

**Consumption or Profit? Edible Caterpillar Collection in Northern Province of Zambia,  
1950s-2019**

**by**

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**A Dissertation Submitted to the University of Zambia in Partial Fulfillment of the  
Requirements for the Degree of Master of Arts in History**

**University of Zambia**

**Lusaka**

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### **Declaration**

I, **AARON MWANZA** hereby declare that this dissertation represents my own work and that it has not been previously submitted for a degree at this or any other university.

**Signed**.....

**Date**.....

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## Approval

This dissertation of Aaron Mwanza is approved as fulfilling part of the requirements for the award of degree of Master of Arts in History at the University of Zambia.

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## **Dedication**

To my Mother, Maureen Mwenya, my first teacher who taught me alphabet prior to my grade one enrolment; and my late father, Mr. Bernard Mwanza (M.H.S.R.I.P.), who timeously made me realise the importance of education.

## **Acknowledgements**

This dissertation would not have yielded the desired results if it had not been for the unwavering support of my supervisor, Dr. Clarence Chongo. Despite occupying a busy office of Assistant Dean, Postgraduate Studies in the School of Humanities and Social Sciences and at the same time working as a lecturer, Dr Chongo worked tirelessly to see to it that all the chapters were thoroughly checked in good time. This indeed posed a reciprocal challenge on me to work extra harder. He did not only criticise me but endeavoured to inspire me to forge ahead irrespective of whatever bottlenecks I encountered on the way to producing this work. For the concerted efforts demonstrated on this dissertation, I wish to sincerely express my gratitude to him.

Special thanks also go to some scientists who helped to shape my study through consultation. These are Professor Keith Mbata and Professor Philip Nkunika both of the Department of Biological Sciences at the University of Zambia. Given the nature of this study and although it was written from the historical perspective, it immensely benefitted from the experts in entomology who shared relevant scientific knowledge about edible caterpillars. These senior lecturers therefore deserve a pat at their backs for willingly accepting ‘too many’ questions I posed to them. For their support, I am heavily indebted.

My utmost appreciation goes to some institutions and individuals whom I interviewed during data collection. Of these interviewees the following ought to be mentioned: Fr. Justine Chomba, Fr. Oscar Chishimba, Mr. Gabriel Chambeshi, Mr. Paul Kasonje, Mr. Mwewa Chibwe, Mr. Robinson Mulenga and Mrs Precious Nganga. Lastly, but in no way least, I thank my wife, Lombe Chizyuka for assuming the role of a father in a home and for taking care of my three sons: Aaron Emmanuel Mwanza, Jr., Andrea Bukata Mwanza, Lubono Mwanza and my only daughter, Paulcheria Deborah Mwanza. I am truly grateful for their endurance during my absence from home, especially at the time they needed me most.

## **Abstract**

Since the 1950s, edible caterpillars were being collected by the people of Northern Rhodesia (now Zambia's) Northern Province. They were consumed as a delicacy at household level. In some instances, however, edible caterpillars were sold for cash later when the cash economy was introduced or bartered with other foodstuffs. In view of this, this study investigates the extent to which edible caterpillars were collected either for consumption or for profit in the Northern Province of Zambia from the 1950s to 2019. The study focuses on two districts of the province, that is, Luwingu and Mporokoso. The study discusses the methods adopted by the local people in collecting caterpillars. It argues that four main methods were used, that is, net trapping, cutting down trees, hand-picking and tree-beating (shaking). However, only the latter three were used in Mporokoso and Luwingu districts. In addition, the study examines the dynamics of edible caterpillar harvesting in Luwingu and Mporokoso districts. It argues that the methods of collecting caterpillars remained unchanged. The people of these areas did not adopt new methods of collecting caterpillars. Rather, by 2019, they were still engrossed in traditional methods of caterpillar collection. The study further demonstrates that as opposed to earlier years when caterpillars were mostly collected for consumption, by 1976 commercialisation in caterpillar collection had become prominent. Caterpillars began to be sold to local markets in Lusaka and the Copperbelt Provinces of Zambia. In some instances, they even found markets in European nations. In this respect, from mainly being consumed at household level, edible caterpillars gradually became an important source of income generation and profit for the local people. The study also analyses the socio-economic impact of edible caterpillar harvesting among the people of Luwingu and Mporokoso districts. It argues that the process of collecting edible caterpillars had both negative and positive impact on the local people of Luwingu and Mporokoso. A notable negative social impact was pupils' absenteeism from schools during the collecting season when they opted to collect caterpillars than attend classes. Another social impact was that church revenue, which depended on church members' attendance, went down during caterpillar season as most members would go and collect the insects. The churches involved were the Catholic, UCZ, Bread of Life and Brethren. This was a common trend in all the aforementioned churches. Positively, the study demonstrates that those who began selling caterpillars for profit were empowered economically. The study argues that though positive economic gains were noted from caterpillar collection, socially, negative results over-rode positive ones.

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## **Abbreviations and Acronyms**

AIDS	Acquired Immunodeficiency Syndrome
ANC	African National Congress
ARPT	Adaptive Research Planning Team
ARPT-NP	Adaptive Research Planning Team-Northern Province
BBC	British Broadcasting Corporation
BRE	Bemba Royal Establishment
CBD	Central Business District
DEBS	District Education Board Secretary
DESO	District Education Standards Officer
ECZ	Examination Council of Zambia
FNDP	First National Development Plan
HIV	Human Immunodeficiency Virus
HQ	Head Quarters
KG	Kilogrammes
LINTCO	Lint Company of Zambia
MLNR	Ministry of Lands and Natural Resources
MLNREP	Ministry of Lands and Natural Resources Environmental Protection
MMD	Movement for Multiparty Democracy
NAZ	National Archives of Zambia
NCU	Northern Co-operative Union
PS	Permanent Secretary
TAZARA	Tanzania Zambia Railway Authority
ZNBC	Zambia National Broadcasting Corporation

PTA	Parent Teacher Association
MOGE	Ministry of General Education
SNDP	Second National Development Plan
UNDP	United Nation Development Programme
NWFPs	Non-Wood Forest Products
ZARI	Zambia Agricultural Research Institute
ZANIS	Zambia National Information Service

## Chapter 1

### Introduction and Historical Background

It is generally accepted in academic literature that traditional consumption of edible insects is common in one third of the world's population, mostly in Latin America, Asia and Africa.<sup>1</sup> Entomophagy, that is, the eating of insects, is not a new phenomenon. Archaeological evidence demonstrates that humans have evolved as an entomophagous species.<sup>2</sup> Since time immemorial, humans have been consuming a variety of insects.

Literature demonstrates that insects were consumed among the Israelites who God instructed which insects they could eat and which ones they could not eat. The book of Leviticus in the bible pointed out that “All winged insects are unclean, except those that hop. You may eat locusts, crickets, or grasshoppers. But all other small things that have wings and also crawl must be considered unclean.”<sup>3</sup> This quotation clearly shows that God instructed the Israelites not to eat certain types of insects. In view of this, insects were consumed among the Jews. Joost Van Itterbreeck and Arnold van Huis argued that Westernization caused Jews who previously ate insects to reverse their habits.<sup>4</sup> The scholars pointed out that:

Consumption of insects such as termites and beetles were in the diet of the early American Indians by 9,500 B.P. and caterpillars in Mexico by 5,400 B.P.

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<sup>1</sup> This has been alluded to by a number of scholars documenting insects as human food in the history of human kind. See, for instance, Jaynie Tao and Yao Olive Li, ‘Edible Insects as a means to address global malnutrition and food insecurity issues’, *Edible insects for malnutrition*, (2018), vol. 2, No.2; DeFoliart, G. R. (1992). Insects as human food. *Crop Protection*, 11: 395-399.

<sup>2</sup> Quoted in D. Dobermann, J.A. Swift and L. M. Field, ‘Opportunities and hurdles of edible insects for food and feed’, *Nutrition Bulletin (review)*, 43 (2017), 293.

<sup>3</sup> Leviticus 11: 21-23, *Good News Bible*, second edition, (New York: The United Bible Society, 1994), 113.

<sup>4</sup> Joost Van Itterbreeck and Arnold van Huis, ‘Environmental manipulation for edible insect procurement: a historical perspective’, *Journal of Ethnobiology and Ethnomedicine*, 8, 3 (2012), 1.

Australian Aboriginal people were equally known to have been consuming: “termites, grasshoppers, moths, caterpillars, beetle larvae and many more”<sup>5</sup>

The significance of this quotation is that it shows the importance of insects in the diets of early communities. However, this study focused on edible caterpillars only.

Insects were also a source of proteins in Africa, for example the Kun-san of the Kalahari Desert consumed termites, grasshoppers, caterpillars and ants.<sup>6</sup> Yizenge Chondoka and Chewebien Chabatama argued that edible caterpillars were a source of food among different ethnic groups of Zambia. Illustrating the importance of edible insects among the Tumbuka and Senga people of Chama district during Zambia’s pre-colonial era, Chondoka postulated that “caterpillars, mushrooms, flying ants and crickets were collected by the Tumbuka from their territory annually between November and February.”<sup>7</sup> Similarly, Chabatama highlighted the importance of caterpillars among ethnic groups of Zambia’s North-western Province. He noted that villagers survived by living on insects and small animals.<sup>8</sup> The significance of the examples cited from North-eastern Rhodesia and Zambia’s North-western Province is that they show that caterpillars were consumed among the communities of these areas. In view of this, the study examines the extent to which the local people of Luwingu and Mporokoso districts of Northern Province collected and consumed edible caterpillars.

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<sup>5</sup> Itterbreeck and Huis, ‘Environmental manipulation’, 1. From: <http://www.ethnobiomed.com/content/8/1/3> (accessed 06/06/2019). See also Alan L.Yen, ‘Edible insects: Traditional knowledge or western phobia?’ *Entomological Research*, 39 (2009) 289-298, 290.

<sup>6</sup> Itterbeeck and van Huis, ‘Environmental manipulation’.

<sup>7</sup> Yizenge A. Chondoka, *A History of the Tumbuka and Senga in Chama District, Zambia, 1450-1900*, (Lusaka: Vensus Stationary Limited, 2007), 44.

<sup>8</sup> Chewebien M. Chabatama, *Peasant Farming, ‘The State, and Food Security in the North-western Province of Zambia, 1902-1964’*, PhD Thesis, University of Toronto, 1999, 41.



## Description of Edible Caterpillars

Edible caterpillars are insects belonging to the order of Lepidoptera. It is believed that members of this order evolved about 220 million years ago, according to the geological record of the group. Caterpillars are immature stages of Lepidoptera. Once they reach the adult stage, caterpillars transform into butterflies and moths, depending on the species of Lepidoptera involved. According to Mabossy-Mobouna, there are 180,000 caterpillar species that are recognized by entomologists and that they belong to 128 families of which 36 species are collected and consumed in the Congo-Republic

The southern Africa caterpillar called Mopane worm, *Gonimbrasia belina* (Westwood, 1849) and two caterpillar species occurring in northern Zambia namely “Chipumi”, *Gynanisa major* (Klug, 1836) and “Mumpa”, *Gonimbrasia zambesina* Walker, 1885, are edible insects. However, they differ in character as well as where they are found geographically. To this effect, Keith Mbata noted that in Zambia, ‘mopane worms’ were only found in the southern parts of Zambia, while Chipumi and Mumpa, were found in Northern, Luapula and Muchinga Provinces and other parts (Central and Copperbelt Provinces) of the country.<sup>5</sup> This confirms A.E.G. Storr’s argument that ‘mopane worms’ are found on mopane trees, *Colophospermum mopane* (J.Kirk ex Benth.) J.Kirk ex J.Léonard (Family, Fabaceae), from which the name of the caterpillars is drawn and are found along the Zambezi valley and the Kafue River in the southern part of Zambia. Additionally, Mbata also noted that:

Mopane worms are not popular in Zambia because they are not widely distributed in the country. Their distribution coincides with that of the mopane vegetation, which is found mainly along the Zambezi valley and intermittently along the southern Kafue River valley.<sup>7</sup>

From the foregoing and for the sake of this study therefore, the phrase ‘edible caterpillars’ will be used throughout the dissertation because it is the one on which the research focused, particularly Chipumi and Mumpa species.

It has been noted that edible caterpillars feed on specific host plants called “Mpasa” in the local language, Bemba, or scientifically known as *Julbernardia globiflora* (Benth.) Troupin (See appendix 2) on which they are found while mopane worms, as earlier stated, specifically feed on mopane trees. However, it must be noted that edible caterpillars do not depend on Mpasa for their survival, but feed on 3-4 other common trees in the miombo woodland areas of Zambia.<sup>8</sup> This implies that wherever these food-trees are found, caterpillars would most likely be found as leaves of the said trees are their food source.

There are different types of edible caterpillars that have been identified by entomologists, scientists, Archaeologists, foresters and other researchers around the world. However, in Zambia, there are eight common types of edible caterpillars that were harvested annually, consumed and sometimes sold. These included:

Chipumi (*G. major*), Mumpa (*G. zambesina*), “Fikoso” (*Cirina forda* (Westwood, 1849)), “Mpambata” (*Imbrasia epimethea* (Drury, 1772)), “Nakayonga”, “Namusamfwa” (*Imbrasia* sp.), “Namusuku” (*Imbrasia rubra* Bouvier, 1927) and “Namusuku”.<sup>10</sup>

In the Northern Province of Zambia, the two commonly consumed and commercial edible caterpillar species were Chipumi and Mumpa. Although other types of edible caterpillars were present during the harvest period, the local people concentrated on collecting the two common species due to their economic value. Chidumayo and Mbata indicated that the two species were very popular, highly valued, tastier and marketable.<sup>11</sup> This partly explains why the study focused on Northern Province and not any other province of Zambia.

## **Statement of the Problem**

Harvesting of edible caterpillars was an important economic activity undertaken by many ethnic groups of northern and central parts of Zambia since pre-colonial times. The caterpillars were initially collected for domestic consumption but over the years the insects became an important source of income generation for the local people who often transported the commodity from rural areas to urban centres where they sold it for a profit. Although edible caterpillars were important in supplementing the diet of the local people and served as a source of income, very little has been written on the significance of edible caterpillars in the economy of the people of Northern Province in Zambia. This study examines the extent to which edible caterpillars were used for consumption and sold for profit among the people of Luwingu and Mporokoso districts in Northern Province of Zambia. It also examined the dynamics in caterpillar collection.

## **Objectives of the Study**

The objectives of the study were to;

1. Examine the dynamics of edible caterpillar harvesting in Luwingu and Mporokoso districts;
2. Analyse the socio-economic impact of edible caterpillar harvesting among the people of Luwingu-Mporokoso districts;
3. Establish the extent to which edible caterpillars were used for consumption or income-generation.

## **Rationale**

The study will contribute to the limited literature on the history of edible caterpillar collection in Zambia. It is also hoped that this study stimulates further research interest on the subject.

## **Period and Area of Study**

The 1950s are chosen as the starting point for this study because primary sources show that much writings on edible caterpillars began around this period of time on both Luwingu and Mporokoso districts. The study ends in 2019 because both primary and secondary material showed that edible caterpillar collection in Luwingu and Mporokoso districts had a socio-economic bearing on the people's livelihood in that year and beyond.

At the time of this research (April, 2020 to December, 2020) there were twelve (12) districts in the Northern Province of Zambia. These were Chilubi, Kaputa, Kasama, Lunte, Luwingu, Lupososhi, Mbala, Mungwi, Mporokoso, Mpulungu, Nsama and Senga Hill districts.<sup>9</sup> Out of these districts, Lunte, Luwingu, Lupososhi, Mbala, Mporokoso and Mungwi districts were reported as areas that were highly populated with caterpillars every year.<sup>10</sup> Nevertheless, the study focused on Luwingu and Mporokoso districts because little research had been done on the two districts, especially on edible caterpillar collection. Secondly, preliminary interviews carried out demonstrated that a lot of business men and women coming from far places outside Northern Province went specifically to the two districts to purchase caterpillars for profit generation because they believed that caterpillars that came from that side were of high quality and that they could sale faster than those from other regions.<sup>11</sup> This, further, stimulated more interest as the researcher wanted to know more about caterpillars that came from the two districts.

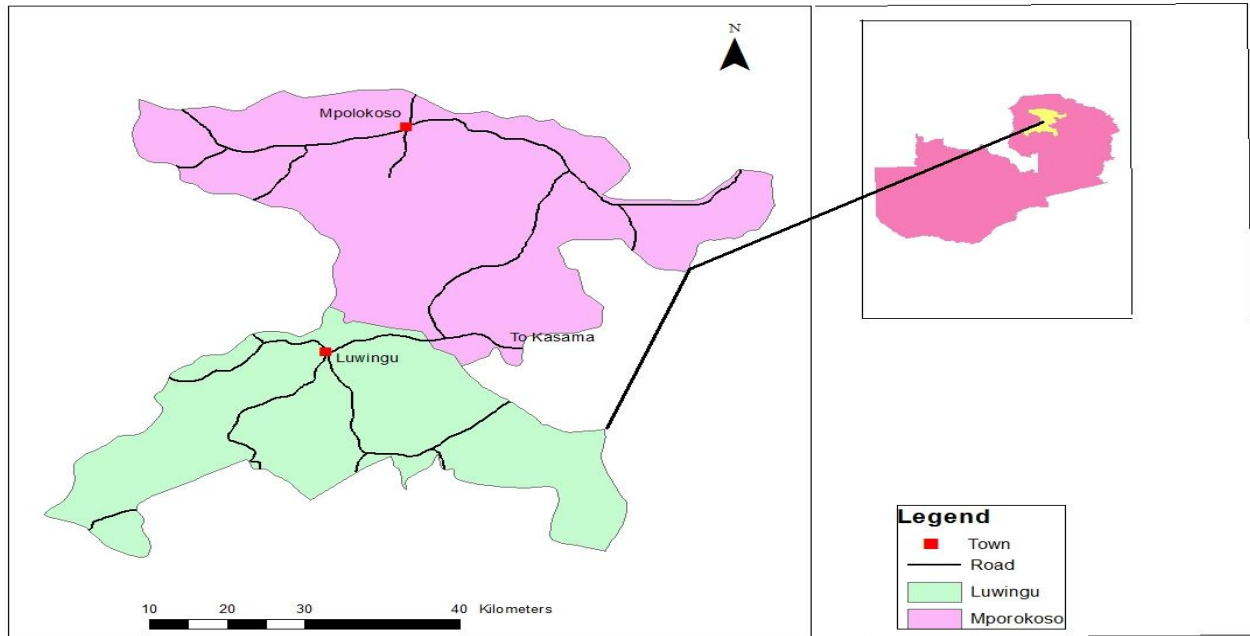
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<sup>9</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed 12/08/2020).

<sup>10</sup> Interview with Chief Chimbola, Kasama, 22<sup>nd</sup> August, 2020.

<sup>11</sup> Interview with Maloba Emmanuel, a teacher of history, Luwingu, 16, December, 2020.

**MAP 1: The location of two study areas: Luwingu and Mporokoso districts**



**Source:** Drawn by Chanda Mwendapole, Department of Geography and Cartography Section, UNZA.

### *Luwingu District*

Luwingu district is one of the oldest districts of Northern Province.<sup>12</sup> The name ‘Luwingu’ emanates from the word ‘*Lubingu*’, which literally means ‘light’. It was reported that since time immemorial, the district had a lot of lions, whose eyes would reflect light especially in the night.<sup>13</sup> It was further noted that as lions were moving as a pride in the evening, lights from the lions’ eyes would shine covering an estimated distance of about 500 meters, a sign that enabled the local people to notice that lions were around.<sup>14</sup> Due to the presence of missionaries who mostly were Europeans, the name *Lubingu* gradually changed to Luwingu as these were failing to pronounce the word *Lubingu* whenever they were preaching the word of God. They

<sup>12</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed December 27, 2020).

<sup>13</sup> Interview with Maloba Emmanuel, a teacher of history, Luwingu, 16, December, 2020.

<sup>14</sup> Interview with Gabriel Mwamba Kambone, senior headman Kamanika to Chief Peter Shimumbi number 9, Chief Chipalo’s palace, Luwingu, 2<sup>nd</sup> November, 2019.

instead pronounced it as *Luwingu*.<sup>15</sup> This is how the name was widely spread and eventually changed permanently.

The district is on the western part of Kasama, the provincial headquarters of Northern Province about 165 kilometres away.<sup>16</sup> It lies between latitude 29° 45' 00" and 10° 15' 00" longitudes.<sup>17</sup> It shares boundaries with other districts namely Mporokoso, Lunte, Kawambwa, Mansa and Chipili.<sup>18</sup> According to the 2010 Zambian Census of Population and Housing, the district had a population of 122,136 people with an annual population growth rate of 4.2 percent.<sup>19</sup> Luwingu has three (3) chiefdoms, namely: senior Chief Shimumbi, Chief Chipalo, and Chief Tungati.<sup>20</sup> The study was carried out in all the three chiefdoms.

Luwingu has a terrain which is largely plateau Savannah.<sup>21</sup> The district receives good rainfall annually. In terms of vegetation, the northern region of the district is on a semi-low highland area while the southern part slopes towards the flat land, with lakes, rivers and dambos which are wet throughout the year.<sup>22</sup> The highland has many rivers and streams that dry up seasonally leaving swampy; good for animal grazing and rice growing.<sup>23</sup>

Economically, Luwingu district is predominantly an agricultural area with 99% of farmers being small cultivators who grow beans, maize, cassava and groundnuts.<sup>24</sup> Apart from these, edible caterpillars, which are collected from the trees in the bush, are also part of the

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<sup>15</sup> Interview with Maloba.

<sup>16</sup> *Times of Zambia*, 'Tourism potentials in Northern Province of Zambia', Wednesday, 3<sup>rd</sup> March, 1992, 7.

<sup>17</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed December 27, 2020).

<sup>18</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed December 27, 2020).

<sup>19</sup> Quoted in "Districts of Zambia" *Statoids* (Retrieved December 27, 2015).

<sup>20</sup> Interview with Mulenga Masala, Secretary to Chief Chipalo, Luwingu, 12 December, 2020.

<sup>21</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed December 27, 2020).

<sup>22</sup> *Times of Zambia*, 'Some districts in Northern Province of Zambia', Wednesday, 3<sup>rd</sup> March, 1992, 7.

<sup>23</sup> From: [www.zambia-info.org](http://www.zambia-info.org) (accessed December 27, 2020).

