabwe is offered, drawing out the incidences of *gomarara* that are usually associated with OCPs. The second section reconstructs debates about OCPs as environmental pollutants, a discussion that I argue was muted at the height of the spraying campaigns of the 1950s and 1960s and is largely forgotten now. This is alarming given the banning of these chemicals globally, along with other synthetic products, such as lead-based paint and asbestos, that were once deemed very safe and now are known to be toxic. (In Africa, recalls are rare and class action lawsuits against toxic products virtually unheard of. Corporations get away with everything.) I then examine some of the investigations made into the environmental effects of OCPs elsewhere, marshalling that evidence to ask questions and to map and follow the itineraries of these pesticides in our bodies and those of *mhuka*.

As early as 1944, skeptics were already warning that these new chemical weapons against pests were "turning out to be double-edged weapons" that "may at the same time destroy both useful and harmful agricultural insects." Indeed, as Jane Stafford cautioned, "They may rid your dog of fleas, but insidiously ... damage his liver or paralyze him through nerve

damage. They will rid your home of mosquitoes, flies and vermin, but the price may turn out to be high in human health and life" (Stafford 1944, 90).

Chapter 14, "Chemoprophylactics," addresses the use of trypanocidal drugs to cure or prevent *n'gana* in *mombe*. It first gives a historical overview of chemoprophylaxis in Southern Rhodesia, then turns to the problem of drug resistance and photosensitization, a clinical condition in which the skin's negative exposure and reaction to sunlight is heightened due to phototoxic drugs and chemicals. The chapter ends with some case studies of chemoprophylaxis operations in Southern Rhodesia, all showing how the early promise of chemoprophylaxis ended with unforeseen complications that poisoned instead of curing *zvipfuyo* of *n'gana*. The argument made is one about pollution of the most intimate kind: within the body, both of the animal and *hutachiwana* itself. The chapter shows a general pattern among all the drugs: They worked well initially before the animal either relapsed or exhibited signs of drug resistance, prompting the deployment of one drug to cure the effects of another.

Chapter 15, "Unleashed: *Mhesvi* in a Time of War," takes the discussion into the abandonment of "tsetse control operations" as the war of self-liberation intensified, into the fog of war in which the methods designed for *mhesvi* and other pests are extended to those *vatema* viewed as *varwi veru-sununguko* (freedom fighters) and those designated *magandanganga* (terrorists). This does not mean all *vatema* and all *vachena* shared the same perspective or that all freedom fighters behaved consistently with that description but the majority did. This lumping together of "problem animals" and "problem people" into "vermin beings" justified the extension and slippage of instruments and methods from *zvipukanana* to the dehumanized *munhu*, whose elimination constituted a form of pest control.

Finally, in "Conclusion: *Vatema* as Intellectual Agents," I return to the question of *munhu mutema* as intellectual agent, reemphasizing that *mhesvi* is one venue in which *ruzivo* was applied, produced, and extended in different directions. What are the implications of knowing from the fly?