<sup>24</sup> From: [www.zambia-info.org](http://www.zambia-info.org) (accessed December 27, 2020).

economic activities in the area.<sup>25</sup> Since the 1950s, edible caterpillar collection, like other economic activities is undertaken as an annual activity.

The district has a total number of eleven (11) protected Forest Reserves and two (2) plantations. The major trees found in the forest include: *paranchytesia Spaformis* (*Muputu*), *Branchytesia Longi Folia* (*Muombo*), *Branchytezia Floribunda* (*Musompa*), *Maraguesia marcoura* (*Musenshi*), *Uapaco* (*Musuku*) and *Juberradia Gilobiflora* (*Mpasa*).<sup>26</sup> According to Stein Terje Holden, it is this *mpasa* which mostly hosts edible caterpillars. He nevertheless contended that edible caterpillars later on feed on 3-4 most common trees in Zambia, namely *Branchytesia Longi Folia* (*Muombo*), *Juberradia Gilobiflora* (*Mpasa*), *Jubernardia paniculata* or *mutondo* in Bemba.<sup>27</sup> This partly explains why there are lots of edible caterpillars in Luwingu as compared to other districts of northern Zambia such as Mungwi, Mbala and Mpulungu. In other words, it is the nature of tree species that determined the availability and non-availability of edible caterpillars in any given area.

#### *Mporokoso District*

‘Mporokoso’ comes from the word *umumpolokoso*, which literally means a red lechwe, an animal which was killed by earlier inhabitants of the area and got the name Mporokoso from it.<sup>28</sup> Before the chiefdom was established, the forefathers killed a red lechwe for relish as they were trying to settle down. It is the same point where they had killed this animal from that the first inhabitants settled, immediately the place was named Mporokoso.<sup>29</sup> This became the name

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<sup>25</sup> *Times of Zambia*, ‘Some districts in Northern Province of Zambia’, Wednesday, 3<sup>rd</sup> March, 1992, 7.

<sup>26</sup> From: [www.cifor.org](http://www.cifor.org) (accessed December 27, 2020).

<sup>27</sup> Stein Terje Holden, ‘Edible Caterpillars-A potential Agroforestry resource?’ *The Food Insects Newsletter*, Vol. IV, 2 (1991), 2-3.

<sup>28</sup> Interview with Dilux Bwalya, senior headman and secretary to His Royal Highness Chief Mumporokoso number 11, Ackson Musenge Mwamba, Mporokoso, 22<sup>nd</sup> July, 2020.

<sup>29</sup> Interview with Bwalya.

of the district as well. However, earlier on, the place was called *Isenga*.<sup>30</sup> When the actual Chiefdom was being established in the early 1900s,<sup>31</sup> the first Chief Mumpolokoso ignored a prefix ‘u’ and coined it as *Mumporokoso* or *Mumpolokoso*, an imitation of the original name *umumpolokoso*.<sup>32</sup> The difference between the two words was letters ‘r’ and ‘l’ but both pronunciations were accepted. The pronunciations of the missionaries who had come to preach the word of God also had an influence over the name.<sup>33</sup>

Mporokoso district lies between latitudes 9° 22’ 60” South and longitude 30° 7’ 60” East.<sup>34</sup> Mporokoso district shares boundaries with Nsama, Kaputa, Mpulungu, Kasama, Mbala, Lunte and kawambwa districts.<sup>35</sup> Mporokoso is 178 kilometres west of Kasama and 90 kilometres north-east of Kalungwishi River bridge, which borders Kawambwa in Luapula Province.<sup>36</sup> According to the 2000 Zambian Census of Population and Housing, the district had a population of 80,758.<sup>37</sup>

The district receives more rain than any other district in Zambia.<sup>38</sup> The average annual rainfall is more than 1,000mm, with maximum temperatures ranging between 30 degrees Celsius and 35 degrees Celsius.<sup>39</sup> The rainy season extends from October to April/May the following

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<sup>30</sup> NAZ, Kasama District Note Book, Volume 1.

<sup>31</sup> NAZ, Kasama District Note Book, Volume 1.

<sup>32</sup> Interview with Bwalya and; Ackson Musenge Mwamba, Mporokoso, 22<sup>nd</sup> July, 2020.

<sup>33</sup> Interview with Bwalya and Mwamba.

<sup>34</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed December 27, 2020).

<sup>35</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed December 27, 2020).

<sup>36</sup> *Zambia Daily Mail* ‘Mporokoso: A land of Plenty’, 23 December, 2015, 3.

<sup>37</sup> Quoted in “Districts of Zambia”. *Statoids* (Retrieved February 12, 2010).

<sup>38</sup> *Zambia Daily Mail* ‘Mporokoso’, 3

<sup>39</sup> V. Waffenschmidt, ‘Animal Production in Northern Province: current situation, past activities and future perspectives’, FSRT-NP, n. d., 2.



year.<sup>40</sup> The district is endowed with several rivers and streams that are perennial in nature. Notable big rivers were: *Mutotoshi*, *Luangwa*, *Kalungwishi* and *Lufubu*<sup>41</sup>.

In terms of economic and social activities, the main occupation in the district is subsistence farming. Commercial farming activities are done on a small scale. The major crops were maize, beans, cassava and finger millets.<sup>42</sup> This also includes edible caterpillars which are collected from the forests on an annual basis. Kambone noted that although there was a collision between farming activities and caterpillar season, most collectors preferred collecting caterpillars to farming because the former had quicker and more profits than the latter.<sup>43</sup> This means that a person had to decide whether to collect caterpillars or to do farming activities.

Like Luwingu, Mporokoso is endowed with a lot of Forest Reserves that host different types of edible caterpillars. The vegetation in particular is *paranchytesia Spaformis* (*Muputu*), *Branchytesia Longi Folia* (*Muombo*), *Branchytezia Floribunda* (*Musompa*), *Maraguesia marcoura* (*Musenshi*), *Uapaco* (*Musuku*) and *Juberradia Gilobiflora* (*Mpasa*).<sup>44</sup> As earlier stated, it can be concluded that Mporokoso has a lot of edible caterpillars because of the nature of vegetation that supported the insects.

Unlike Luwingu district which has three chiefdoms, Mporokoso district only has Chief Mumpolokoso with two sub-chiefs, namely Njalamimba (about 35 kilometres to the west of Mporokoso and Nsunkutu (about 70 kilometres north-west of Mporokoso town).<sup>45</sup> Even if the chiefs in Northern Province of Zambia enjoy some autonomy in their chiefdoms, they all report

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<sup>40</sup> From: [www.nor.gov.zm](http://www.nor.gov.zm) (accessed 27 December, 2020).

<sup>41</sup> *Zambia Daily Mail* 'Mporokoso: A land of Plenty', 23 December, 2015.

<sup>42</sup> From: [www.Zambia-info.org](http://www.Zambia-info.org) (accessed 27 December, 2020).

<sup>43</sup> Timothy Mudenda, 'A Socio-Economic Study of Rural Households in Chief Kopa, Mpika District', Adapted from ARPT data base, September 1981, 25.

<sup>44</sup> *Zambia Daily Mail* 'Mporokoso: A land of Plenty', 23 December, 2015.

<sup>45</sup> Minutes of a meeting held between Chief Mumporokoso and his people at Chief Mumporokoso's palace, 9<sup>th</sup> December, 1971.

to Paramount Chief, Chitimukulu which means *Mwine Lubemba* (Owner of the Bemba Kingdom).<sup>46</sup> For the sake of this study therefore, some districts of Northern Province were simply referred to as certain information could not be specifically on Luwingu and Mporokoso districts.

### **Research Methodology**

The study utilised qualitative methods on edible caterpillar collection in Luwingu and Mporokoso from the 1950s to 2019. Thus, both primary and secondary sources were consulted. At the University of Zambia Library, Special Collections Section in particular, the study utilised books, theses and dissertations, journals (online and printed ones from the serials' division). Sources from the library were critical on how edible caterpillars were perceived by the communities of Luwingu and Mporokoso districts and the people of Northern Province at large. Journals in particular informed the study on the extent to which authors covered the socio-economic aspects of edible caterpillar collection. The sources also informed the study on the history relating to caterpillars on the Zambian soil. This helped this researcher to establish the gap difference that existed between other people's work and this work. The study also utilised all the National Development Plans documents, that is, from the first to sixth. These documents provided information on the importance of forestry products which included edible caterpillars.

The National Archives of Zambia (NAZ) were also a valuable source of primary information such as Annual Reports for the Ministry of Lands and Natural Resources; Department of Forestry Reports; District Notebooks for Kasama, Luwingu and Mporokoso districts in particular were all consulted. These documents provided useful data on how

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<sup>46</sup> NAZ/KSZ4/1, 'Genealogy of Bemba chiefs', 24th July, 1970.

caterpillars were collected by different communities of northern Zambia. Even if there was no specific information for Luwingu and Mporokoso districts, data on the trade regarding caterpillars was obtained from different sources that generally referred to Northern Province. Other primary sources consulted included newspapers such as *Central African Mail*, *Mutende, Ilyashi*, *Zambia Daily Mail*, *Times of Zambia* and *The Post*. These newspapers reported on activities related to the collection of edible caterpillars in the two districts. They also informed the study on the socio-economic impact of caterpillar harvesting on Luwingu and Mporokoso districts.

Another institution consulted was the Zambia Agriculture Research Institute (ZARI), formerly Mount Makulu in Chilanga district where information pertaining to socio-economic impact on edible caterpillars was obtained. A number of sources such as Adaptive Research Planning Team for Northern Province (ARPT-NP) were relevant to the study, without which the study would have been incomplete. Faith and Encounter Centre of Zambia (FENZA) in Bauleni, Lusaka was another institution that provided information regarding caterpillar collection on the study. Apart from the open library, FENZA also provided archival manuscripts which were consulted. A lot of information regarding myths and caterpillar collection was obtained from here. Zambia National Broadcasting Corporation (ZNBC) was also consulted for audio-visual documentaries, particularly on forestry related programmes. It was noted that videos that had caterpillar-related discussions presented by Mpundu Mwape on a ZNBC programme dubbed '*Ilyashi Lya panwesonde*' under a sub-theme '*Ifyo Naendele Kulubemba*' were available. Mwape also provided general information pertaining to the background of caterpillar collection vis-à-vis the people of Northern Province. Apart from being interviewed, Mwape also provided some

videos which were relevant to the study. Therefore, the dissertation contains some citations of both Zambia National Broadcasting Corporation (ZNBC) videos and interviews with Mpundu Mwape.

Interviews with local people of Luwingu and Mporokoso districts such as the headmen, collectors and caterpillar traders were conducted. Headmen representing their respective Chiefs in the two districts provided some information on the procedures, traditional laws, beliefs and myths related to the collection of edible caterpillars. Collectors and caterpillar traders (both local and outsiders of the study areas) provided information on how edible caterpillars contributed to either their food security or income generation. Two Lusaka-based women, who have been trading in edible caterpillars, provided information on the profitability and lucrativeness of edible caterpillar business.

In both Luwingu and Mporokoso districts, only significant areas were visited, especially those that were known to be highly populated with edible caterpillars. In Luwingu, some of the schools visited included Chiponde, Kapisha, Lubansenshi, Makolongo and Menga Primary Schools. Secondary Schools visited were Luwingu Day and Luwingu Boarding School. In Mporokoso, schools visited were Chishamwamba, Kashinda, Mporokoso primary schools and Mporokoso Secondary School. These learning institutions provided information on school-going children vis-a-vis edible caterpillar collection. Similarly, District Education Board Secretary (DEBS)'s offices for both Luwingu and Mporokoso districts were consulted. These offices provided specific information on schools that were negatively affected annually due to caterpillar harvesting. Not only that, the school authorities also provided some information on the

interventions they often put in place for schools in the two districts to operate normally during caterpillar season. Further, head teachers and teachers in those areas were also interviewed.

Men, women, boys and girls (15 years and above) who were involved in caterpillar collection were also interviewed in the presence of their guardians and parents, owing to ethical guidelines of the University of Zambia. The ethical guidelines of the university state that only children above 15 years are supposed to be interviewed. The children provided information regarding why they were involved in caterpillar harvesting; what motivated them to do so and what their subsequent benefits were. The Clergy men and women in the study areas were also consulted to ascertain the social impact of caterpillar collection on their members. Chief Chipalo's palace (about 5 km from Luwingu town and Chief Mumpolokoso (about 4.5 km from Mporokoso town were also visited. Although Chiefs (except Chief Chimbola of Mungwi district) were not allowed to be talked with in both palaces, however headmen for Luwingu and Mporokoso were interviewed. On behalf of the Royal Highnesses, headmen answered a lot of research questions to the study.

### **Limitation of the study**

The major weakness of this study was that the author failed to collect information covering the earlier period as data was not available. Some data which was expected to be found in some institutions like churches, schools and hospitals in relation to caterpillar collection, could not be accessed as anticipated. In churches for instance, data collected from UCZ, Catholic and Pentecostal churches showed that only recent records were available, the latest being 2010. Since the study began in the 1950s, efforts to collect data for the 1960s, 1970s and 1980s were made but to no avail. Lastly, both hospitals in Luwingu and Mporokoso provided useful data on

caterpillar collection. Preliminary oral interviews for instance, demonstrated that there were an increased number of HIV/AIDs patients who were not consistent in collecting Anti-Retroviral Virus drugs (ARVs) because they were sometimes out in the bush collecting caterpillars when they were due for review. However, this information could not be documented due to its sensitivity.

### **Literature Review**

Literature on edible insects is voluminous, but little has been written on Zambia. Most of the works that cover the pre-colonial and colonial periods deal with edible insects in Asia, South America, Australia and many other parts of Africa. This historiographical gap reflects shifting trends and perspectives in the writing of Zambian history. Many economic historians of Zambian history concentrated on fish, *kapenta* and bush meat thereby, paying little attention to caterpillars. Although caterpillars were part of the diet in the pre-colonial era, not much was written about them. However, in the colonial period, there was a shift in terms of perception. This discourse attempted to analyse how paradigm shifts impacted the collection of edible caterpillars thereby culminating into commercialisation of the process from small scale to large scale. Discourse on edible insects in Asia comes from Vantomme, Gohler and Ziangba<sup>47</sup>, Food Agricultural Organization (FAO)<sup>48</sup>, Ng'andwe et al,<sup>49</sup> Conconi et al<sup>50</sup>, A. E. Ghaly<sup>51</sup>, Solomon

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<sup>47</sup> Paul Vantomme, Daniela Göhler and François N'Deckere-Ziangba, 'Contribution'1.

<sup>48</sup> Arnold Van Huis, et. al., 'Edible Insects: Future Prospects for Food and Feed Security', (Rome: FAO, 2003), 45.

<sup>49</sup> Philimon Ng'andwe, et.al., *Forest Policy, Economics and Markets in Zambia* (Kitwe: Copperbelt University, 2015), 67.

<sup>50</sup> Conconi et. al. 'Protein content of some Edible insects in Mexico,' *Ethnobiol*, 4, 1, (1984), 61.

<sup>51</sup> Ghaly, 'The Use of Insects as Human Food in Zambia', 93.

and Prisca.<sup>52</sup> and Dobermann et al.<sup>53</sup> Vantomme, Gohler and Ziangba focused on the producer (gatherer) and consumer and how they may significantly mark up prices. The scholars noted that merchants would trek to rural areas where they would purchase larvae (caterpillars) and thereafter resale them in cities. They also pointed out that some of the wholesalers owned storage depots in town in order for them to provide regular supplies and in times of shortage, they would get higher prices.<sup>54</sup> These three works are relevant to this study as they highlight the aspects of consumption and profit. This study builds on these insights and relates them to the Zambian context.

Vantomme, Gohler and Ziangba argued that among the forest insects that were found in the Cameroon, Central African Republic (CAR), the Republic of the Congo (Brazzaville) and the Democratic Republic of Congo (DRC), caterpillars were very common and were collected. The significance of the study lies in the fact that the collection of caterpillars was not only done in Zambia but other parts of Africa as well. The study used their arguments to compare with caterpillar collection in Zambia.

Thireletso Lorraine Lucas wrote about the evolution and impact of Mopane worm harvesting in Botswana. Lucas noted that “The shift from subsistence to commercial use resulted from increased demand due to changing diets and economic pressures in urban centres, as well as from cultural interactions.”<sup>55</sup> From the historiographical perspective, it is clear that while

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<sup>52</sup> Marian Solomon and N. Prisca, ‘Nutritive Value of Lepidoptara Litoralia (Edible Caterpillar) Found in Jos Nigeria Nigeria: Implication for Food Security and Poverty Alleviation’, *African Journal of Food, Agriculture, Nutrition and Development*, 12, 6, (2012), 6737.

<sup>53</sup> D. Dobermann, J.A. Swift and L.M. Field, ‘Opportunities and hurdles of edible insects for food and feed,’ *Nutrition Bulletin*, 42, (2017), 293.

<sup>54</sup> Vantomme, Göhler and N’Deckere-Ziangba, ‘Contribution’, 1.

<sup>55</sup> Tshireletso Lorraine Lucas, ‘The evolution and Impact of Mopane worm Harvesting: Perception of Harvesters in Central Botswana’, MA Dissertation, University of Witwatersrand, 2010, 12.

Mpundu Mwape singled out cultural interaction as one major factor which contributed to commercialisation of edible caterpillars,<sup>56</sup> Lucas focused on changing diets and economic pressures in urban centres, thereby creating a glaring gap between his study and this one. While the gap was conspicuous from Lucas' analyses whose sub-theme focused on perceptions of harvesters in Central Botswana, this study in northern Zambia attempted to focus on some factors that led to commercialisation of caterpillars, some of which have been alluded to already.

The Food Agricultural Organization (FAO)<sup>57</sup> report noted that edible insects are important and that people in particular gather them. The report further noted that caterpillar collection is mostly done by women and children.<sup>58</sup> Non-Wood Forest Products (NWFPs) in food security have grown considerably, adding that edible insects are also important NWFPs that poor people gather, particularly women and children. FAO also reported that edible insects are a popular food in many cultures all over the world, be it as an occasional delicacy or as a replacement food in times of shortages, droughts, floods or war. FAO's report is significant to this study because it investigates the extent to which caterpillars enhanced food security in northern Zambia.

Ng'andwe et.al argued that edible insects such as caterpillars and termites and other secondary products such as honey, beeswax including other forest products are currently on high demand both in and outside the country. Further, the scholars maintained that NWFPs provide essential micronutrients mostly for children and women. They also postulate that various indigenous forests were continuously harvested for household sustenance needs and for sale to

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<sup>56</sup> Mpundu Mwape, *Efyo Naendele Ku Lubemba*, ZNBC, Lusaka, video part 1, 2006.

<sup>57</sup> Yupa Hanboonson and Patrick B.Durst, *Edible Insects in Lao PDR: Building on Tradition to enhance Food Security* (Bangkok: FAO, 2014), 3.

<sup>58</sup> Hanboonson and Durst, *Edible Insects in Lao*, 2014, 3.



earn income. Other than that, they wrote that “the end use distribution of NWFPs include for income generation, household consumption and medicinal use.”<sup>59</sup> Ng’andwe and others’ work helps us to understand the nutritional values of edible caterpillars and the significance of women and children in the collection process. Not only that, their work is relevant to the study as they enable us to appreciate edible caterpillars as a multi-purpose insect which can be used both as relish and medicine at the same time, depending on one’s need.

The nutritional value of caterpillars was also discussed by Solomon and Prisca.<sup>60</sup> They noted that caterpillars are traditionally important foods in many cultures in Jos plateau State in Nigeria. They further pointed out that edible caterpillars contribute immensely to nutritional and economic potentials, adding that these edible insects have the potential to mitigate food insecurity and poverty alleviation. Similar views were expressed by Ghaly who stated that edible insects have the potential of being used as a protein source for human consumption. Payne et al<sup>61</sup> discussed the nutritious alternative of insects other than the conventional protein sources. They argued that insects’ nutritional composition is higher than meat.

Writing on edible insects as a means to address global malnutrition and food insecurity, Tao and Li<sup>62</sup> argued that the practice of consuming insects provides a nutritious relief to many malnourished people in developing countries. Conconi et.al argued that the appropriate use of technology and acceptance of commercially produced insect products would help alleviate

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<sup>59</sup> Ng’andwe, et. al., *Forest Policy Economics, and Markets in Zambia*, 67.

<sup>60</sup> Solomon and Prisca, ‘Nutritive Value’, 6737.

<sup>61</sup> CLR Payne et.al., ‘Are edible insects more or less ‘healthy’ than commonly consumed meats? A comparison using two nutrient profiling models developed to Combat over-and undernutrition,’ *European Journal of Clinical Nutrition*, 70, (2016), 285.

<sup>62</sup> Jaynie Tao and Yao Olive Li, ‘Edible insects as a means to address global malnutrition and Food insecurity issues’, *Edible Insects for Malnutrition*, 2, 1, (2018), 17.

hunger and malnutrition in Mexico.<sup>63</sup> While these three studies examined the nutritional value of caterpillars, they did not discuss how caterpillars were collected, processed and finally sold to consumers. This study intends to fill in this gap.

Hanbooson and Durst<sup>64</sup> discussed some challenges associated with the collection of edible insects. They note that the small size of edible insects makes it a challenge collecting them. They highlighted most of the challenges rural communities go through, particularly those who are fully engaged in collecting edible caterpillars. They encounter challenges such as gathering them, gutting and roasting tasks surrounding caterpillar collection. This study is significant as it provides useful insights into the challenges associated with the collection of edible insects. This study builds on these insights by focusing on the people of Luwingu and Mporokoso districts.

In some works insects have been described as low ranked food sources. Itterbeck and Huis<sup>65</sup> pointed out that “insects can be considered low ranked food sources as the return rates energy gained minus energy costs from searching, handling and processing of large animals is higher. Kinyuru et al<sup>66</sup> had a similar view. Their argument was that edible insects could be seen as a ‘starvation food’, noting that they are eaten only in times of extreme food shortage. They further stated that “individuals engaging in entomophagy have been considered as engaging in primitive peoples’ practice.” The study investigated the extent to which caterpillars in northern Zambia were consumed by the people of Luwingu and Mporokos districts.

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<sup>63</sup> Conconi et al., ‘Protein’, 61

<sup>64</sup> Hanbooson and Durst, *Edible Insects in Lao PDR: Building on Tradition to enhance Food Security*, 3.

<sup>65</sup> Itterbeeck and Huis, ‘Environmental’, 2.

<sup>66</sup> John Kinyuru, et.al., Nutritional Potential of Longhorn grasshopper (*Ruspolia differens*) Consumed in Siaya District, Kenya, *Journal of Agricultural, Science and Technology*, 12, 2009, 33.

Juliet Ramos Elorduy,<sup>67</sup> an entomologist, documented the value of edible insects to man's health. She noted that they not only provide complete protein than meat or fish, but that they are concentrated sources of calcium, magnesium, potassium, the B-vitamins and many other nutrients. Ghaly, a Biologist, had a similar view, noting that the pedi of South Africa prefer a quarter pound of these caterpillars to one pound of fresh beef.<sup>68</sup> This is not different from Defoliart's view. Commenting on Yukpa people of Colombia and Venezuela, the entomologist observed that these people preferred their traditional insect foods to fresh meat.<sup>69</sup> The significance of these studies is that they examined how ethnic groups in different parts of Africa used caterpillars for home consumption, which this study also investigated.

Literature on edible caterpillars in Zambia also exists. E.N. Chidumayo and K.J. Mbata<sup>70</sup> examined the impact of the collection of caterpillars on man and his environment. They noted that more trees were felled in young re-growths during caterpillar harvesting in Kopa area of northern Zambia in November 2000, culminating into deforestation. However, they did not look at other major impact of caterpillar collection. This study examined socio-economic impact of caterpillar collection in Luwingu and Mporokoso districts.

In a study conducted in the North-western Province of Zambia, Chabatama<sup>71</sup> alluded to the importance of edible caterpillars among the people of this region. He noted that though insects were considered small, they were big during the time of hunger as they seemed to have

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<sup>67</sup> Juliet Ramos-Elorduy, 'Creepy Crawly Cuisine: The Gourmet Guide to Edible Insects,' *Food Insect Newsletter*, 1998.

<sup>68</sup> Ghaly, 'The Use of Insects', 94.

<sup>69</sup> Defoliart, 'Insects as Human Food', 395.

<sup>70</sup> Chidumayo and Mbata, 'Shifting Cultivation', 175.

<sup>71</sup> Chabatama, 'Peasant Farming', 41.

been the best possible alternative in times of need. However, the study did not examine in detail how caterpillars were collected and processed which this study had investigated.

### **Organization of the Study**

The study is sub-divided into five chapters. Chapter One is an introduction. Chapter Two investigates the strategies used in the collection of edible caterpillars from the 1950s to the 1980s. Chapter Three examines the dynamics of edible caterpillar harvesting in Luwingu and Mporokoso districts, 1976-2006. Chapter Four discusses the socio-economic impact of collecting edible caterpillars in Luwingu and Mporokoso districts from 1982 to 2019. Chapter five concludes the study.

## **Chapter 2**

### **Strategies of Collecting Edible Caterpillars, 1950s-1980**

This chapter is divided into four sections. The first section discusses the stages of collecting edible caterpillars. It argues that traditional rituals took centre stage prior to the collection season of edible caterpillars. Most importantly, the section demonstrates the significance of traditional leadership in the whole process of harvesting caterpillars, without which the collection process would be considered illegal. The second part focuses on the main theme of this chapter. It examines the strategies of collecting edible caterpillars in Luwingu and Mporokoso districts of Northern Province of Zambia, from the 1950s to the 1980s. While comparing the periods 1950s to 1980s with later modern times, this section maintains that nothing much changed in as far as collecting caterpillars was concerned. The section further argues that despite improved technology in the modern society, traditional methods such as bending tress when collecting caterpillars had been maintained.

The third section, investigates the myths associated with collection of edible caterpillars. The section points out that as a result of abrogating the traditional law on edible caterpillar collection by a collector of any given chiefdoms of the two study areas, negative consequences followed the offenders. The section also argues that myths were not only associated with the collection of edible caterpillars, but they were also applied in other activities such as tree-cutting and mushroom collection. Whilst focusing on mythology for the two study areas, the section compares and contrasts with other myths in Mpika, an area believed to be highly populated with

caterpillars. This part of the study also examines the challenges involved in collecting edible caterpillars.

The last part discusses gender roles vis-à-vis labour mobilisation during the collection of edible caterpillars. It argues that irrespective of numbers in each given family, men, women and children were all involved in the collection process. In view of this, it further contends that families with bigger numbers (i.e. six members and above) had an added advantage over smaller families in collecting caterpillars as opposed to a family with fewer (four members or less). This is because the aim of the collectors was to have enough caterpillars for consumption so that they could be food secure and ultimately sell some surplus for profit-generation.

According to some primary sources, edible caterpillars began to be collected and consumed in Mporokoso around 1951. One of the sources, *Mutende* newspaper, published in a local dialect known as Bemba indicated that:

Good news from Mr. P.E. Bwalya who lives in Mporokoso. The good news is that there is no hunger in Mporokoso anymore because the place is highly populated with edible caterpillars, which could be used as relish for most communities in the chiefdom. He gladly noted that caterpillars in this year were in millions of litres more than ever before. He concluded that people were lucky and that there would be no more poverty in the region as there was plenty of food.<sup>72</sup>

*Mutende* newspaper further provides evidence that edible caterpillars were being collected even earlier than the 1950s. Luwingu had similar recorded evidence,<sup>73</sup> although there was lack of consistence in the flow of information regarding edible caterpillars.

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<sup>72</sup> *Mutende Newspaper* 22<sup>nd</sup> May, 1951, p.3.

<sup>73</sup> Interview with Justine Chomba, 31<sup>st</sup> July, Mpika, 2020.

## Religious ceremonies and rituals vis-à-vis edible caterpillar collection

Religious ceremonies and rituals were common practices among the Africans. The Bembas of Luwingu and Mporokoso districts were not an exception of this tradition of rituals and religious ceremonies. The traditional practices for example were done whenever there were a food-gathering, hunting expeditions, funerals, weddings and ancestral worship. In view of this, in his book titled, *The prayers of Africa*, John S. Mbiti noted that religious ceremonies were performed during food-gatherings and hunting expeditions so that the relationship between people and the living dead could continue.<sup>74</sup> Similarly, Harold Turner indicated that many offerings, ceremonies and even special shrines where the dead were served and honoured, especially in times when people were in need, were guarded jealously.<sup>75</sup> It must be argued that even if edible caterpillars were not specifically mentioned in the two quotations above; they were among the foodstuffs that were gathered especially from the forests. Secondly, caterpillars were only collected after rituals were performed,<sup>76</sup> thereby making them to be part of the food under discussion. In addition, writing on the lamba people, Kenneth Kangenda noted that professional hunters had to go to the hunters' shrine for the hunting charms. He also observed that fishing and gathering of other forestry products were hazardous, hence the need for religious practices as forests were regarded as evil.<sup>77</sup> It can be argued from this background that edible caterpillars were associated with a lot of religious ceremonies, rituals and beliefs before they were collected because they were part of the forest products which were regarded as evil.

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<sup>74</sup> John S. Mbiti, *The Prayers of African Religion* (SPCK: London, 1975), 119.

<sup>75</sup> Harold Turner, *Living Tribal Religions* (London: Ward Lock Educational, 1971), 15.

<sup>76</sup> Interview with Bwalya.

<sup>77</sup> Kenneth Kangede, *Zambian Myths and Legends of the Wild* (Lusaka: Minta Publishers, 2001), xi.

Turner argued that it was necessary to offer religious ceremonies such as sacrifices when collecting caterpillars especially that people yearned them for relish. Further, the insects were found in the thicket of the bush which was considered evil; therefore, ethnic groups in Luwingu and Mporokoso saw it worthy to offer prayers and sacrifices before collecting caterpillars and any other bush-related activity in order to cast away evil from their food. Through such activities, it was strongly believed, according to Mbiti, that purification of the land (or bush) where food was fetched from took place immediately after prayers were offered. It was at this point after the religious ceremonies and rituals were done that gathering of food that included edible caterpillars was legalized. In this context, it was also believed among the people of Luwingu and Mporokoso districts that good harvests of caterpillars could only be realised if the ancestral spirits were pleased through prayers, sacrifices and rituals.<sup>78</sup>

Appeasement of the spirits using a white cloth, mealie-meal to symbolise purity or goodness, among others, was predominantly practiced. Through their traditional leadership like a chief or the first wife to the chief, in case he was a polygamist, mealie-meal in the palm of the leader would be thrown around the bush as a symbol of purification whilst saying prayers and incantations loudly to the ‘living dead’<sup>79</sup> or the bush from which caterpillars were to be collected. Besides, some of the fresh caterpillars (collected in the very first week of the collection season before land was blessed) or dry ones called *bube*<sup>80</sup> (collected in the previous season) were carried on the white cloth and thrown as such, with words of appeal to the ‘living-dead’ to provide more

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<sup>78</sup> Minutes of a meeting held between the Paramount Chief Chitimukulu and his sub-chiefs Chiefs, at Chitimukulu’s palace, Kasama, 13th October, 1973.

<sup>79</sup> Living dead in this context is used to refer to the spiritual communication that Mbiti believed in between the living and the dead. Through some signs, the living dead would reciprocate whenever they were appeased. For details, see: Mbiti, *The Prayers of African Religion*, 119-120.

<sup>80</sup> *Bube* is a Bemba word to literally mean small caterpillars mixed with old dry ones. This was according to an Interview with 84 years old, Gabriel Mwamba Kambone, Luwingu, 8<sup>th</sup> July, 2020.



edible caterpillars to the local people, and also not to harm any collector during the collection season.<sup>81</sup> This is because in the words of Mbiti, it was believed strongly that the living dead spiritually played a pivotal role in providing food to the living as well as protecting them from any harm. Another prominent religious activity was that of the chief kneeling before *imfuba*<sup>82</sup> believed to be sacred and offered sacrifices in a traditional way.<sup>83</sup> Other religious activities that were annually repeatedly performed before commencement of caterpillar collection were not disclosed as chiefs were not allowed to do so. It can therefore be safely stated that rituals and religious ceremonies were part and parcel of the way of life of the people of Luwingu and Mporokoso districts.

This exercise was similar to that of Mpika, although some variations in the religious practices were noted. If the chief had more than one wife for instance, it was the senior wife who was given the mandate of “*ukuposela*”<sup>84</sup> and not any other person.<sup>85</sup> Through this thanks-giving traditional custom, she would appease the ancestral spirits for a larger harvest of edible caterpillars as well as asking for protection against harmful animals that might appear in the bush during edible caterpillar collection.

Another variation was reported in terms of ritual practices in Mporokoso district which was slightly different from Mpika district. It was a common practice in senior Chief kopa’s area in Mpika that male grandchildren of the senior chief would mark host plants in the woodland

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<sup>81</sup> Interview with Robin Mulenga, 1<sup>st</sup> July, 2020. He was a Headman in Chief Mupolokoso’s area.

<sup>82</sup> *Imfuba* is a Bemba word to mean a small shrine. According to Mwamba Kambone, these were houses where old chiefs were buried. He also noted that the chief would approach *imfuba* to seek consent of spirits before he blesses the bush in readiness for caterpillar collection.

<sup>83</sup> Interview with Gabriel Mwamba Kambone.

<sup>84</sup> *Ukuposela* is a Bemba word to literally mean blessing the land or bush.

<sup>85</sup> K.J. Mbata, E.N. Chidumayo and C.M. Lwatula, “Traditional regulation of edible caterpillar exploitation in the Kopa area of Mpika ditrict in northern Zambia”, *Journal of Insect Conservation* 6, 115-130, (2002), 126.

with white<sup>86</sup> pieces of cloth.<sup>87</sup> It was reported in this district that anyone, except the second wife, if any, whom the chief had entrusted with the task of *Ukuposela*, would do it. Unlike in Chief Kopa's area, Chief Chimbola of Mungwi district held the belief that for as long as one member of the Bemba Royal Establishment (B.R.E.) was delegated to carry out the religious activity, it was as good as the traditional leader himself who had done it.<sup>88</sup> Simply put, while it was a well-known phenomenon in Chief Kopa's area that male grandchildren were involved in the process of marking host plants in the woodland with white pieces of cloth, it was not the same scenario with either in Luwingu or Mumporokoso district.

Another notable difference was that while other areas like Mpika had the woodland blessed by the chief or the first wife to the senior chief in preparation for edible caterpillar collection, it was not the same case with Mumporokoso's chiefdom. In this area, *ukuposela* was purely done by the chief himself and *bampandamano*<sup>89</sup> to the chief. Apart from the chief doing his part, he assigned one *mpandamano* (*Chilolo wa ntambi*),<sup>90</sup> who was specialised in taking care of the traditional customs, to perform appropriate rituals before caterpillar collection commenced. In performing these rituals, the chief's advisor used items like mealie-meal,<sup>91</sup> a white piece of cloth,<sup>92</sup> beads<sup>93</sup> and *impemba*<sup>94</sup>, without which the blessing would be deemed incomplete.

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<sup>86</sup> A colour that symbolizes purity, goodness or simply success. Marking of host plants with white pieces would be done at least two weeks before collection of caterpillars began.

<sup>87</sup> Mbata, Chidumayo and Lwatula, "Traditional regulation", 126.

<sup>88</sup> Interview with Chimbola.

<sup>89</sup> A Bemba word to denote the trustee or simply the advisor to the senior Chief.

<sup>90</sup> *Chilolo wa ntambi* is a Bemba word to denote a person trusted by the traditional leaders to safeguard customs jealously.

<sup>91</sup> Mealie-meal symbolises purity or simply goodness. The basic understanding by local people of Luwingu and Mporokoso is that mealie-meal is eaten in form of pap (nshima) and once people are satisfied, they are glad. Hence it was associated with goodness.

<sup>92</sup> A white piece of cloth signifies spiritual symbolism for purity, literary refers to light which in local language (Bemba) is called *ulubuto*.

Furthermore, while some ritual practices were a secret in some cases like in Chief Mumporokoso's area, they were not the same scenario in Luwingu and Mpika districts. It was emphatically reported for instance that some parts of the blessing processes were entirely top secret of the chief himself alone, to an extent that even the most trusted *Chilolo wa ntambi* could not know some ritual practices the chief performed.<sup>95</sup> However, what was prominent is that the chief knelt before the shrines (*babanye*) in the palace and pleaded with the ancestral spirits.<sup>96</sup> Once the land was blessed for edible caterpillar collection, the chief flagged-off to authorise the people to start the activity. This was often done annually by sending letters (as in figure 1 below) to all communities through the headmen and women.

Signs that the rituals were accepted by the ancestral spirits were only shown to the BRE family members as it was believed that they were the only ones who were in direct contact with the ancestral spirits. Mulenga Masala pointed out that it was imperative for a leader like Chief Chipalo to always maintain a good rapport with the ancestors in order for them to secure enough food like edible caterpillars.<sup>97</sup> He added that their leadership could not do without ancestors or else there would be doom in their chieftdom.<sup>98</sup> This also highlights the reality of religious spiritualism among the traditional leadership.

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<sup>93</sup> A Bemba word which literary means white clay. Spiritually, it symbolizes purity and goodness.

<sup>94</sup> A Bemba word to denote white clay, literary used to symbolize light.

<sup>95</sup> Interview with Robin Mulenga.

<sup>96</sup> Interview with Robin Mulenga.

<sup>97</sup> Interview with Masala

<sup>98</sup> Interview with Masala.

## Traditional Laws, Beliefs and Mythology

The collection of edible caterpillars was associated with traditional laws, beliefs and myths. This history was known among the Bemba ethnic group dating to the period prior to the 1950s. In view of this, it was postulated that:

The religious spirit is very much developed amongst the Awemba...which happens, good or bad, is imputed to supernatural causes. Sickness or happiness or misery, even death, are ascribed to spirits; and in the chase spirits enable them to kill the game, gather food or otherwise. These superstitions are in numbers.<sup>99</sup>

It is clear that beliefs among the awemba (Bembas) were real. This means that they could not do any activity in the bush without the involvement of spirits, as they strongly believed that it was a remedy against hunger and thirst.<sup>100</sup> They further believed that there were territorial spirits in the land that were to be appeased in order for them to acquire what they wanted.<sup>101</sup> There were some myths for instance which were believed to be associated with gathering of mushrooms, fish, birds and other foodstuffs like caterpillars from the bush.<sup>102</sup> In other words, beliefs in the traditional African societies were part of them. The people of Mporokoso were not an exception.

At a meeting between Chief Nsama and his subjects in 1953, it was noted that:

There undoubtedly has existed for generations and still exists in the minds of the inhabitants of the Mporokoso Division an idea of a grant spirit god. Whether this god is considered the god of a tribe is uncertain-yet in each tribe there seems to exist the idea of a great spirit-unknown, omniscient, all-powerful-the “*lesa mukula*”.<sup>103</sup>

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<sup>99</sup>NAZ, Mporokoso District Note-book Volume I, Minutes of a Meeting held at Chief Nsama’s Musumba on the Thirtieth November, 1953, 402.

<sup>100</sup> Missionary Archives of Zambia (MAZ), I-M-C-137, ‘Beliefs and Religious Practices of the Bemba and the Neighbouring Tribes,’ *Monograph*, 3-4.

<sup>101</sup> MAZ, I-M-C-137, ‘Beliefs and Religious Practices’ 3-4. See also Hermen Kroesberger, ‘The Language of Faith in Southern Africa: Spirit World Power Community’, *Holism*, AOSIS, Vol.6, 2019.

<sup>102</sup> Interview with Maureen Mwenya, Tungati Chieftdom, Luwingu, 2<sup>nd</sup> July, 2020.

<sup>103</sup> NAZ, ‘Minutes of a Meeting held at Chief Nsama’s Musumba on the Thirtieth November’, Mporokoso District Note-book Volume I, 1953, 1.

In view of the above, it can be argued that beliefs did not only exist among the people of Mporokoso, but they also influenced traditional practices of other ethnic groups of Northern Province of Zambia in general. It was believed especially by the people of Luwingu and Mporokoso that there could not be abundant harvests of food such as maize, beans and caterpillars without the active involvement of spirits,<sup>104</sup> signifying the strong belief in their ancestral spirits. This is evident among most ethnic groups in northern Zambia including the people of Luwingu and Mporokoso in their quest to acquire relish such as fish and birds. At the same meeting, as indicated above, it was observed that:

In May and June every year Nsama's priest called Chabatama and many people go to Chansa Walala and camp near the hill, they kneel at the spirit hut and pray then Chansa Walala opens one of the stone doors for the priest and the small girl. Suddenly a large python comes along, rests on the legs of the small girl for some minutes before it can go back into the pool....This is an indication that Chansa Walala is very pleased and will give them fish and birds from his pool. The following morning the people approach the hill and find that Chansa Walala has already opened one of the stone doors for them-the water rushes out together with the fish.<sup>105</sup>

In view of this, it can be argued further that beliefs, among the people of Northern Province of Zambia, were associated with any form of food acquisition; including collection of edible caterpillars. It was these same beliefs that led to myths. To this end, the following popular myths were often associated with the collection of edible caterpillars.

It was believed for instance that caterpillar collectors could not indulge in sexual intercourse, whether married or not, during caterpillar collection. This was debatable among different ethnic groups of Northern Province of Zambia. While it was believed in Mpika district that the rule on sexual intercourse during caterpillar collection had nothing to do with the

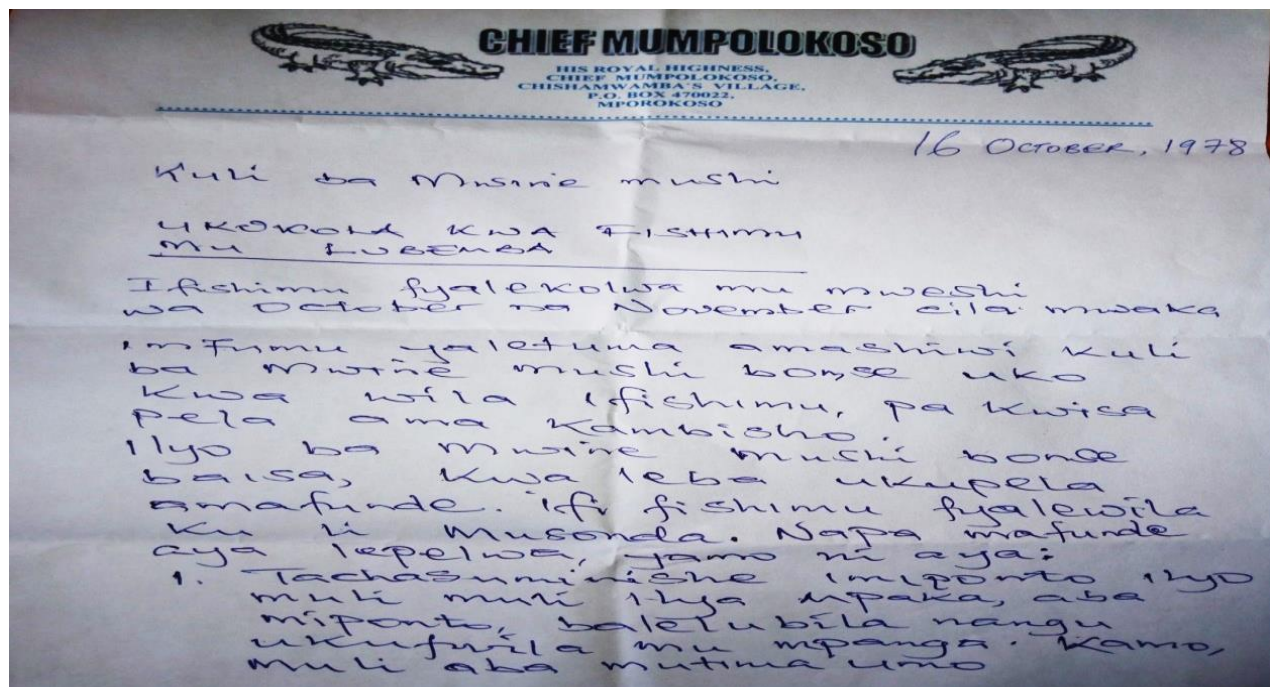
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<sup>104</sup> MAZ, I-M-C-137, 'Beliefs and Religious Practices' 1950, 3.

<sup>105</sup> NAZ, Mporokoso District Note-book Volume I, Minutes of a Meeting held at Chief Nsama's Musumba on the Thirtieth November, 1953, 3. See also NAZ, C3/23/32.

legitimacy of a marital relationship, Luwingu and Mporokoso people believed that sexual intercourse during caterpillar collection between the legitimately married couples was not an illegal act.<sup>106</sup> It was further stressed that married partners could enjoy their conjugal rights before and during the collection of edible caterpillars in their homes.<sup>107</sup> However, unmarried couples, who also intended to collect edible caterpillars, were not allowed to have sexual intercourse, whether in their houses or inside the bush earmarked for collection of edible caterpillars.<sup>108</sup> This shows how restrict traditional laws on caterpillars were. A letter from his Royal Highness Chief Mumporokoso tabulating a list of traditional laws on how to deal with edible caterpillars confirmed this assertion. The letter was sent to all people in his chiefdom in October, 1978.

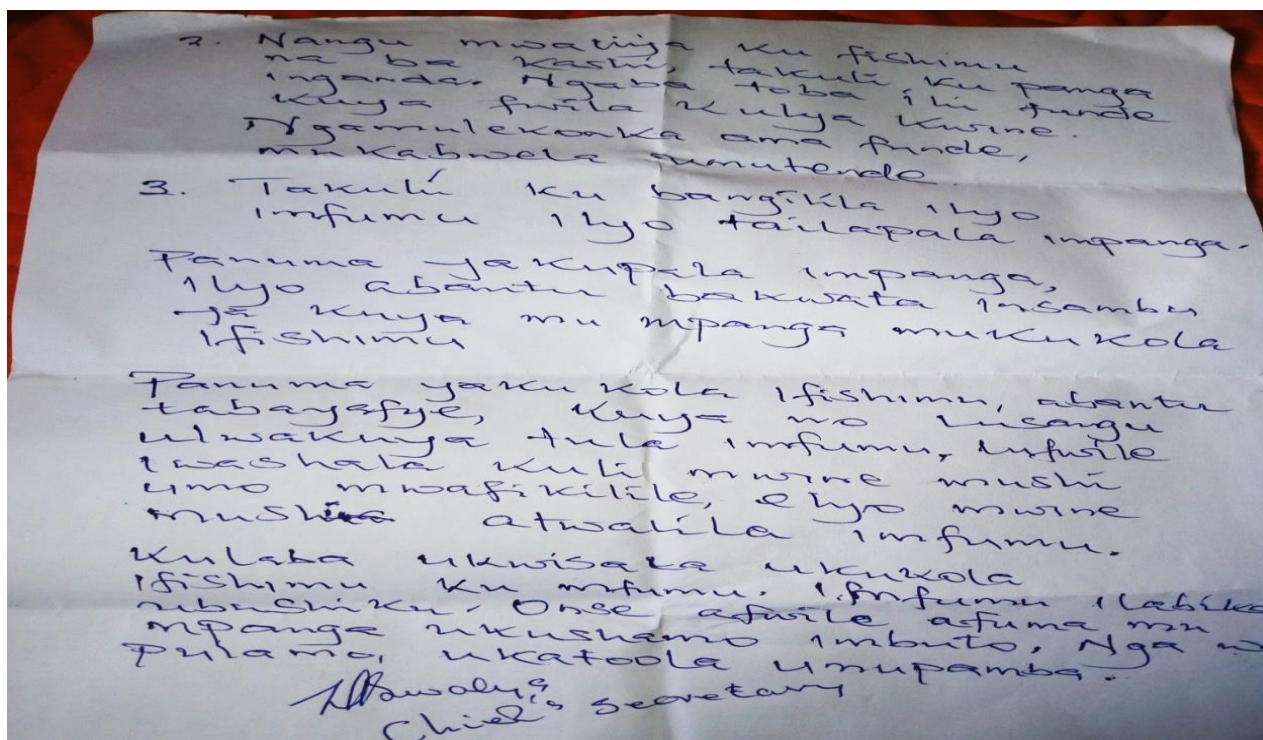
**Figure 1: A letter with traditional laws from his Royal Highness Chief Mumporokoso sent to all headmen and women in his chiefdom on edible caterpillars.**



<sup>106</sup> Interview with Benson Mulenga Tanganyika, Mumporokoso Chiefdom, Mporokoso on 2<sup>nd</sup> July, 2020.

<sup>107</sup> M A Z, I-M-C-137, 'Beliefs and Religious Practices', 3-4.

<sup>108</sup> MAZ, I-M-C-137, 'Beliefs and Religious Practices', 5.



**Source:** Chief Mumporokoso's Palace, Mporokoso District

The literal translation of the above laws according to the numeric order read:

1. No person is allowed to insult or use any abusive language against another person while collecting caterpillars. If one breaks these laws, he/she may get lost; he/she may die, unless collectors of caterpillars were working in one accord;
2. Even if a legitimately married couple has gone to collect caterpillars in the bush, they are not allowed to have sexual intercourse. Should they break the law, the couple would end up dying in the bush. If they were to remain safe, the couple needed to abide by the laws of the land;
3. No one is allowed to catch caterpillars before the chief blesses the bush. Upon blessing the land, people will be authorised to go and fetch edible caterpillars....When the collection period is over, everyone is supposed to take some of the caterpillars to the chief through his headman/woman in form of tribute as a way of showing respect to his Royal Highness....There is a day that the chief sets as a last day of collecting caterpillars. In view of this, every collector is supposed to obey this law, failure to doing so would result into someone facing the wrath of the law (i.e. strange things would happen to him or her).

According to these laws and myths, an act of a collector engaging themselves in sexual intercourse was offensive to the ancestral spirits. It was believed that offenders would face the wrath of the law of the land. They would either be bitten by a snake such as a python or they

would simply go missing from the said bush or be struck by lightning.<sup>109</sup> This signifies the reality of mythology among the people of Mporokoso in particular.

It was strongly believed that if any bad omen (such as being struck by lightning) happened to anyone who had gone into the bush to collect edible caterpillars, he/she automatically must have abrogated the traditional laws and that the ancestral spirits were not pleased with him or her.<sup>110</sup> In view of laws being abrogated, in 2015 in Mporokoso district for example, *Times of Zambia* newspaper reported that Nelson went to fetch some caterpillars but went missing in the bush. The paper further postulated that:

Caterpillars are a delicacy for some and can be a source of income. Although he does not eat them, Nelson Chanda got lost in the woods one day when he and a colleague went on an expedition for the high protein source.<sup>111</sup>

It was not everybody involved in collecting edible caterpillars that consumed them. Others like Nelson Chanda would collect edible caterpillars probably for selling in order to make profit. Unfortunately, regardless of one's intention behind the collection of caterpillars, one needed to abide by the laws set by the traditional leaders. Doing so would enable a collector to be at peace with the ancestral spirits. This implies that myths were an important component of the people of Luwingu and Mporokoso districts and could not be separated from the collection of edible caterpillars.

Other people end up dying signifying the gravity of their offence. In 2015, the *Lusaka Times Newspaper* reported that a “Woman on a caterpillar picking errand dies after snake bite,

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<sup>109</sup> Interview with Headman Angel Chibwe, Chief Munkonge's Chiefdom, Kasama district, 31<sup>st</sup> July, 2020.

<sup>110</sup> Davies M. Chanda, 'Getting Lost in the Wood Due to Caterpillar Collection', *Times of Zambia*, March 13, 2015, 6.

<sup>111</sup> Chanda, 'Getting Lost', 6.



two survive.”<sup>112</sup> As earlier stated, any strange incident like this one was associated with having defied any of the stipulated traditional laws of the land. This was one of the myths.

Another myth was that if someone stole anything from a colleague while collecting caterpillars, the repercussions were that he/she would get lost in the bush. It was believed that if someone was guilty of stealing from the neighbours’ already collected caterpillars that person would be lost in the bush.<sup>113</sup> Traditionally, it was also believed that such victims who had broken one of the traditional laws of the land were punished.<sup>114</sup> Punitive measures took different forms. Offenders for example were asked to cultivate a very big piece of land; they would be asked to do any manual work like cleaning the surrounding of the palace.<sup>115</sup> Depending on the nature of the offence committed, Angel Chibwe reported that offenders would be asked to pay in kind. He said that no offender would go scot-free as they were asked to pay in form of livestock such as goats, chickens and cattle.<sup>116</sup> This helped to maintain law and order in the chiefdom.

Thirdly, it was also believed that a caterpillar collector was not expected to throw any of the collected caterpillars into the running water like a stream, river, lake or any form of water body during the process of collecting caterpillars. This myth was based on some historical beliefs in Kasama district dating back to the period after 1955. A story was told in which one of the chiefs in Kasama district had thrown some of the caterpillars into the river and immediately the river went dry.<sup>117</sup> It is against this background therefore that most chiefdoms in northern Zambia believed that once the caterpillars were thrown into the river or any running water, the resultant

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<sup>112</sup> *Lusaka Times*, ‘Woman on a caterpillar picking errand dies’, November 6, 2015, 5. Going by what has been written earlier on, it can be argued that for a woman being bitten by a snake leading to death, it was clear that she abrogated the laid Traditional Laws.

<sup>113</sup> *Lusaka Times*, ‘Woman on a caterpillar picking errand dies’, November 6, 2015. 5.

<sup>114</sup> *Lusaka Times*, ‘Woman’, 5.

<sup>115</sup> Interview with Angel Chibwe.

<sup>116</sup> Interview with Angel Chibwe.

<sup>117</sup> Interview with Angel Chibwe.

impact was poverty,<sup>118</sup> as there would be no more edible caterpillars in the area. In other words, if the spirits were upset, caterpillars were believed to disappear immediately and in the following year; they would only be found in sporadic areas to an extent that the expectant collectors would end up being frustrated. Edible caterpillars were believed to shift to other areas in which spirits were pleased. Simply put, the happier the ancestral spirits; the better harvests of caterpillars the people of Luwingu and Mporokoso had in that year.<sup>119</sup> Although this was their belief, it can be contended on one hand that it was one way of preserving water hygiene as processing caterpillars which had been collected was done near water. On the other hand, water was needed for drinking, cooking, washing dishes and cleaning up caterpillars themselves while caterpillar collectors were in the bush.

Another myth had to do with the pregnant woman. It was believed that a pregnant woman was not supposed to collect any of the types of caterpillars as she would miscarry if she collected them. This belief was reaffirmed by Mulenga M. Kapwepwe when she noted that:

Firstly, a pregnant woman must not pick up the edible caterpillar known as Kabambala or Matuku (collectively known as ifishimu pl. ichishimu sing.). If one of these caterpillars happened to fall on her belly a miscarriage would inevitably result.<sup>120</sup>

On the contrary, it can be argued that this could have been a better way of protecting the unborn child in the womb of a mother, owing to the daunting task<sup>121</sup> that was involved in the caterpillar collection process.

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<sup>118</sup> Mpundu Mwape, *Efyo Naendele Ku Lubemba*, ZNBC, Lusaka: video part 4, 2009.

<sup>119</sup> Interview with Angel Chibwe.

<sup>120</sup> Mulenga M. Kapwepwe, *A little Book of Omens: Some Superstitious Beliefs of the Bemba people* (Lusaka: Published by Mulenga Kapwepwe, 2003), 3.

<sup>121</sup> Interview with Mulenga M. Kapwepwe.

It was common for harmful animals like snakes and dogs to disappear during the collection period and reappear when the collection of caterpillars was over much to the surprise of the collectors. In this vein, Angel Chibwe, a respondent pointed out that:

It is surprising how animals disappear during the collection period and appear when the collection period was over. We wonder how the animals were able to guess that the period of collecting caterpillars was over and that it was time to get back...this was magical!<sup>122</sup>

This also explains why there had been some restrictions on the methods of collecting edible caterpillars. In the letter above (law 3), it was indicated that all caterpillar collectors were to stop collecting on the day that the chief had set and that everyone was expected to obey.

### **Commencement of Edible Caterpillar Collection**

According to Robin Mulenga, one of the village headmen of Chief Mumpolokoso, people usually left their homes for the bush as early as 04:00 hours every day and by 05:30 hours they would have reached their collection area (s) which in most cases would be about 6 to 7 kilometers from their respective homes.<sup>123</sup> Similarly, writing on Mpika district, Chidumayo and Mbata noted that “local people left at dawn to collect edible caterpillars in the bush and returned to their villages and/or temporary bush camps to process caterpillars around mid-morning after 4 to 5 hours of harvesting”.<sup>124</sup> However, in terms of timing, this was not the exact scenario with the people of Luwingu and Mporokoso districts. They instead argued that once they went to the bush early in the morning, they would only return home at sunset. The scholars, Chidumayo and Mbata further stressed that the realisation for consumption and profit involved in collecting caterpillars made them to include all family members above 15 years in order for them to collect

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<sup>122</sup> Interview with Angel Chibwe.

<sup>123</sup> Interview with Mulenga.

<sup>124</sup> E.N. Chidumayo and K.J. Mbata, 181.

as much as they could.<sup>125</sup> This clearly demonstrates that families worked together to collect caterpillars.

Make-shifts or *mitanda* (a temporary hut made near the collection place) during caterpillar season<sup>126</sup> were also made especially by the people coming from outside Luwingu and Mporokoso districts.<sup>127</sup> The camping would last for three to four weeks; a period of time for active collection of caterpillars. A good example of the district where people built a lot of make-shift shelters, mostly tents or grass thatched ones, was Luwingu district. Ng'onga Roydah, a former Mporokoso dweller who later shifted to Luwingu district noted that Mporokoso in comparison to Luwingu seemed to have had more make-shifts than Luwingu district. Perhaps this was because of its vicinity to the border area of the Democratic Republic of Congo (DRC).<sup>128</sup> This could plausibly be attributed to the fact that a lot of *Mwachusas*<sup>129</sup> (Congolese as they were commonly referred to) trekked to Mporokoso to collect edible caterpillars. Arguably, due to lack of guest houses in caterpillar prone areas to accommodate the *mwachusas*, make-shifts were inevitable.

It was also reported that most villages in northern Zambia were deserted as most households were engaged in gathering *ifinkubala* from the surrounding forests.<sup>130</sup> To this effect, it can be argued that security in Luwingu-Mporokoso was compromised to a larger extent.

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<sup>125</sup> Interview with Mulenga.

<sup>126</sup> Kristi Anne Stolen and Edwardo P. Archetti, 'Socio-Economic constraints on Agricultural production in Northern Province, Zambia', Soil Productivity Research Programme, Extracted from ARPT Data base, September, 1981, 14.

<sup>127</sup> Minutes of the meeting held at Chief Chipalo's palace, Luwingu district, 5<sup>th</sup> November, 1975, 2.

<sup>128</sup> Interview with Ng'onga Roydah, an edible caterpillar trader, Luwingu, 17 August, 2020.

<sup>129</sup> Interview with Ng'ona Roydah.

<sup>130</sup> Mudenda, ARPT, 'A Socio-Economic Study', 1.

## Methods of Collection

There were numerous methods of harvesting edible caterpillars in the Northern Province of Zambia. These were net-trapping, cutting down of trees, handpicking and tree beating (shaking). Nevertheless, since the 1950s, there were three prominent strategies that were employed in Luwingu and Mporokoso districts, namely, cutting down of trees; handpicking and tree beating. Even if net-trapping was one of the methods once used to harvest caterpillars in Luwingu and Mporokoso districts since the 1950s, it did not last long.

Net-trapping, a method used to catch caterpillars using a net,<sup>131</sup> was employed in some selected areas of Northern Province such as Chilubi and Samfya in Luapula Province since 1952-72.<sup>132</sup> This was because people in such areas where fishing was the main economic activity, found it convenient to utilise the same nets on caterpillars that they used in fishing.<sup>133</sup> It can be deduced that this helped caterpillar collectors to save on time and resources of looking for other materials like *chitenge* and axes to aid them in the collection process. However, after 1972 as earlier mentioned, the method was no longer considered, perhaps, other strategies were better off than this one.

Cutting down of trees was another method that was frequently employed in the caterpillar collection process in both Luwingu and Mporokoso districts between 1950 and 1980. In this vein, H.M.N. Lees asserted that in the early 1960s in years when edible caterpillars were abundant, clearings of up to 2 hectares were made in the woodland, especially where the host

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<sup>131</sup> *Central African Mail*, 'Good news for caterpillar-Lovers throughout Northern Rhodesia', Thursday, 8th November, 1963, 2.

<sup>132</sup> Ministry of Lands and Natural Resources, *Annual Report of the Forest Department for the year 1979*, (Lusaka: Government Printer, 1980), 10.

<sup>133</sup> *Central African Mail*, 1.

plant was dominant<sup>134</sup> Similarly, a Ministry of Lands and Natural Resources (MLNR) Report for 1979 indicated that cutting down of trees was prominent in high caterpillar populated areas of northern Zambia.<sup>135</sup> To this end, *Times of Zambia* in 1980 noted that caterpillar collectors in Kasama and surrounding areas had to cut down branches of trees, despite environmental authorities reminding them against the dangers of felling trees.<sup>136</sup> This clearly shows that the method of cutting branches and in some cases trees when fetching caterpillars was a common practice among the Bemba of northern Zambia. This in turn disturbed the breeding process of edible caterpillars in the following season as there would be no host trees for them.<sup>137</sup>

This phenomenon, nevertheless, did not continue as the Government of the Republic of Zambia (G.R.Z) put up legislation to curb the vice. There were for instance laws for arresting all culprits who were guilty of indiscriminate cutting of trees whether for caterpillar collection, charcoal burning or any other reason.<sup>138</sup> This was backed by the Forest Act of 1973 and the 1976 Forest Regulations. Legislation facilitated the enforcement of the Government's policy of protection and use of the forest products.<sup>139</sup> The law also demanded for the arrest and prosecution of the culprits. Consequently, some people ended up being arrested for abrogating the law in place leading to their prosecution. In 1977 for instance, 28 people from Luwingu were arrested for cutting down trees in their quest to harvest caterpillars and consequently, they were transported to Kitwe for prosecution. The *Central African Mail* recounted:

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<sup>134</sup> H.M.N, Lees, Working plan for the Forests Supplying the Copperbelt, Western Province, 1962-1967, (Lusaka: Government Printer, 1962), 14-15.

<sup>135</sup> MLNR, *Annual Report of the Forest Department for the year 1979*, (Lusaka: Government Printer, 1980), 10.

<sup>136</sup> *Times of Zambia*, Thursday, May 3, 1980.

<sup>137</sup> MLNR, *Annual Report of the Forest Department for the year 1979*, 10-11.

<sup>138</sup> MLNR, *Annual Report of the Forest Department for the year 1972*, 1. Also, see: MLNR, *Annual Report of the Forest Department for the year 1976*, 11.

<sup>139</sup> G.R.Z., *Third National Development Plan 1979-83* (Lusaka: Office of the President-National Commission of Development Planning, 1979), 177.

The only people arrested in Forest Reserves are those caught cutting down trees. So far 28 people from Luwingu have been prosecuted in the Kitwe urban area for felling trees and fined 10s each....It would appear the hunter's cry here is: catch your caterpillar but leave the tree alone.<sup>140</sup>

In 1979, it was reported that restraining all those who were in pursuit of edible caterpillars from cutting trees was a struggle.<sup>141</sup> It was also noted that in spite of the effort made by government to curb the practice of cutting down trees, there was still a considerable damage done to forests.<sup>142</sup> In 1982, a number of caterpillar collectors from different districts of Northern and Luapula Provinces contravening the Forest Act of 1973 were apprehended at different times of the year. The Annual Report of the Forestry Department noted:

A total of 109 people were taken to courts of law for contravening the Forest Act of 1973. Out of this, 102 were convicted and fined a total of k 247 while the rest were pending trial as at 31<sup>st</sup> December, 1982<sup>143</sup>

This also demonstrates that despite legislation being in place, illegal pollarding of trees among the people of luwingu, Mporokoso and Northern Province at large, persisted in their pursuit of edible caterpillars.

Arrests for felling down trees in the process of collecting caterpillars and other forest products worked as a deterrent to many would be offenders. This was noticed in the years after 1980 as the number of arrests regarding forests-related offences reduced significantly.<sup>144</sup> This was evident in the MLNR Report of 1983 which categorically stated that "Ninety-three people

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<sup>140</sup> *Central African Mail*, 1.

<sup>141</sup> MLNR, *Annual Report of the Forest Department for the year 1979*, 10.

<sup>142</sup> MLNR, *Annual Report of the Forest Department for the year 1979*, 10. Also, see, Ministry of Agriculture, 'Review of the operations of the Agricultural Marketing Committee During the year ending 30<sup>th</sup> June, 1968' (Lusaka: Printed by the Government Printer, 1971), 9.

<sup>143</sup> MLNR, *Annual Report of the Forest Department for the year 1982*, 17.

<sup>144</sup> *Zambia Daily Mail*, May 19, 1988, 3.

were taken before Courts of Law for various illegal forestry activities.”<sup>145</sup> This, indeed, signifies a reduction on the number of people contravening the forestry law, owing to the statistical figures stated above. The *Zambia Daily Mail* newspaper further noted that as a result of information dissemination on radio on the dangers of cutting down trees, there was a drastic reduction on the number of people being arrested.<sup>146</sup> Consequently, the method of cutting down a tree or a branch of the foliage in the caterpillar collection process reduced. Unlike the 1970s where close to 300 or more people felling trees would be arrested, about a 100 or fewer people in Northern Province of Zambia were being arrested after 1982.<sup>147</sup> This also explains why cutting down trees as a method of fetching caterpillars was discontinued in the study area after 1983.<sup>148</sup> If at all there were caterpillar collectors who continued felling trees even after legislation was made clear to the general public especially after 1980, then they did it illegally.

Handpicking, as earlier stated, was employed by the collectors of edible caterpillars in the study areas. It is literally defined as the method of separating easily identifiable material from a mixture.<sup>149</sup> In this context, it meant picking caterpillars using one’s hands. Since caterpillars fed on leaves and they therefore depended on them for their survival, the collector would separate the caterpillars from the feed host plants.<sup>150</sup> Philip Nkunika argued that “handpicking is a very impactive, although it is a tedious method of collecting caterpillars.”<sup>151</sup> He also noted that the impactiveness was in terms of the quantity of caterpillars collected in each day. He further asserted that unlike other methods which used some materials such as sticks which may be

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<sup>145</sup> MLNR, Annual report of the Forest Department for the year, 1982, 16.

<sup>146</sup> *Zambia Daily Mail*, 3.

<sup>147</sup> *Zambia Daily Mail*, 3.

<sup>148</sup> Minutes of the meeting held at Chief Tungati’s palace, 27<sup>th</sup> October, 1982, 1.

<sup>149</sup> From: <https://dictionary.cambridge.org/dictionary/english> (Accessed on 09/09/2020).

<sup>150</sup> Provincial Agricultural Officers’ report, Northern Province, 1966-1967, 43.

<sup>151</sup> Interview with Professor Phillip O.Y. Nkunika, an entomologist and a lecturer in the department of Biological Sciences at the University of Zambia (UNZA), the University of Zambia, 3<sup>rd</sup> August, 2020.



harmful to human life, handpicking would not interfere with other collectors as it was the safest way of collecting caterpillars.<sup>152</sup>

Nonetheless, inasmuch as it had a myriad of merits, handpicking as a method had its disadvantages as well. One of the demerits was that it was a slow process and so a lot of time was consumed in the collection process.<sup>153</sup> It was also a risky method of collecting caterpillars as men were sometimes killed due to snake bites while in the trees and would fall from high trees.<sup>154</sup> In this regard, some of the collectors especially women found it very challenging to climb tall trees as the method itself was too tiresome, risky and challenging.<sup>155</sup> The activity that spontaneously followed was the cleaning process which was said to be mandatory.<sup>156</sup> The palm, in turn, was pricked with spines (*iminga*)<sup>157</sup> and swollen, deterring one from the following days' collection.

Tree-beating or shaking of the branches of the tree was another method commonly used in Luwingu and Mporokoso districts and many other districts like Mungwi and Kasama in the Northern Province of Zambia.<sup>158</sup> This was a process where a collector would use a stick to strike or beat the trunk littered with caterpillars, causing them to drop on the ground. As the caterpillars fell from the host tree, it was easier for the collector to fetch them.<sup>159</sup> In some cases, a cloth like

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<sup>152</sup> Interview with Nkunika.

<sup>153</sup> Interview with Gabriel Chilufya; William Chambeshi; Getrude Musonda; Roydah Ng'onga, Mporokoso district, 7<sup>th</sup> July, 2020.

<sup>154</sup> Stolen and Archetti, 'Socio-Economic constraints on Agricultural production in Northern Province, Zambia', 1981, 13.

<sup>155</sup> ARPT, 'The needs of Rural Women' in Northern Province: Analysis and Recommendations', 1985 (Lusaka: Government Printer, 1985), 17.

<sup>156</sup> ARPT, 'The needs of Rural Women', 17.

<sup>157</sup> *Iminga* is a Bemba word to mean 'spines' or literally 'thorns' of edible caterpillars.

<sup>158</sup> MLNR, *Annual Report of the Forest Department for the year 1979*, 6.

<sup>159</sup> Ministry of Rural Development, *Annual Report of the Research Branch, 1973-74*, (Lusaka: Government Printers, 1975), 128.

*chitenge*<sup>160</sup> material would be spread or tied under the targeted trunk of a tree. Once the tree is shaken or beaten, caterpillars on it would fall in numbers from the host plants and the collector would easily have access to them.<sup>161</sup> Depending on the situation at hand, if tree-beating was not satisfactory, a collector would switch to an alternative method, especially the tree ‘shaking method’.<sup>162</sup> In this way, it can be contended that methods used to harvest edible caterpillars in Luwingu and Mporokoso districts varied from time to time, as they were determined by the geographical situations such as terrain and how viable the target area was. In short, there were no pre-determined methods to employ whenever caterpillar collectors began the catching process.

### **Challenges in Collecting Edible Caterpillars**

There were a number of challenges that Luwingu and Mporokoso caterpillar collectors encountered whenever they went to harvest the insects. These included the size of caterpillars which made the work itself tedious, insufficient supply of labour in households with few family members and unfavourable geographical places due to terrain.

Caterpillars were small in size implying that squeezing them in readiness for drying and smoking was not only a tiresome but also a lengthy exercise.<sup>163</sup> Writing on the Socio-Economic constraints on Agriculture in the Northern Province of Zambia, Kristi Stolen and Edwardo Archetti held that some heavily populated areas with caterpillars were not easily accessible, while other areas lacked facilities such as water to support human life during the collection

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<sup>160</sup> *Chitenge* is a Bemba name to refer to a wrapper (or traditional cloth) worn by an African woman and in this case, it can be used in different ways. Apart from being worn by a woman, *chitenge* can be used like a basket to keep caterpillars.

<sup>161</sup> ARPT, ‘A Consultant Report to Provincial Planning Unit’, Kasama, Zambia, 79, 1978, 7.

<sup>162</sup> Interview with Musonda and Ng’onga.

<sup>163</sup> Hanboonson and Durst, *Edible Insects in Lao PDR: Building on Tradition to enhance Food Security*, 3.

period.<sup>164</sup> In some cases, some roads were impassable, making it difficult for collectors to access their target areas.<sup>165</sup> Similarly, in 1974 it was reported that there were transport challenges due to poor road network which caused a standstill. This eventually disturbed the flow of forest products that were being transported from the Northern to the Copperbelt Provinces.<sup>166</sup>

Insufficient labour supply during the collection of edible caterpillars posed a major challenge for some families. It was noted that the composition of some family members could not allow them to collect as much caterpillars as they desired. A family of 4 members for instance, which probably consisted of a father and mother who were perhaps over sixty years and two grand-daughters aged 9 and twelve could not impactively collect the caterpillars as they wished.<sup>167</sup> Referring to the impact of family size on caterpillar collection, Gabriel Chilufya Chambeshi lamented that:

Caterpillar collection was a good substitute for farming, especially in times of poor harvest. Families with many members were assured of collecting as much caterpillars as possible. Consequently, they were able to sustain themselves and rarely went hungry. They would also sell surplus for profit....The small size of my family adversely impacted on the quantity of caterpillars we could collect. In some instances we would have no relish while our friends with bigger families rarely lacked relish.<sup>168</sup>

Other scholars observed that there was a process of evisceration (removal of gut contents) from caterpillars which was equally a slow process and very tiresome.<sup>169</sup> This also points to the fact

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<sup>164</sup> Stolen and Archetti, 'Socio-Economic constraints on Agricultural production in Northern Province, Zambia', 1981, 14.

<sup>165</sup> ARPT, 'Misamfu Regional Research Centre', *Research Proposal*, kasama, Extracted from ARPT Data base, n. d., 6.

<sup>166</sup> Ministry of Agriculture, *Copperbelt Annual Report*, (Lusaka: government Printers, 1974), 8. Similar views on the challenges of transport were also quoted in Dorothy Mwansa, 'Gender and Agricultural Development in Zambia, 1890-1990', PhD Thesis, University of Zambia, 214. Also, see: Stolen and Archetti, 'Socio-Economic constraints on Agricultural production in Northern Province, Zambia', 36.

<sup>167</sup> Interview with Chambeshi.

<sup>168</sup> Interview with Chambeshi.

<sup>169</sup> Ministry of Rural Development, *Annual Report of the Research Branch, 1973-74*, 128.

that although there were many economic advantages (about 70%) in collecting edible caterpillars, there were several challenges involved as well.<sup>170</sup>

The terrain and some geographical places were not favourable in most areas for collection of caterpillars. It was noted that some areas where prime harvesting took place were mountainous, hilly and thick bushes such that getting to the caterpillar highly populated areas was a challenge, as the area would be impassable.<sup>171</sup> Ironically, those areas were seen to have more harvestable caterpillars than the areas that were passable.

Water bodies such as *Lubansenshi*, *Luena*, *Lufubu*, *Lupososhi*, *Mufili* and *Mulalashi* Rivers in Luwingu; *Mutotoshi*, *Kashinda* behind *Kashinda* Primary School, *Kasakalabwe* and *Mipa* Rivers in Mporokoso played a pivotal role during the collection period of caterpillars. Although they were not found in prime areas of edible caterpillars, they supported human life and so areas near them that were highly populated with caterpillars were usually more crowded during the period of collection as opposed to places which were far from water. It can also be stated that going back home for cooking or bathing was time consuming to a larger extent. Therefore, it was probably the reason why most collectors preferred being near any source of water than the dry land. Further, it was also observed that water was used to wash plates after collectors had cooked and had eaten their meals.<sup>172</sup> Water was also boiled to mix collected caterpillars with salt as a way of preserving them.<sup>173</sup> Furthermore, water was used to put off the fire after roasting the caterpillars. Above all, rivers provided fish for people collecting

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<sup>170</sup> Mudenda, 'A Socio-Economic Study', 25.

<sup>171</sup> *Lutandanya Newspaper*, 8 November, 1960, 3.

<sup>172</sup> Interview with Chambeshi.

<sup>173</sup> Interview with Chambeshi.

caterpillars to eat.<sup>174</sup> In other words, being near any water body like a river was a common trend by all caterpillar collectors.

Although caterpillars were found in most of the forests in both Luwingu and Mporokoso districts, it was not in all parts of these two districts that they were collected from. Certain places lacked necessities of life like water. As such, caterpillars were not collected from such areas; instead, collectors knew which areas were ideal for caterpillar harvesting.<sup>175</sup> In short, water bodies like streams, rivers or dams contributed immensely to the easy collection of caterpillars. Some caterpillar collectors who shifted camps from homes to the bush suffered from mosquito bites.<sup>176</sup> This also posed a danger of contracting malaria by the collectors.

### **Labour Mobilisation and Gender Roles in Edible Caterpillar Collection**

Edible caterpillars were often collected by all categories of gender including men, women and children, both girls and boys (aged between 15 and 17).<sup>177</sup> In Mporokoso district for instance, Gabriel Chambeshi pointed out that most children participated because they had no one to remain with at home; some children were involved in collecting edible caterpillars because of fear of remaining home alone.<sup>178</sup>

In Luwingu district particularly, it was reported that:

Boys and girls collectively gathered logs from the vicinity of the respective caterpillar populated areas. They fetched water from the nearby streams and rivers used for washing the caterpillars. They often washed dishes before and after meals. In other words, the chores were not different from the normal home daily routine.<sup>179</sup>

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<sup>174</sup> *Lutandanya*, 3.

<sup>175</sup> *Ilyashi Newspaper*, 2<sup>nd</sup> December, 1961, 2.

<sup>176</sup> *Ilyashi*, 2. The actual words reported by this newspaper in Bemba were: “*abantu abengi balesumwa sana na bamungwingwi munshita yakukola ifishimu.*”

<sup>177</sup> Interview with Chambeshi.

<sup>178</sup> Interview with Chambeshi.

<sup>179</sup> Interview with Chambeshi.

Boys did not only collect fire-wood for making fire needed for roasting caterpillars, but they equally participated in male dominated tasks especially those tasks which were believed to be masculine in nature. Chidumayo and Mbata maintained that even if both sexes were involved in caterpillar collection, specific roles were well defined:

Men, women and children were all involved in edible caterpillar harvesting, although men harvested at different sites from those used by women and children. Harvesting was done by bending trees and searching for caterpillars in the foliage; when there were too big to bend, they were cut. The processing of caterpillars involved evisceration (removal of gut contents), roasting in hot ash and sun drying mainly by children.<sup>180</sup>

Like in many societies, caterpillar collection was primarily done by women.<sup>181</sup> This was evident in Mporokoso districts<sup>182</sup> and it was the case in Thailand. P. Somnasang, G. Moreno and K. Chusil's thus postulated:

It is important to record and maintain traditional knowledge about edible insects while respecting traditional ways of life; for example, gender is often important in food harvesting, and in northeastern Thailand, women are the main collectors of insect food.<sup>183</sup>

Apart from collecting caterpillars, women were also involved in trade (buying and selling) of caterpillars.

## Conclusion

The chapter has discussed the strategies of collecting edible caterpillars. It has demonstrated that unlike other insects such as termites and grasshoppers which were collected from forests without any restriction,<sup>184</sup> the harvesting of edible caterpillars was associated with a lot of

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<sup>180</sup> E.N. Chidumayo and K.J. Mbata, 'Shifting Cultivation', 175-193. Also see: *Mutende*, 3.

<sup>181</sup> Hanboonsong and Durst, *Edible Insects*, 2014, 3.

<sup>182</sup> *Mutende*, Saturday May 5, 1955, 2.

<sup>183</sup> Somnasang, P., Moreno G, Chusil K., 'Indigenous Knowledge of wild food hunting and gathering in north-east Thailand', *Food and Nutrition Bulletin* 19: 359-365.

<sup>184</sup> Siulapwa et.al., 'Nutritional Value of Four common Edible Insects in Zambia', 876.

traditional laws, highlighting the importance of custom and traditional belief system prior to the commencement of the collection period. It has shown that traditional leadership played an important role prior to each season of collecting caterpillars as they not only flagged off the harvesting process, but also directed the local communities on the procedures and traditional practices to be followed by the people prior to and during the process of harvesting caterpillars. The chapter has also analysed how each particular method was applied. It has shown that since the 1950s, there were three prominent strategies that were employed to harvest caterpillars in Luwingu and Mporokoso districts, namely, cutting down of trees; handpicking and tree-beating. While tree-beating or shaking proved to be more impactful than the other two methods as it was faster and reliable, handpicking, apart from consuming a lot of time, was not as impactful and reliable method as tree-beating. This also applied to felling of trees as a method of fetching caterpillars. Among the three methods, this was the worst as it left permanent damage to the environment especially in caterpillar breeding areas. Once a tree was cut for example, it meant that ecology was disturbed and that the following season caterpillars were not going to breed in that particular area.<sup>185</sup> Although cutting down of trees was not initially the aim of most of the caterpillar collectors, the chapter noted that circumstances in which collectors found themselves coerced them to cut foliage leading to the entire trunk being cut. This indiscriminate felling of trees was so rampant that the government had to put up some legislation to curb the vice. As a result of such concerted effort, statistics showed some improvement in adherence to law as numbers of the offenders reduced drastically. Lastly, the chapter also argued that despite improved technology after the 1980s, old methods were employed in collecting edible

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<sup>185</sup> Provincial Agricultural Officer's Report (PAO), Northern Province 1966-1967, 43.

caterpillars. These old methods included bending of trees especially in areas highly populated with caterpillars.

Mythology and its subsequent impact on the collectors of edible caterpillars were also discussed in the chapter. It was pointed out that as a result of abrogating the instructions on edible caterpillar collection; offenders of traditional customs did not go unpunished. It was further demonstrated that myths were not only associated with edible caterpillar collection, but that they were also applicable in other areas of life such as ‘cutting down of trees’, ‘mushroom collection’ and other forms of relish acquisition such as birds and fish.

The challenges involved in collecting caterpillars were also examined. These included, among others, long distances from homes of collectors to the bush and lack of water bodies in certain areas, thereby making it difficult for some collectors to collect the insects.



## **Chapter 3**

### **Transformations, Commercialisation and Trade in Edible Caterpillars in Luwingu and Mporokoso Districts, 1976-2006**

This chapter examines the dynamics which occurred overtime with regard to edible caterpillars, and the commercialisation and trade in the commodity in Luwingu and Mporokoso districts from 1976 to 2006. The chapter is divided into three sections. The first section discusses factors that contributed to the commercialisation of edible caterpillars. It argues that there were a number of factors, mainly economic in nature, which led to commercialisation of the commodity. These included, among others, the construction of Tanzania-Zambia Railway (TAZARA), urbanisation and the growth of city markets. It further argues that although there were traces of trading in edible caterpillars prior to and after the 1950s, the activity became more pronounced in 1976. The second part of the chapter discusses the evolution of prices for edible caterpillars. The third part focuses on the changing perceptions and attitudes towards collection of edible caterpillars in Luwingu and Mporokoso districts between 1976 and 2006. It is argued here that prior to the 1950s, edible caterpillars were mainly collected for domestic consumption only, but as time evolved, available evidence suggests that the local people began also to increasingly harvest edible caterpillars for income-generation and profit, leading to commercialisation of the commodity.

## Contributing Factors to Commercialisation of Edible Caterpillars

The concept of commercialisation in economic terms means applying business methods to achieve profit for a new product or service.<sup>186</sup> In the context of this study, edible caterpillar traders collected insects from northern parts of Zambia and sold them to different parts of the country for profit. In this way, commercialisation of edible caterpillars was actualised by a number of factors. The first one was the construction of TAZARA. The Zambian government in its First National Development Plan (FNDP) reported that between 1966 and 1970, the Rhodesia railways, which carried most of the country's import and export trade with the outside world had proved to be unreliable as its capacity was not sufficient enough to meet the expanding requirements of the country's fast developing economy.<sup>187</sup> In addition, "the pattern of the colonial transport system had made it impossible to develop trade links with neighbouring countries".<sup>188</sup> There was too much reliance on the United Bus Services (UBZ) particularly in Zambia to transport people from one corner of the country to the other.<sup>189</sup> This therefore made it very difficult for traders who wanted to engage in regional trade to do so as the bus was operating within the nation. This impacted negatively on a lot of economic activities such as buying and selling of different merchandise in the region, owing to the fact that there was poor road network in northern Zambia.<sup>190</sup> However, from 1976 onwards, following the commissioning of TAZARA, the economic lifestyle of many traders improved because of the railway line which enhanced the mobility of goods and services.

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<sup>186</sup> 'Alireza Aslani et. al., 'Commercialisation Methods of a New product/ service in ICT Industry: Case of science and technology Park,' *Oganizacija*, Vol. 48, 2, (2015), 13.

<sup>187</sup> G.R.Z., *First National Development Plan (FNDP) 1966-70* (Lusaka: Office of National Development and Planning, 1966), 26.

<sup>188</sup> G.R.Z., *FNDP 1966-70*, 26.

<sup>189</sup> *Times of Zambia*, 'TAZARA vital, says Chinkuli', Friday, February 12, 1988, 4.

<sup>190</sup> G.R.Z., *Second National Development Plan*, January 1972- December, 1976, 21.

Built by the Chinese Government between 1970 and 1974 and commissioned in 1976, TAZARA railway line became a very significant economic asset as it could carry heavy goods from the neighbouring Tanzania into Zambia and vice versa. TAZARA was perceived as an urgency that enhanced the mobility of many goods and services from the northern region to southern part of Zambia.<sup>191</sup> The 1, 860 kilometer railway line, also known as the Uhuru Railway transported goods such as edible caterpillars and beans from Luwingu and Mporokoso districts, fish and *kapenta* (dry fish) from Mpulungu district, sweet potatoes from Kasama and Mpika districts, irish potatoes and rice from Nakonde border.<sup>192</sup> It must also be noted that the railway line passes through Kasama, the provincial headquarters of Northern Province. This meant that all goods from Luwingu and Mporokoso districts and other far-flung areas away from Kasama district like Mbala and Mpulungu were first transported by road before they were loaded on the goods train at Kasama Railway Station to their respective destinations.

However, due to the poor road network at the time, traders of edible caterpillars and other items were adversely affected because they could not efficiently transport their merchandise. Similarly, Derrick Mwenya of the *Post Newspaper* reported in 2004 that the poor state of the Mporokoso-Kaputa road network since the 1970s had impaired the movements of goods such as rice, beans, cassava, sugarcane, bananas, sweet potatoes, edible caterpillars and mushroom to neighbouring districts.<sup>193</sup> In view of this, it can be argued that the poor road network slowed down movements of edible caterpillars and other items to an extent that once collected, transporting them to big cities like the Copperbelt and Lusaka for markets was a

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<sup>191</sup> Editor, *Times of Zambia*, 'Marking 10 years of Solid Zambia-China friendship' Friday, July 23 1986, 15.

<sup>192</sup> Interview with Mpundu Mwape, ZNBC, Lusaka, 2nd August, 2020. Mr. Mwape worked for 35 years from 1985 to 2020 as a Producer TV journalist in the Bemba section at ZNBC before his retirement in 2020.

<sup>193</sup> Derrick Mwenya, 'Mporokoso-Kaputa Road', *The Post Newspaper*, Thursday, 2004, 11.

challenge. It could further be argued that the emergence of TAZARA contributed immensely to promoting trade in and commercialisation of edible caterpillars and other items because the railway network not only efficiently transported the goods, but also served as a cheaper mode of transport.

In 1984, the *Times of Zambia* for instance, reported that freight charges for a goods' train were relatively cheaper than road transport, and consequently, many traders from northern Zambia often preferred using TAZARA to transport their merchandise to a bus.<sup>194</sup> Freight charges for example, for transporting "twenty 50kg bags of beans would only cost a trader K30 for a stretch of 900 kilometers, from Kasama to Kapiri Mposhi district"<sup>195</sup>. On the other hand, road transport was unreliable because of limited mode of transport. The only passenger bus that existed during the period under review was the United Bus Company of Zambia (UBZ), suggesting that road transport was truly slow and scarce. Not only that, the road network was almost impassable. The *Times of Zambia* reported in 1984 that:

The Great North road was called 'hell run' because it was in a dilapidated state. Whenever people travelled on this road, they experienced 'hell on earth' even if they had not been to hell itself. Because of too many potholes, a 12-hour journey would take 24 hours....This was purely a nightmare! People were therefore considering ratio turnover whenever they thought of travelling to the north. To make matters worse, there was only UBZ, so it was cumbersome to wait for one bus for the whole day....Goods were more secured in a goods' train/passenger train than it was on a bus or a truck.<sup>196</sup>

In light of this, in 1984, Mathews Mapulanga, the Industrial Governor for TAZARA, urged villagers who were living along the line of rail, especially traders of different types of

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<sup>194</sup> *Times of Zambia*, 'TAZARA vital, says Chinkuli', Friday, February 12, 1988, 4.

<sup>195</sup> *Zambia Daily Mail*, 'Utilise TAZARA,' Friday, April 13, 1984, 4.

<sup>196</sup> *Zambia Daily Mail*, 'Utilise TAZARA,' Friday, April 13, 1984, 4.

merchandise in northern Zambia to utilize the railway transport at low costs.<sup>197</sup> Although Mapulanga did not mention caterpillars in his speech, he alluded to the fact that farm produce like maize, beans, finger millets and forest products could attract more profit than one anticipated.<sup>198</sup> As earlier mentioned, edible caterpillars, grasshoppers, termites, mushrooms, fruits, berries, tubers were forest products that were extracted from many parts of Zambia including the forests of Northern Province.<sup>199</sup> It is plausible to argue that edible caterpillars were among the forest products that were transported by TAZARA from the northern to central province, and ultimately by road to other parts of Zambia, thereby promoting trade in the commodity.

Further, it was not only the freight charges that were competitive between the two modes of transport (railway or road), but the state of the road network around the 1980s left much to be desired. In 1984 for instance, Donald Mwansa of Northern Co-operative Union (NCU) called on the District Councils in the province to improve the condition of feeder roads to facilitate haulage of produce when marketing was about to begin.<sup>200</sup> Mwansa noted that beans from Luwingu and Mbala, forest products and some foodstuffs from Mporokoso could easily find market in other provinces if roads leading to Kasama were repaired.<sup>201</sup> Certainly, it could be argued that improved railway transport through TAZARA enhanced the development of trade in caterpillars and other items as it proved to be the most efficient, cheaper and reliable mode of transport.

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<sup>197</sup> *Zambia Daily Mail*, 'Utilise TAZARA,' Friday, April 13, 1984, 4.

<sup>198</sup> *Zambia Daily Mail*, 'Utilise TAZARA,' Friday, April 13, 1984, 4.

<sup>199</sup> Nils Celander, 'Miombo Woodlands in Africa: Distribution, Ecology and Patterns of Land Use,' working paper 16, (Uppsala: 1983), 7. Extracted from ARPT data base

<sup>200</sup> *Times of Zambia*, 'Repair Roads, urges co-op', Monday, April 16, 1984, 7.

<sup>201</sup> *Times of Zambia*, 'Repair Roads, urges co-op', Monday, April 16, 1984, 7.

## Urbanisation and Commercialization of Edible Caterpillars

Another key factor that enhanced the commercialization of edible caterpillars in Zambia was the growth and development of urban centres, a function of rural-urban drift. Generally, in Zambia, the period between 1969 and 1990 was characterized by the rural-urban drift. The Central Statistics Office (CSO) Report of 1995 stated that the people who migrated from rural to urban centres came from different regions of the country including Western, Southern and Northern Provinces. Those who migrated to urban centres from Northern Province included minority ethnic groups such as the *Bisa, Chishinga, Lamba, Mambwe, Namwanga, Ushi and Unga*.<sup>202</sup> In this regard, the 1995 CSO Report noted that:

There has been a steady flow of people to mining towns and urban centres. As a result, the proportion of the population living in urban areas has increased steadily from 29 percent in 1969 to 38 percent in 1990. During 1969-80, the urban population grew much faster than the rural population.<sup>203</sup>

Similarly, the First National Development Plan (FNDP) for the period 1966-70 noted that following independence, the urban population grew rapidly.<sup>204</sup> It stated that:

Given the localisation of urban centres, the rural-urban population shifts have had major interregional implications....There was an estimated net migration of 282,000 to the line-of-rail provinces, whose proportion of total population rose from 42 to 49 percent.<sup>205</sup>

There were a number of factors which accounted for an increase in urbanisation during the period under review. Mitsuo Ogura asserted that:

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<sup>202</sup> Quoted in *Zambia Demographic Survey 1996* (Lusaka: Zambia, 1997), 1.

<sup>203</sup> CSO report (Lusaka: Zambia, 1995), 3.

<sup>204</sup> G.R.Z., *First National Development Plan 1966-70*, 26.

<sup>205</sup> G.R.Z., *First National Development Plan 1966-70*, 16-17.

In 1991, local people from different provinces of Zambia migrated to the copperbelt in search of wage labour. Secondly, women, who upon getting married joined their husbands in the mining area. This made the urban population to grow faster....Income gaps between urban and rural areas also contributed to migration flows. Other magnets in urban areas are better educational opportunities, water supply, and the lure of city lights. However, towns on the other hand had less than 50 people going in the opposite direction.<sup>206</sup>

This was a general pattern that characterized the situation in Zambia, and it can be contended that the people of Luwingu and Mporokoso were part and parcel of these migrants. In view of this, it is argued here that when migrants flocked to urban areas, different ethnic groups from northern Zambia often carried along traditional foodstuffs which, according to Philip Nkunika, were taken to peri-urban areas.<sup>207</sup> This made people in urban areas to know some traditional foodstuffs like edible caterpillars which were scarcely found in urban areas.

While some people carried some edible caterpillars and other foodstuffs from Northern Province to different parts of the country through migration, others embarked on selling them to any available markets. Arguably, through marketing of their merchandise, it was possible that caterpillars were introduced to most parts of Zambia. Additionally, the movement of people of Luwingu-Mporokoso districts through urbanisation had a direct impact on the commercialisation of caterpillars owing to the available markets that had emerged in the industrial towns of the Copperbelt and Lusaka.<sup>208</sup> In view of this, Nkunika contended that because of the booming populations in peri-urban areas due to urbanisation, non-availability of foods and lack of

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<sup>206</sup> Mitsuo Ogura, 'Rural-Urban Migration in Zambia and Migrant Ties to Home Villages', *The Developing Economies* XXIX, 2 (1991), 1. Also see G.R.Z., *Second National Development Plan, January 1972-December, 1976*, 14.

<sup>207</sup> Interview with Philip Nkunika, The University of Zambia (UNZA), Lusaka, 6th August, 2020.

<sup>208</sup> Wold, 'The Motivational Impact of Agricultural Activities', 11. Similar views on why caterpillars were transported to the Copperbelt were also recorded by George Kay, *Chief Kalaba's Village: A Preliminary Survey of Economic Life in an Ushi Village, Northern Rhodesia* (Manchester: Manchester University Press, 1964), 52.

purchasing power of consumers, culminating into food insecurity in some parts of Zambia, people had no choice but to look at insects as an alternative new food sources.<sup>209</sup> Even if caterpillars were not mentioned as the food sources that were used as an alternative means of survival, they were among foods that helped to cushion the burden for the growing population especially in times of drought and emergencies.<sup>210</sup>

Edible caterpillars were cheaply acquired by anyone who desired collecting them from the bush, implying that there was less or little money involved in the process of collection.<sup>211</sup> This partly explains why edible caterpillars and other forest products evolved from being consumed only at home to becoming commercialised on a larger scale.<sup>212</sup>

### **Conflicting Interpretation on Commercialisation of Edible Caterpillars**

Due to the different views that a number of scholars and informants provided, it was difficult to establish the period when edible caterpillars were actually commercialised. For instance, the Ministry of Lands and Forestry Report noted that by 1983 traders had come to Lwitikila Forestry Reserves in Mpika district from the Copperbelt and Lusaka to collect caterpillars, which in turn were sold from big markets.<sup>213</sup> This suggests that commercialisation of edible caterpillars began in 1983 or earlier. On the contrary, Justine Chomba asserted that commercialisation of caterpillars might have started in the early 1990s because of the

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<sup>209</sup> Philip O. Y. Nkunya, 'Edible Insects: A source of Food Security, Nutrition and Income Generation', (Brochure), 2.

<sup>210</sup> Ng'andwe, Mwitwa and Muimba-Kankolongo, *Forest Policy*, 72. Also, see: N. Siulapwa, A. Mwambungu, E. Lungu and W. Sichilima, 'Nutritional Value of Four Common Insects in Zambia', *International Journal of Science and Research*, Vol. 3, 6 (2014), 876.

<sup>211</sup> Interview with Robin Mulenga, 1<sup>st</sup> July, 2020. He was a 72-year aged Headman of Chief Mumporokoso's area.

<sup>212</sup> Interview with Mwape.

<sup>213</sup> Annual Report of the Forest Department for the year 1982, (Lusaka: Government Printer, 1983), 17. It is also argued that traders did not only come from Lusaka and Copperbelt but also from as far as Fort Rosebery, now Mansa, town, northern Zambia. The movement of these traders to cover such long distances is in itself evident enough that caterpillars were collected either for consumption or profit-generation.



liberalization of the economy which, among other things, promoted the development of the transport sector.<sup>214</sup> This discourse suggests that commercialisation of caterpillars and other merchandise that depended on improved transport system to reach big markets for sale, improved immensely.

Although there were uncertainties on the period when commercialisation of insects occurred due to conflicting views, it is plausible to argue that commercialisation began before the 1970s but grew steadily after 1976 due to improved rail transport that enhanced frequent mobility of caterpillar traders. Nevertheless, the study further argued that commercialisation of edible caterpillars increased to a larger extent after 1991.<sup>215</sup> In other words, commercialisation of edible caterpillars began on a smaller scale after 1976 but grew rapidly after 1991. It was to ‘a smaller extent’ before and after 1976 because the majority of the caterpillar collectors collected insects for home consumption especially in hunger periods,<sup>216</sup> without any intention of selling them to bigger markets. However, caterpillar business grew rapidly after 1991 following realisation by the people of Luwingu-Mporokoso that the insects could be sold to generate income for them.<sup>217</sup> Based on this evidence, it can be argued that caterpillars were collected both for consumption and profit-generation.

### **Price evolution of Edible Caterpillars**

Price dynamics of edible caterpillars were noted over the years. Prior to 1976 and beyond, prices of caterpillars were pegged at par with that of *kapenta*. A *medda* of 5 litres of

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<sup>214</sup> Interview with Justine Chomba, 31<sup>st</sup> July, 2020. He was an 85-year old Mpika-based Catholic priest, who once lived in Luwingu district.

<sup>215</sup> Ng’andwe, Mwitwa and Muimba-Kankolongo, *Forest Policy*, 72.

<sup>216</sup> Interview with Nkunika.

<sup>217</sup> Interview with Chomba.

caterpillars for example was selling at K2 by 1984<sup>218</sup>. Discrepancies in terms of price changes were also noted. In 1987 for instance, a *medda* of edible caterpillars was selling at k12<sup>219</sup> while that of *kapenta* remained at K7. This demonstrates that the demand for the insects had grown with time, that is, from low-income generating insects to a lucrative business. It further demonstrates that the price of insects was twice more than that of *kapenta* signifying how important it was. In terms of profitability, the two commodities were expected to realise the same amounts of money.

Even if prices of *kapenta* and edible caterpillars were once at par, the trend kept on fluctuating. In the early 1990s for example, *kapenta* became twice as more expensive than the prices of most relish such as: mushrooms, edible caterpillars and fish. However, this trend did not overlook the fact that prices differed from one region to the other and that this discrepancy in terms of distance where the commodities were obtained from had perhaps determined the price differences. Furthermore, it could be argued that the further the area of the source of particular merchandise like edible caterpillars was, the higher the price tag expected due to some costs a trader would incur in the process of procurement. One would further contend that even if *kapenta* would sell higher than caterpillars, it was evident as its procurement process was not as cheap as caterpillars'.<sup>220</sup> Contrary to Sharon Kaoma's view, Moore and Vaughan argued that:

25% of the women in Bemba land sold caterpillars locally and to the Copperbelt. Other things sold in small quantities included: eggs, roots and fresh vegetables, tobacco, beer and baskets. The most profitable of the saleable commodities were caterpillars which provided 28% of the total money

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<sup>218</sup> Times Reporter, *Times of Zambia*, Thursday, January 5, 1984, 5.

<sup>219</sup> Times Reporter, *Times of Zambia*, Thursday, January 5, 1984, 5.

<sup>220</sup> Interview with Kaoma.

obtained; grain provided 23%, pulses provided 20%, meat provided 15%, and hens provided 5%.<sup>221</sup>

Even if their book covered part of the pre-colonial era, it must be noted that periodisation Moore and Vaughan referred to was the 1980s, which correlates with the period range of this chapter. It was also emphasised that caterpillars were the most profitable of the saleable commodities, suggesting commercialisation of the insects. In the same vein, Moore and Vaughan asserted that “One woman interviewed in 1988 claimed to have realised K500 from the sale of caterpillars. This was a very substantial sum.”<sup>222</sup> Certainly, this was a substantial figure considering the fact that K500 in 1988 could not surely be compared to the K500 of 2020 because of value discrepancies as well as inflation rate differences that may have occurred over the years. In a nutshell, it could be deduced that prices for edible caterpillars evolved from time to time to an extent that they superseded prices of other commodities especially after 1994.<sup>223</sup>

Although the money economy was already in place between 1976 and 2006, caterpillar traders increasingly used the barter system as an alternative method of disposing off their merchandise. Prior to the 1950s for instance, the Bemba people of Luwingu and Mporokoso acquired different foodstuffs such as salt, fish and beans through barter system.<sup>224</sup> Edible caterpillars were also part of the commodities that were exchanged with salt, fish and beans or any item that traders from different parts of Zambia lacked. To this effect, Ngandwe and others noted that “Edible caterpillars were bartered or exchanged with other goods or services within

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<sup>221</sup> Moore and Vaughan, *Cutting Down Trees*, 61.

<sup>222</sup> Moore and Vaughan, *Cutting Down Trees*, 190. Similar views were also observed by Siulapwa, et. al., ‘Nutritional Value of Four Common Insects in Zambia’, 876.

<sup>223</sup> Times Reporter, *Times of Zambia*, Thursday, January 5, 1984, 5.

<sup>224</sup> W. Watson, *Tribal Cohesion in a money economy: A study of the Mambwe People of Zambia* (Manchester: Manchester University Press, 1958), 32. It must be clearly stated that Watson did not mention the people of Luwingu and Mporokoso in his writing; he nevertheless wrote about the Bemba in general which includes the Mambwe. Luwingu and Mporokoso who are part of the Bemba land.

the community and grocery owners throughout where they are collected”.<sup>225</sup> Although the Scholars did not specify the actual areas where the barter system took place, they confirmed that the barter system took place wherever edible caterpillars were collected.<sup>226</sup> It can therefore be contended that the barter system involving caterpillars in exchange with other items such as salt, fish and beans that they lacked took place also among the people of Luwingu and Mporokoso districts.

In view of the above, during the time when money was not used for various reasons, it was reported that barter system (*Ukukabusha*)<sup>227</sup> took centre stage. Furthermore, Sharon Kaoma and Mary Tembo, the two business women who fetched their edible caterpillars from Luwingu and Mporokoso for sale every year, *ukukabusha* was very common in the early 1980s and that the same trend continued after some two decades.<sup>228</sup> They noted that fetching caterpillars was very easy as it did not matter whether one had capital or not. However, what was clear was that any trader from anywhere who wanted to trade in edible caterpillars, needed to have something form of capital, which included different items such as animals and clothes. To this end, the two women traders, Sharon Kaoma and Mary Tembo held that:

Clothes, goats, pigs, chickens, ducks and any other item were allowed to be exchanged with edible caterpillars depending on the quantity of insects that each trader wanted. In terms of foodstuffs which were mostly exchanged with caterpillars, bags of maize, sorghum, cassava, groundnuts were part of the process of barter system in both Luwingu and Mporokoso districts.<sup>229</sup>

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<sup>225</sup> Ng’andwe, Mwitwa and Muimba-Kankolongo, *Forest Policy*, 72.

<sup>226</sup> Moore and Vaughan, *Cutting Down Trees*, 190-191.

<sup>227</sup> *Ukukabusha* is a Bemba word used synonymously with barter system. The plural form is *amakabu*.

<sup>228</sup> Interview with Kaoma and Tembo.

<sup>229</sup> Interview with Kaoma and Tembo.

From the foregoing, it is clear that the barter system defined the marketability of these insects that indeed, edible caterpillars were collected either for consumption or for profit depending on one's needs.

### **The relationship between traditional ceremonies, customs and edible caterpillars**

Apart from edible caterpillars being collected for either home consumption or profit-generation, they were counted among the traditional foods. In view of this, *Times of Zambia Newspaper*<sup>230</sup> in 1997 demonstrated that edible caterpillars were for *ichilanga mulilo*<sup>231</sup> and *amatebeto*<sup>232</sup>. This demonstration showed that there was indeed a relationship between Zambian tradition and edible caterpillars. In line with this, writing an article on the '9 Traditional Foods you must eat while you are in Zambia', Mazuba Kapembwa noted:

Eating is ingrained in Zambian culture, from social events such as barbeques to pre-wedding events where a groom is treated to a buffet of traditional dishes from his bride's family. If you want to know what's on the menu, check out our pick of the top traditional foods you must eat while you are in Zambia. One of the traditional foods is the edible caterpillars. Caterpillars in Zambia are called *ifinkubala*. They are usually fried in oil, or boiled for a few minutes, then served with tomatoes and onion with *nshima*.<sup>233</sup>

In addition, one of the pre-wedding events where caterpillars were usually served as part of the traditional foods is *ichilanga mulilo*. Perhaps it is also safe to state that a set of Zambian

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<sup>230</sup> Times of Zambia, 14<sup>th</sup> July, 1997.

<sup>231</sup> *Ichilanga mulilo* is a Bemba word which literally means 'showing fire'. It is a traditional ceremony in Zambia where a bridegroom is shown the customs of his would-be bride and at the same time given the authority to feed from the partner's home.

<sup>232</sup> *Amatebeto* is a Bemba word which literally means to 'honour'. This is a traditional ceremony where a man who has been in marriage for some time is being honoured by the in-laws for taking care of their daughter properly.

<sup>233</sup> Mazuba Kapembwa, 5 September, 2018. Theculturaltrip.com (accessed on 29/09/2020)

traditional foods would be incomplete if there were no edible caterpillars on the menu.<sup>234</sup> This indeed shows the relationship between edible caterpillars and tradition.

Edible caterpillars were used to help in keeping a customary law afloat. Since time immemorial for instance, gifts in terms of animals such as cattle, goats, sheep and oxen<sup>235</sup> were offered to the chief as a form of tribute.<sup>236</sup> W. Watson also held that this was a form of respect to the chief and at the same time, tribute empowered the chief to exercise his juridical, administrative and legislative authority over his people. Even if Watson did not stress on edible caterpillars as part of the gifts given to the Chief in form of tribute, the insects were still vital in as far as keeping this custom was concerned.<sup>237</sup> The *African Mail Newspaper* for instance, reported that after the caterpillars were collected in Chief Mpembo's area in northern Zambia, the chief got worried that he was not going to receive his tribute in form of caterpillars.<sup>238</sup> In view of this, edible caterpillars were indeed received as a tribute by any chief of either Luwingu or Mporokoso chiefdom. While it was alleged that traditional leaders amassed a lot of wealth through tribute,<sup>239</sup> the opposite was the reality. During the period of hunger, the chief would offer foodstuffs which arguably involved edible caterpillars to the local people in the community to alleviate poverty.<sup>240</sup> Generally Speaking, Watson pointed out that:

The chief was able to accumulate a surplus through this tribute in labour and food, but this wealth did not greatly increase his standard of living, for he constantly returned food to his people, mainly in the form of gifts to

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<sup>234</sup> [www.researchgate.net](http://www.researchgate.net) (accessed 22/08/19).

<sup>235</sup> Watson, *Tribal Cohesion in a money economy*, 30.

<sup>236</sup> Watson, *Tribal Cohesion in a money economy*, 160.

<sup>237</sup> *African Mail*, "Chiefs waits for his Caterpillars", November 28, 1961, 3.

<sup>238</sup> *African Mail*, "Chiefs waits for his Caterpillars", 3.

<sup>239</sup> Interview with Chief headman Robinson Mulenga in Mporokoso district on 20<sup>th</sup> July, 2020.

<sup>240</sup> Watson, *Tribal Cohesion in a money economy*, 160.

dependants. A subject could demand food and assistance from his chief in time of need.<sup>241</sup>

On the other hand, Chiefs in Luwingu and Mporokoso recognized caterpillars as the food that helped to cushion relish shortages, as the period for collecting caterpillars was in the farming season when much food had just been grown.<sup>242</sup> Similarly, not only were the edible caterpillars used to supplement the diet of the local people, but they were also used to promote food security in times of hunger. In 1994, the Adaptive Research Planning Team ARPT reported that:

A case study done in Kapatu, Mporokoso district (RZ2) revealed that households begin to experience food shortages as early as October. This period extends through November to February. In this period there is a critical shortage of staple foods, except cassava. Although some cassava may be available, it is not readily available for home consumption because of the difficulties involved in its drying and processing during the wet season. In addition some households do not grow sufficient amounts of cassava to meet their requirements during the hunger period. However, there is a relative abundance of relish foods such as mushrooms, caterpillars and local vegetables during the hunger times.<sup>243</sup>

This suggests that edible caterpillars had multiple functions. Apart from being collected and used for household consumption in Luwingu, Mporokoso and other parts of Zambia, caterpillars were used to cushion the burden of looking for relish especially in hunger periods.

Although other foodstuffs like maize, sweet potatoes, sorghum, beer, cassava and beans were predominantly given to Chief Mumporokoso in form of tribute, Robinson Mulenga argued that whatever the hands of a villager (*umwikalamushi*)<sup>244</sup> pounced on, it could still be given as tribute to the Chief.<sup>245</sup> Contrary to Mulenga's assertions, Angel Chibwe contended that in Luwingu district tribute was dictated entirely by what the environment in which someone lived

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<sup>241</sup> Watson, *Tribal Cohesion in a money economy*, 160.

<sup>242</sup> Interview with Mulenga.

<sup>243</sup> B. Mwalongo and M. Simenga, 'A report on ARPT-Northern Province on challenges on Household Food Security in Rural Areas', Adapted from ARPT data base, September, 1994, 3-4.

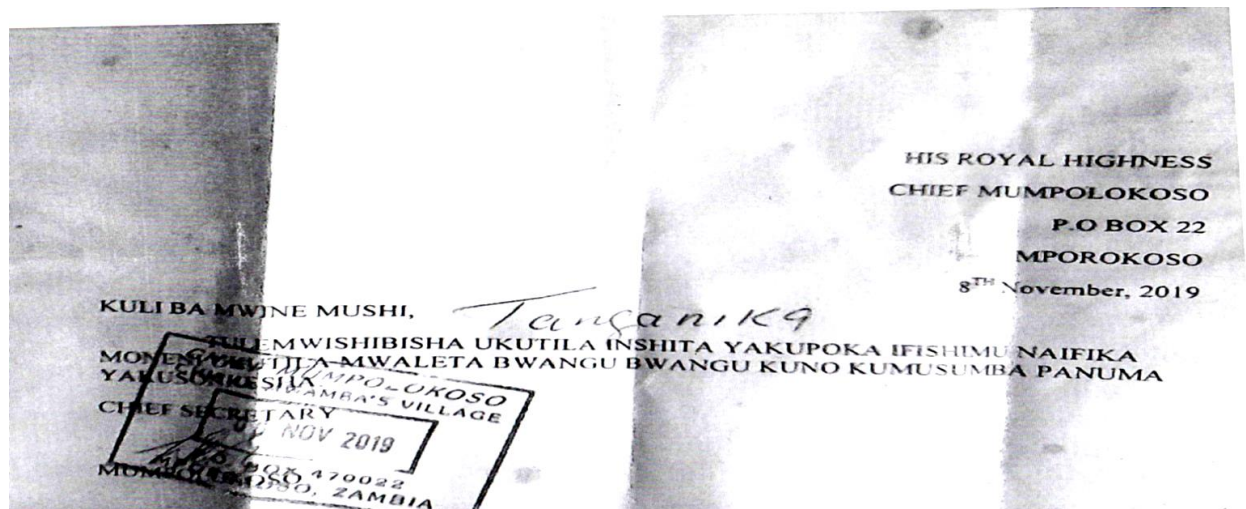
<sup>244</sup> *Umwikalamushi* is a Bemba word which implies a community member in a village set-up.

<sup>245</sup> Interview with Mulenga.

could offer. He emphasised that “Luwingu, being rich with Lupososhi River and its tributaries for instance, produced some fish that some local communities benefitted from. It was this same fish, fresh or dry, which in turn was given to our chief as tribute.”<sup>246</sup> For this reason, it could be argued that caterpillars were among the seasonal insects that were offered as tribute to the chiefs in both Luwingu and Mporokoso districts given that the two areas were highly populated with caterpillars every year.

To demonstrate this further, a letter from His Royal Highness via the headmen and women to the subjects was sent to remind them of the importance of tribute. Figure 2 is a sample of a letter sent to the members of the community in Chief Mumporokoso’s area.

**Figure 2: A letter from Chief Mumpolokoso to remind his subjects about tribute, 2019:**



**Source:** *Chief Mumporokoso’s Palace, Mporokoso*

The translation from figure 2 above literary means that Chief Mumporokoso was reminding his people in his chieftom that time for collecting edible caterpillars meant for tribute to the chief had come and that all villagers were expected to contribute caterpillars as a form of respect.

<sup>246</sup> Interview with Headman Angel Chibwe, formerly Luwingu resident but currently based in Chief Munkonge’s area, kasama district, 31<sup>st</sup> July, 2020.



In the same vein, it was reported that some chiefs of northern Zambia were denied their customary right of receiving tribute which was in form of caterpillars. This caused panic among some of the traditional leaders. In view of this, *African Mail newspaper* reported that:

Although the people of senior Chief Shimumbi's area returned three weeks ago from the annual traditional collection of caterpillars, it is understood that the chief has not yet received his tribute....A spokesperson from the chief's palace reports that the chief fears tradition may be overlooked this year.<sup>247</sup>

It could be argued that some collectors of edible caterpillars did not want to honour their obligation because they wanted to maximise on the profit. While some collectors focused on profit, others utilized edible caterpillars for consumption purposes.

#### *From localisation to internationalisation*

It is contended here that although edible caterpillars were found in other continents such as Asia and South America, insects from Zambia in particular, were sold on the European market as well. Even though edible caterpillars were earlier on considered as local traditional foods that were collected and sold locally,<sup>248</sup> recent evidence shows that caterpillars were no longer consumed locally but were exported to European countries like Belgium and Germany as well.<sup>249</sup> Janet N. Abramovitz nevertheless argued that Non-Wood Forest Products (NWFP) were a significant source of revenue worldwide.<sup>250</sup> Writing on the relationship between human beings and the world's forests in the early 1990s, Abramovitz noted that: "FAO estimates that over 150 NWFP was traded internationally in significant amounts, altogether worth \$ 11.1 billion a

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<sup>247</sup> *African Mail*, "Chiefs waits for his Caterpillars", November 28, 1969, 3.

<sup>248</sup> Geisler, Keller and Chuzu, 'Needs of Women in Northern Province', 16.

<sup>249</sup> Interview with Precious Nganga, the University of Zambia (UNZA), Lusaka, 26 August, 2020. At the time of interview, Nganga was an acting Head of Department-Special Collections at UNZA.

<sup>250</sup> Janet N. Abramovitz, 'Taking a Stand: Cultivating a New Relationship with the World's Forests' (World Watch Paper 140, April, 1998), 10.

year.”<sup>251</sup> An appropriate substantiation to this argument is that edible caterpillars are now sold in foreign supermarket chain stores like Spar; Shoprite and Pick n Pay.<sup>252</sup> This suggests a changed perception that people had on edible caterpillars. Unlike earlier moments, edible caterpillars among other products were supplied by the local farmers to the foreign chain store supermarkets. This indeed extended the market for caterpillars from the local to the international.<sup>253</sup>

Inasmuch as edible caterpillars were beneficial to the human race in terms of consumption and profit-generation, they impacted on flora and fauna in Luwingu and Mporokoso districts and northern Zambia at large. In 1981, an Annual Report of the Forestry Department for instance, asserted that defoliation of indigenous trees by caterpillars was observed in many forests notably in *Mukonge* and *Makasa* local forests in Northern Province of Zambia.<sup>254</sup> Not only did the damage to the trees occur in Northern Province due to caterpillar collection, it was also noted in Luapula Province in 1984<sup>255</sup>, particularly in Chief Chisunka’s area. Meanwhile the 1996 Annual Report of the Forestry Department indicated that “caterpillar destruction was witnessed in Chiefs *Katuta*, *Chungu*, *Matanda* and *Kasasa Lukangaba*’s area.”<sup>256</sup> Hence, it could be argued that although caterpillars were collected for consumption or profit in one season, destruction of trees left an indelible mark that eventually impacted the breeding process of the moths in later years.

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<sup>251</sup> Abramovitz, ‘Taking a Stand’, 10.

<sup>252</sup> Mwanda Phiri and Francis Ziba, *Zambia Daily Mail*, 1<sup>st</sup> June, 2017, 2.

<sup>253</sup> Editor, *Zambia Daily Mail*.

<sup>254</sup> MLNR, Annual Report of the Forest Department for the year 1981 (Lusaka: Government Printer, 1982), 15.

<sup>255</sup> MLNR, Annual Report of the Forest Department for the year 1984, 17.

<sup>256</sup> MLNR, Annual Report of the Forest Department for the year 1986, 27. Also, See: MLNR, Annual Report of the Forest Department for the year 1983, 17.

## **Conclusion**

In conclusion, the chapter has demonstrated the dynamics involved in edible caterpillar collection in Luwingu and Mporokoso districts from 1976 to 2006. It has been argued that prior to the 1950s edible caterpillars were mainly collected for home consumption. However, as time evolved, caterpillars began to be collected for profits, leading to continuous commercialisation of the commodity. Even if the actual periodisation as to when caterpillars were commercialised was subjected to some scholarly debate, the study concluded that commercialisation was dictated by many factors that surrounded it. Some notable ones, among others were: the emergency of TAZARA in 1976 which played a pivotal role in enhancing mobility of caterpillar traders. The other factor was on migration. It was noted that the migration of many villagers to bigger towns, who in turn carried caterpillars with them, became an urgency of caterpillars from rural areas of northern Zambia to the Southern part of the country. It is further argued that the growing city markets especially on the Copperbelt and Lusaka Provinces also played a pivotal role in the commercialization process of caterpillars.

Furthermore, tribute dynamics to the chief in form of caterpillars vis-a-vis poverty alleviation in Luwingu and Mporokoso districts were also discussed. This discourse argued that even if Chiefs in northern Zambia were receiving tribute in form of various agricultural produce, edible caterpillars became part and parcel of the seasonal tributes to the Chiefs. It was also argued that edible caterpillars were not just given out as tribute to the chief, but that they, together with other agricultural produce, helped in alleviating poverty levels in times of need.

## **Chapter 4**

### **The Socio-Economic Impact of Edible Caterpillars, 1982-2019**

This chapter examines the socio-economic impact of edible caterpillars in Luwingu and Mporokoso Districts of Northern Province of Zambia, from 1982 to 2019. It is broadly divided into two sections. The first section discusses the social impact which included the poor attendance of congregants in selected churches and a high rate of pupils' absenteeism in selected schools. It argues that during the season or period of harvesting caterpillars, the social usual life style of the people in caterpillar highly populated areas like Luwingu and Mporokoso was disturbed. Even if there were positive impact of caterpillar collection recorded in terms of economic benefits, the chapter argues that the negative social impact became more pronounced, thereby outweighing the positive ones.

The second section examines the economic impact of edible caterpillars on the livelihoods of local people. It demonstrates how edible caterpillar collection contributed immensely to the re-capitalisation of small-scale businesses for caterpillar traders of Luwingu, Mporokoso or any other part of Zambia. It further argues that unlike other business ventures that required huge capital base in their initial stages, caterpillar collection did not require any or if so, it was little capital needed. The second part of the chapter discusses the improved standard of living among the caterpillar collectors in both Luwingu and Mporokoso districts. It argues that as a result of collecting and selling edible caterpillars, the lives of the local people were significantly transformed as they were economically empowered.

## Social Impact of Edible Caterpillar Collection

During the season of collecting edible caterpillars between October and December of each year, it was a well-known fact that families and communities in Luwingu and Mporokoso districts were often impacted in one way or the other. Some of the families had their conventional daily businesses affected as their minds had to shift or switch from their routine activity to collecting edible caterpillars.<sup>257</sup> This suggests that there was restlessness, desertion in villages and townships.<sup>258</sup> It was not only families which were adversely affected during the collection of edible caterpillars, but the entire communities as well. In view of this, referring to some selected areas of Northern Province like Luwingu, Mporokoso and Kasama districts, Jacob Simukanzye reported that security concerns rose as a result of the adult populations abandoning homes to go and collect edible caterpillars in the bush.<sup>259</sup> The nature of insecurity created by this phenomenon was that old people that remained in different households could not withstand the strength of young burglars in case of an attack in any community.<sup>260</sup> Although Simukanzye focused on the central business districts (CBD) of Luwingu, Mporokoso and Kasama towns, it could be argued that the same situation prevailed in peri-urban and rural areas.

Simukanzye further reported that in Luwingu district most families were fragmented, because of the clash of farming and caterpillar collection as the main activities of the season. He also noted that the majority of the community members preferred collecting caterpillars to farming. Similarly, and in reference to Luwingu district in particular, Chief Chimbola noted that

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<sup>257</sup> Interview with Chimbola.

<sup>258</sup> Interview with Chimbola.

<sup>259</sup> Interview with Jacob Simukanzye, Luwingu, 2<sup>nd</sup> September, 2020.

<sup>260</sup> Interview with Chimbola.

families and communities had no choice but to either do farming or collect caterpillars.<sup>261</sup> Chileshe Chitinta, the head chief retainer of Chief Chimbola noted that unity of purpose was conspicuous as families and different community members came together during the caterpillar season.<sup>262</sup> Ironically, while the unity of purpose at family and community levels gave an impetus to collectors to harvest edible caterpillars in huge quantities due to numerical advantages in Luwingu and Mporokoso districts, different social institutions such as churches and schools lacked membership to keep them operational.

### **Social Impact on Churches**

In order to ascertain the true picture of what transpired in terms of attendance before, during and after the collection of caterpillars to religious institutions like the Catholic, Christian Brethren and Bread of life churches in Luwingu, it was generally reported that attendance in these institutions became poorer than ever.<sup>263</sup> In view of this, collecting caterpillars was highly treasured because some of the insects were consumed and others sold for profit. Similarly, the amount of money raised through offerings, tithing and other church projects also declined as numbers of congregants often preferred to harvest caterpillars as opposed to attending church services.<sup>264</sup> Although it could be argued that some people might have abandoned church for other activities and not necessarily caterpillar errands, there was sufficient evidence which showed that before the collection of caterpillars commenced, the Catholic Church in both Luwingu and Mporokoso districts enjoyed regular attendance by the membership while the

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<sup>261</sup> Interview with Chimbola.

<sup>262</sup> Interview with Head Chief Returner of Chief Chimbola, Luwingu, 8<sup>th</sup> July, 2020.

<sup>263</sup> Interview with Pastor Lewis Chanda, Christian Brethren Pentecostal Church, Mporokoso, 21st July, 2020; Interview with Father Justin Kapisha, Saint Peter the Apostle Parish Priest, Luwingu, 11th July, 2020; Fr. Oscar Chishimba Chewa, assistant Parish Priest at Mary Queen of Peace Parish, Mporokoso, 22nd July, 2020.

<sup>264</sup> Interview with Chanda.

numbership significantly declined whenever the season for collecting caterpillars started.<sup>265</sup> Due to this poor attendance in church, particularly in a three-week collection period, it became easier for the church leadership to easily attribute harvesting of edible caterpillars as one of the reasons that led to poor attendance.

In Mporokoso district, for example, Fr. Oscar Chishimba Chewe, an Assistant Catholic Priest at Mary Queen of Peace Parish, who had served at that parish since 2010, observed that the attendance of the parishioners during the caterpillar season was so poor that it even affected the offertory and other developmental projects at parish level.<sup>266</sup> In view of this, citing different examples, Fr. Chewe, who was also in charge of other outstations like *Njalamimba* about 80kms away from Mporokoso CBD, *Kalabwe* (40kms), *Mulama* (15kms) and *Kafwambe* (10kms) noted that “the toilet building project which had started in early October of 1984 and was expected to have been completed by the end of the following month stalled because people who were assigned to build it had reportedly gone to collect edible caterpillars”<sup>267</sup> However, the toilet building project was completed immediately after those who had been assigned to the project returned from collecting caterpillars.<sup>268</sup> Similarly, St. Peter’s the Apostle Parish Priest; Father Justine Kapisha in Luwingu district noted that “offertory indeed drastically goes down during the edible caterpillar season.”<sup>269</sup> On the contrary, Kapisha insisted that there was a slight improvement in terms of revenue collection after Christians returned home.

Despite the church being paralyzed during the caterpillar season which in turn affected the offertory collection, Fr. Chewe however appreciated the involvement of most parishioners in

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<sup>265</sup> Interview with Chewe.

<sup>266</sup> Interview with Chewe.

<sup>267</sup> Interview with Chewe.

<sup>268</sup> Interview with Chewe.

<sup>269</sup> Interview with Oscar Chishimba Kapisha.

the caterpillar business, either as consumers or sellers for profit purposes, in the sense that the more they engaged themselves in the whole process the better it was monetarily for the church.<sup>270</sup> He emphatically noted that for the church to run smoothly, it depended heavily on the same members who were economically comfortable.<sup>271</sup> Fr. Chewe also added that the church had no obligation whatsoever to bar the members from collecting caterpillars, owing to the fact that the economic benefits arising from collecting caterpillars, ultimately, benefited the church as well.<sup>272</sup> This is clearly demonstrated in figure 3 below.

**Figure 3: A report on how caterpillar collection conflicted with some church programs in a ten-year period (1980-1990) at Saint Peter's Parish in Luwingu district.**

ST. PETER'S  
CATHOLIC CHURCH  
00014 LUWINGU  
REPORT YA FI BWAASHITA  
CI SUMINO NO BU TANTANSHI MU PARISHI  
1980 TO 1990

INSHI TA YA KUHWA NO KU KOLA IFISHIMU  
IMILIMO IYINGI YA CISHIMO TA YENDA  
BWINO PANTU ABANTU BOLA KUKA MUTANDA  
NABANA BABO, EICO ABENGI TABAPAPA  
HE FITENTE UMU TU FUNDILA ABANA  
TA BANO NANA NO KUWA FIA WA. TETA  
PEKA NAKUSUKU CILABA BWAASHITA.  
ECA LINGA AMA PROJECT YA  
PELWA UKUBOMBA PO, CILA STA PANTU  
ABAKRISTIAN BALACEPANO MUTUKO WING  
BUHANDA KECILINGA NENTENDO SHA CHIAS  
MPU KU BAPATILI CILA STA ETO NAMAHIFI  
LO TABABONFI BUBA BWAASHITA PA KUBADI  
PILA.

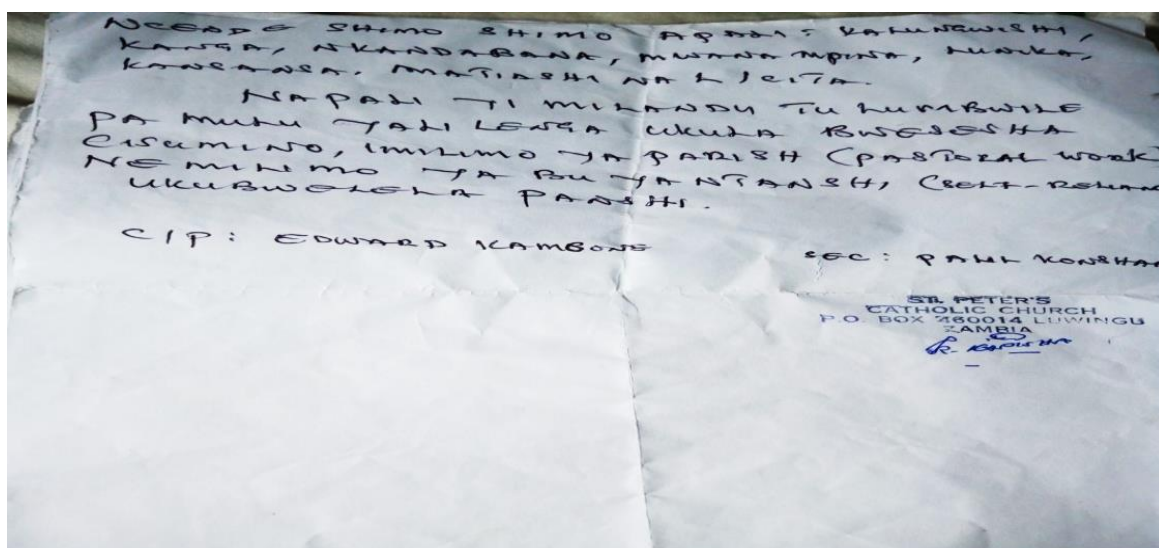
UBWAASHITA NA BUMBI MUTANDU WA FISHIMU  
UYU MUTANDU WENA WA CIDA NAPA KUHWA  
PANTU ABANTU NI CILANGA BONDO BADA YA  
MU OCTOBER TO NOVEMBER. NAMU CHURCH  
ATENGI BALUSALAMU. KANSHI TAKUBA MAPEPO,  
UMUTULO, NAMAFUNDISHO FONSE SIKAZALA.  
EICO UYU MUTANDU WA CILA NAPA MUTANDU  
NAKA KULE KESASA KO KWELA MU

<sup>270</sup> Interview with Chewe.

<sup>271</sup> Interview with Chewe.

<sup>272</sup> Interview with Chewe.





**Source:** St. Peter's Catholic Church, Luwingu.

The literal translation indicated above was that:

There was a clash of interest between farming and caterpillar catching season in that church works that needed the membership to do the works suffered a great deal as its membership had gone on a three-week caterpillar errand.

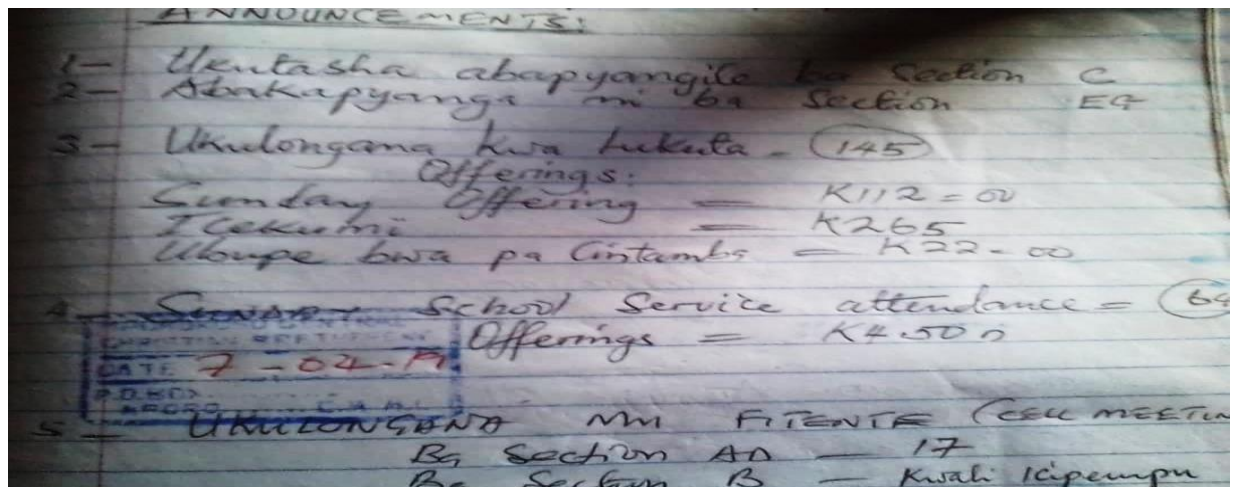
A similar situation occurred in the Christian Brethren Pentecostal church, located about 400 meters away from the CBD in Mporokoso district. While Catholicism focused much on offertory, Pentecostal churches, on the contrary, emphasised on the payment of tithes. Pastor Lewis Chanda, for instance, reported that due to poor attendance during the caterpillar season, the church recorded a decline in revenue collection as it was one of the sources of income for the religious institution. He insisted that out of 200 members, only about 40 people representing 20% would be in church during a three-week period (i.e. second week of October to first week of November) of edible caterpillar collection.<sup>273</sup> In view of this, it could be argued that even though there were other reasons that could have contributed to the reduction in tithing, available

<sup>273</sup> Interview with Pastor Lewis Chanda, Christian Brethren Pentecostal Church, Mporokoso, 21st July, 2020.

evidence from churches themselves indicated that edible caterpillar collection, among others, was predominantly the main cause of absenteeism in different worshipping institutions.

Figure 4 below shows the period before and after caterpillar season vis-à-vis tithing.

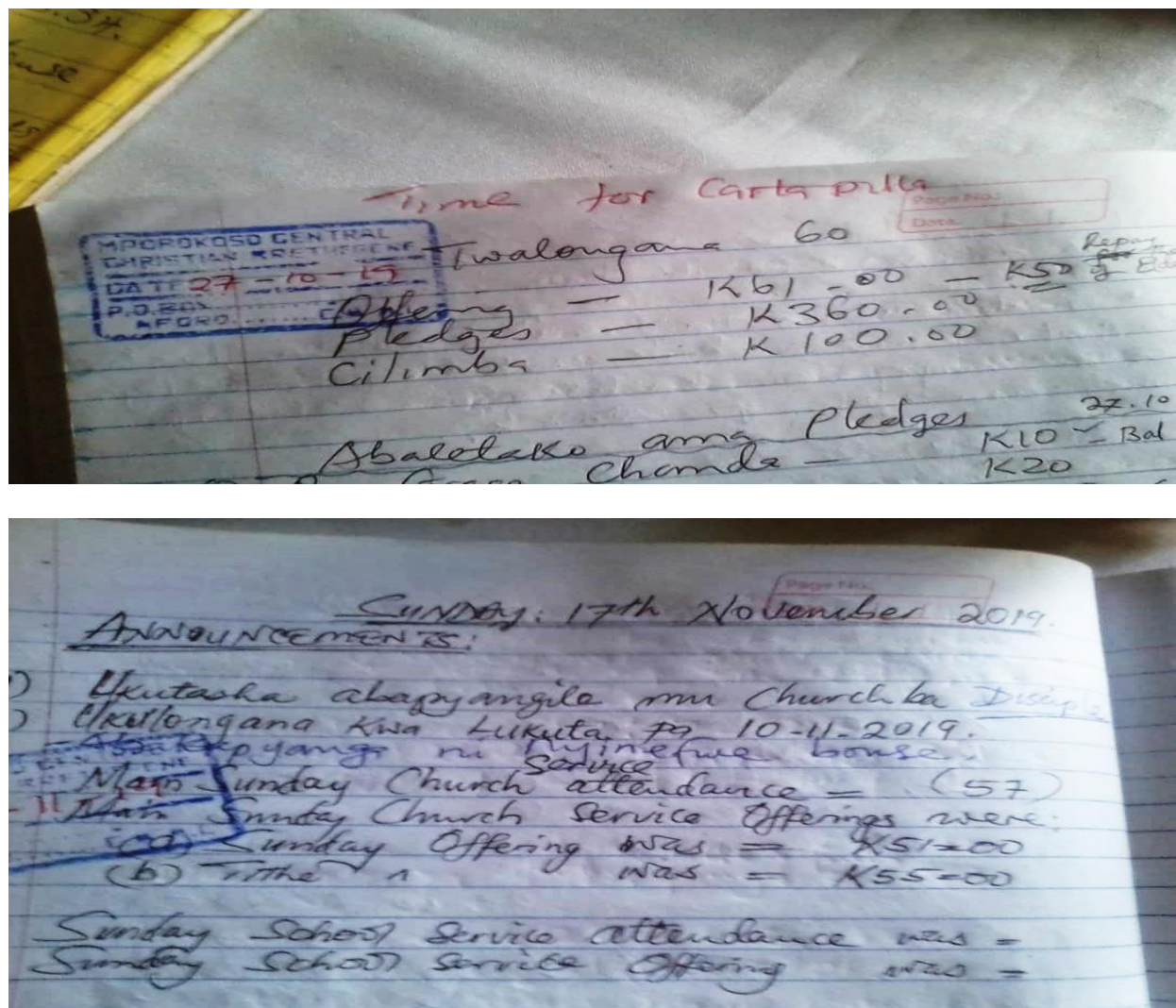
**Figure 4: An excerpt of the announcements at Christian Brethren Church, Mporokoso, demonstrating a period of time before caterpillar season, July 21st, 2019.**



**Source:** Christian Brethren Church, Mporokoso

The interpretation for figure 4 is that there were 145 congregants (*ukulongana kwa lukuta*) gathered in church on 7<sup>th</sup> April, 2019, a period of time before the edible caterpillar collection commenced. Sunday offerings in the announcements' book indicated that an amount of One Hundred and Twelve Kwacha (K 112) was offered. Tithing (*icekumi*), amounting to Two Hundred and Sixty Five Zambian Kwacha (ZMK 265) was also offered on that day. However, there was a complete reduction when the caterpillar season commenced. This is demonstrated in figure 5 below.

**Figure 5: Excerpts of the announcements at Christian Brethren Church, Mporokoso demonstrating a period of time for caterpillar season, October & November 2019.**



**Source:** Christian Brethren Church, Mporokoso.

Comparatively, it could be argued that during the collection of edible caterpillars in October 2019 as demonstrated by figure 5 above, there were only Sixty (60) congregants in church as opposed to the earlier times (April) when they were One Hundred and Forty Five (145) worshippers. It is also crystal clear that only Sixty One Kwacha (k 61) was offered during the

edible caterpillar season. On average therefore, it is safe to argue that each member of the church offered one kwacha (ZMK1) only. The discrepancy was that attendance for congregants had reduced from 60 to 57 thereby resulting into a relatively smaller amount of offertory and tithe of Fifty One Kwacha (K51) and Fifty Five (K55), respectively. In April, there was K 265 offered for tithing as demonstrated by figure 4 above, but this reduced to K55 in November as demonstrated by figure 5.

Worse still, Pastor Chanda, who had been working as a pastor for the past 26 years, observed that some of the outskirt churches that were under the jurisdiction of the main branch which he once presided over ended up closing completely as there were no congregants.<sup>274</sup> He further noted that the scenario was not novel to him, adding that it had been the general pattern since he started his pastoral work in 1994 in Chief Nseluka's area in Mungwi district.<sup>275</sup> According to Pastor Chanda, churches in Luwingu and Mporokoso had similar challenges in the caterpillar season in terms of low-turn-out of general membership, poor tithes and offertory.<sup>276</sup>

Pastor Joel Kapeya of Bread of Life Church and Reverend Molde Mofya of the United Church of Zambia (UCZ) had similar observations. In separate interviews, the duo expressed sadness over the attitude portrayed by the majority of the Christians after the season for caterpillar collection had elapsed. Unlike the Catholic Church where it was reported that there was a slight improvement in terms of offering once collectors sold their merchandise, it was the direct opposite for Bread of life Church and UCZ where it was reported that “despite the membership returning home after selling their caterpillars, tithe, which by God's law was

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<sup>274</sup> Interview with Chanda

<sup>275</sup> Interview with Chanda.

<sup>276</sup> Interview with Chanda.

expected to increase, did not do so”.<sup>277</sup> In other words, it was both for consumption and profit-making for caterpillar collectors.

### **Social Impact on Schools**

The collection of edible caterpillars also adversely affected both primary and secondary schools’ learning processes whenever the season commenced in both Luwingu and Mporokoso districts. During the annual period of collecting edible caterpillars which ran from late October to late November, it was reported that the majority of the school-going children from different schools in the two districts absconded from attending lessons. Although it was difficult to trace earlier history before the 1980s when the disruptions in education and the general reduction of absentees in selected schools occurred, as most of the schools in Luwingu and Mporokoso districts had undergone restructuring, available evidence showed that by 1982 a lot of learners chose caterpillars at the expense of learning.<sup>278</sup> In addition, some primary sources consulted demonstrated that attendance in both primary and secondary schools drastically reduced, thereby paralysing the learning process.

**Table 1: Shows an excerpt of a school register for 1982 at Mporokoso Secondary School.**

<b>Name of learners (withheld)</b>	<b>Before caterpillar season (Early October, 1982)</b>	<b>During caterpillar season (Mid-November, 1982)</b>	<b>After caterpillar season (Early December, 1982)</b>

<sup>277</sup> Interview, Pastor Lawrence Kapeya, Bread of Life Church, Luwingu, 12 July, 2020.

<sup>278</sup> Minutes for the end of term III meeting held at Luwingu Basic School, 17th December, 1982, 3. The school has now now been upgraded to Luwingu Day secondary School since 2014(see appendix 11).

A	M	T	W	Th	F	M	T		Th	F	M	T	W	Th	F
	√	√	√	√	×	√	√	×	×	×	×	√	√	√	√
B	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F
	×	√	√	√	√	√	×	√	×	×	√	√	√	√	×
C	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F
	√	√	√	×	×	×	√	×	×	×	√	√	√	√	√

**Source: Mporokoso Secondary school, 1982 class register.**

**Key: A, B, C= name of a pupil; ×=absent; √=present.**

The interpretation of table 2 above entails that letters A, B and C were deliberately used by the author of this study as symbols to withhold names of learners for ethical reasons, which stated that consent of respondents must be sought before their names were published.<sup>279</sup> The register was for term three of 1996 at Mporokoso Secondary School. In terms of analysis, it was noted that a good number of learners attended lessons often times before the caterpillar season commenced. This was evidenced by the ticks (√) shown in the actual register, from which the information was extracted. However, this was the very opposite when edible caterpillar season had started. Even if it was just one pupil out of 40 learners showing in Table 1, the actual register for the full class of over 40 learners indicated that there were a number of learners who absconded lessons during edible caterpillar season. The statistics confirmed what Maureen Chisanga, the Deputy Head of that school had alluded to during an interview. She categorically stated that during the caterpillar season, the school is grappled with issues of absenteeism for their learners and that it was difficult to control because learners were coming from homes where

<sup>279</sup> The University of Zambia, *Ethical Clearance Booklet*, Directorate Research and Graduate Studies, 2018,2.

parents were in charge of their children.<sup>280</sup> She also noted that even if there were other reasons that might have been attributed to learner absenteeism, caterpillar catching, among others, was known as the main reason for third term especially.<sup>281</sup> It was not only at Mporokoso Secondary School that recorded high pupil absenteeism, but also many other schools reported a similar situation as well. The *Post* newspaper and *Lusaka Times* reported in 2012, in part, that:

Scores of school-going children have abandoned classes in Luwingu preferring to collect caterpillars locally known as ‘ifishimu’. About 300 pupils at Mwemimenda Middle Basic in Lubansenshi Constituency in Luwingu have abandoned lessons to help parents collect caterpillars. School authorities said...experienced an outbreak of caterpillars, paralysing school programmes in senior Chief Shimumbi of Luwingu and Chief Mukonge of Kasama’s areas....Other schools in Northern Province are also reporting low turn-out because most of them have gone en masse to collect the caterpillars....In Luwingu, almost 95 per cent of the population at the school had crossed the neighbouring Lukashya constituency in Kasama to help parents collect caterpillars...out of 338 pupils, only 38 are attending lessons while others have joined their parents to pick up caterpillars in the bush. The authorities said the pupils were posed to be writing end of the term tests and they would fail to do so because they were not attending classes in preference for caterpillars....For grade 3 pupils, they were only five while there were no pupils attending classes in Grades 1 and 2. There were no pupils because they were small children who could not be left alone by their parents.<sup>282</sup>

It can be seen from the evidence above that 300 absentees from a rural school was too huge for it to continue running normally. Presumably on average, a one-stream rural school with grades 1 to 7 for instance would have a maximum of 48 pupils per class. Worst still, 38 represented the entire school, signifying that only 5 learners were in each class. In this respect, it can be argued that the entire school got affected as the number of pupils willing to be taught was so insignificant that even teachers were demotivated to teach them. This adversely impacted the

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<sup>280</sup> Interview with Chisanga.

<sup>281</sup> Interview with Chisanga.

<sup>282</sup> *The post Newspaper*, Friday November 23, 2012, pp.1-4. See also *Lusaka Times*, 22 November, 2012. The author here wrote about Luwingu district, where he had interviewed some pupils and reported that when it was time for edible caterpillars, parents stopped their children from going to school over caterpillar collection.

teaching and learning processes especially in rural schools. Some of the schools that were negatively affected during the edible caterpillar season included Mwemimenda Middle Basic School mentioned in the quotation above and Mulala Primary School in Luwingu district<sup>283</sup> In fact, it was argued that one of the reasons that compelled pupils to collect caterpillars was that it was the only seasonal economic activity which came once in a year and that every pupil would not afford to miss it. For this reason, Chibwe argued that learning had been in existence for many years and that it would continue to be so, yet the caterpillar collection period took three weeks only.<sup>284</sup> It was further argued that although schools suffered absenteeism during the caterpillar season, they indirectly benefitted financially, as learners cleared their outstanding balances after they had sold their caterpillars. It must also be noted that peri-urban schools in both study areas were socially affected more than schools in urban areas.<sup>285</sup> Besides, it was also reported that day schools suffered more absenteeism during the caterpillar season than boarding schools did.

It is also clear from the quotation above that school-going children had joined their parents in collecting caterpillars and the parents supported the idea. It seemed normal for some parents to let their children abandon school. A widowed mother of nine (9) children pointed out in her local language that it was very normal for all the children, regardless of whether they were pupils or not, to be fully involved in the exercise as these children needed to feed; they also required school fees and other economic needs which were to come from caterpillar sales, hence the reason for their involvement in the collection process.<sup>286</sup> This is a contrary view of what some parents indicated from the quotation above. They argued that some children, irrespective of their age, were taken for caterpillar errands because they had no one to remain with at home.

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<sup>283</sup> Interview with Chibwe.

<sup>284</sup> Interview with Chibwe.

<sup>285</sup> A DEBS report on the challenges encountered by schools in Luwingu District, 26 th November, 2003.

<sup>286</sup> Interview with Maureen Mwenya, Tungati Village, Luwingu, 11<sup>th</sup> July, 2020.





Absconding classes due to edible caterpillar collection was not only rampant in Luwingu and Mporokoso districts, it was a common phenomenon over the years for other districts in Zambia as well. A similar scenario was reported in Mungwi District in Northern Province of Zambia. It was stated that “Several school-going children in Mungwi District had stopped attending classes in preference for caterpillar collection.”<sup>290</sup> The *Lusaka Times* in 2012 for instance reported that:

Several school going-children in Mungwi District have stopped attending classes in preference for caterpillar collection....Chanda Weyaya Primary School Head teacher Moses Mulenga told Mr. Bwalya that only 52 pupils attended classes against a total of 702 pupils. At Mwangata Primary School Head teacher Ernest Chisha revealed that school which has 425 pupils only 19 pupils were in classes by 09:30 hours.<sup>291</sup>

Although the number of classes is not specified, it is clear that any school with such numbers would be forced to close temporarily so as to pave way for learners to collect caterpillars. This also demonstrates the extent and seriousness of absenteeism in rural schools during the period of collecting edible caterpillars. In addition, Yorum Mulenga noted that absenteeism was serious in the sense that it affected performance of learners. Mulenga argued that as a result of absenteeism, pupils could not concentrate, while others missed out and therefore they ended up failing their examinations and end of term tests.<sup>292</sup> Further, Mulenga bemoaned the learners who missed final examinations such as grade 9 and 12 in their quest to

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<sup>290</sup> Editor, *Lusaka Times*, “Caterpillar Harvest Halts Learning in Luwingu District”, November 10, 2015. For details see <https://www.lusakatimes.com> (accessed on 03/01/2020).

<sup>291</sup> *Lusaka Times Newspaper*, Friday November 23, 2012, 1-4; see also *Zambia Daily Mail*, “Pupils missing school due to caterpillars”, January 1, 2002.

<sup>292</sup> Interview with Yorum Mulenga, head teacher, Luwingu Day Secondary School, July 21, 2020 (See photo on appendix 9).

fetch caterpillars, adding that the trend unfortunately has kept on repeating itself, year after the other.<sup>293</sup>

Similarly, reporting on Zambezi district in 2010, the *Times of Zambia* noted that pupils at Njilamba Basic School in Zambezi district had started shunning school in preference for catching caterpillars also known as ‘*Vinkubala*’.<sup>294</sup> Certainly, this was the same scenario in every province of Zambia that had edible caterpillars.<sup>295</sup> To demonstrate this further, a samples of pupils’ monthly returns showing statistics of how learners attended classes is highlighted below.

**Table 2: Chishamwamba Primary School pupils’ monthly returns for November, 2010.**

MINISTRY OF EDUCATION  
CHISHAMWAMBA UPPER BASIC SCHOOL  
PUPILS MONTHLY RETURNS

MONTH: NOVEMBER No OF DAYS: 22 YEAR: 2010

GRADE	STREAMS	NUMBER ON ROLL		AVERAGE ATTENDANCE		PERCENTAGE		COMMENTS
		BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	
1	1	16	20	20	15	91	68	The Average attendance for Grade 9 dropped due to Examination and the enrolment for Grades 2, 4 and 6 is still bad due to caterpillar collection
2	1	06	18	17	20	77	91	
3	1	15	16	19	21	86	95	
4	1	14	10	20	21	91	95	
5	1	13	15	21	22	95	100	
6	1	11	09	20	22	91	100	
7	1	-	-	-	-	-	-	
8	1	23	29	20	19	91	86	
9	1	25	25	19	19	86	86	
TOTAL	9	123	137	156	159			

NAME: MELERA C POSITION: DEPUTY HEAD

SIGNATURE: [Signature] DATE: 01.12.10

2 DEC 2010  
HEADTEACHER'S OFFICE  
CHISHAMWAMBA UPPER BASIC SCHOOL  
P.O. BOX 420028 MPOROKOSO

**Source:** Chishamwamba Primary School, Mporokoso.

<sup>293</sup> Interview with Yorum Mulenga.

<sup>294</sup> *Times of Zambia*, “Pupils absconding Classes”, October 25, 2010. Also, see: Editor, *Lusaka Times*, “Rural News”, and October 24, 2010.

<sup>295</sup> *Annual Report of the Forest Department for the year 1962*, 6; Also, see

*Annual report of the Forest Department for the year 1980*, 15. The reports noted that caterpillars were all over Northern Province of Zambia and that people in the local communities and outside collected them. However, it must be made clear that there was no mention of pupils’ absenteeism.

Pupils' monthly return in a school set-up in Zambia is one of the monitoring tools (document) which determines how learners have been attending lessons.<sup>296</sup> It extracts some statistical information from the class register and therefore, it contains sub-headings such as 'grade' 'number of streams for a particular grade, 'number on roll,' 'average attendance,' 'percentage' and 'comments by a teacher.' In the same vein, Mpundu George Chunga also reported that "to determine how good or bad the average attendance for pupils of any given month had been, a teacher looks at a 'daily attendance of pupils from a class register. This is then divided by the total number of days attended by learners in a given month.'"<sup>297</sup> To put it succinctly, the formula appears as follows:

$$\text{Average attendance} = \frac{\text{Total number of working days involved in a month} \times 100}{\text{Total number of days attended by learners}}$$

Chunga also noted that "to arrive at a percentage for boys or girls, an average attendance figure is multiplied by a hundred then divided by a total number of working days"<sup>298</sup>. Simply put:

$$\frac{\text{Average attendance} \times 100}{\text{Total number of working days}} = \text{Percentage}$$

In view of this, tables 2 above demonstrated how pupils at Chishamwamba Upper Basic School in Mporokoso district had attended classes during the caterpillar collection season. The total number on roll for boys in October, 2010 (table withheld because the signatory requested for anonymity) was 145 while that of girls indicated 139. On the contrary, the number on roll reduced to 123 and 137 for both boys and girls respectively during the period for caterpillar collection (November) of the same year. Other than that, a percentage figure for grade one (1) boys and girls in October indicated 95. However, this drastically decreased in November to 91

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<sup>296</sup> Interview with Mpundu Chunga, Headteacher, Chishamwamba Primary School, 28th July, 2020, Mporokoso.

<sup>297</sup> Interview with Chunga.

<sup>298</sup> Interview with Chunga.

and 68 for grade 1 boys and girls, respectively. This reduction in numbers signifies the extent of absenteeism of pupils during the edible caterpillar collection season. Although there could be other contributing factors to pupils' absenteeism in November, school documentations such as November pupils' monthly returns on table 2 attributed their absenteeism to caterpillar collection as the main reason. Similarly, part of the narration on the table above also indicates clearly that enrolment for grades 2, 4 and 6 was affected due to the caterpillar collection season. To this effect, the *Lusaka Times* newspaper reported in 2015 that the picture in Mporokoso district was in tandem with that of Luwingu district.<sup>299</sup> It is plausible to argue that this scenario was a reflection of other districts in Northern Province of Zambia as well.

The authorities at the Ministry of General Education were concerned with the alarming levels of absenteeism which often repeated itself annually. Thus, they came up with some measures to avert the vice. One such measure among others was decreed by the then General Education minister honourable David Mabumba. He announced that:

In view of children dropping out of school due to different seasonal activities like fishing, collecting caterpillars and many more, MOGE intends to introduce mobile teaching, where teachers will be following children at places where such activities are being undertaken.<sup>300</sup>

Catching edible caterpillars was cited as an activity which contributed to the school-going children dropping out of schools. This eventually was seen as one way, among others, which contributed to poor education in the Zambian curriculum.<sup>301</sup> However, the practicality of mobile teaching could still be questioned as it left a lot of the variables to consider hanging. One of these, for instance, was the aspect of resources. Inasmuch as mobile teaching would go miles in

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<sup>299</sup> Editor, *Lusaka Times*, "Caterpillar Harvest Halts Learning in Luwingu District", November 10, 2015.

<sup>300</sup> David Mabumba, *Minister of General Education*, ZNBC 19 hours News, 21st February, 2019.

<sup>301</sup> Interview with Kalumba.

catering for many pupils involved in collecting caterpillars; resources would not practically correlate with the reality on the ground.<sup>302</sup> This entails purchasing mobile vehicles that contain facilities like chalk boards, fuel to ease mobility and most importantly allowances for human resource, which may include drivers, ancillary staff and the teachers themselves. Above all, mobile teaching vehicles may be too expensive to maintain.

Collaboration between teachers and parents was another intervention made by the school authorities to mitigate absenteeism. The Permanent Secretary of MOGE for example, emphasised that parents needed to work together with teachers so that absenteeism could be curbed in one accord.<sup>303</sup> Through the Parent Teacher Association (PTA), it was indeed possible to stop absenteeism. Although it was challenging to implement the mitigation process of reducing absenteeism, it anchored entirely on parents and teachers working together with the relevant school authorities. The challenge as earlier stated was that some parents sought the hand of their children to fetch caterpillars thereby making it difficult to curb absenteeism in this way.

Edible caterpillar collection did not only keep some pupils away from school for three weeks; but it also caused some learners to end up missing national examinations. This had a bearing on an individual learner's academic life. In this respect, the head teacher of Mporokoso Primary school, about 3km away from the CBD, affirmed that indeed a handful of learners had missed two consecutive examinations for 2009 and 2010, expressing sadness at the attitude of some learners towards ECZ examinations.<sup>304</sup> He stressed that although collecting caterpillars was an economic activity that contributed money into the schools' treasuries, national examinations

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<sup>302</sup> Interview with Kalumba.

<sup>303</sup> Interview with Jobbicks Kalumba. Also, see: *Zambia Daily Mail*, "Keep Pupils Away from Caterpillar Harvest", October 9, 2014, 3. Though this was not from the Permanent Secretary (PS), *Daily Mail* reported an educational officer in Zambezi district with the same idea as that of the PS.

<sup>304</sup> Interview with Chibwe, Head teacher at Mporokoso Primary School, 21st July, 2020.

were very important as they defined the future of the pupils, hence the need to take them seriously.<sup>305</sup> Furthermore, citing an example of what transpired in 2009 and 2010, the head teacher pointed out that there were eight (8) pupils; 5 girls and 3 boys and 9 girls and 6 boys respectively who had missed the Examination Council of Zambia (ECZ)'s verification exercise, which he said had coincided with the collection of caterpillars in late October and November.<sup>306</sup> These verifications were meant for the following year's national examinations. Similar cases were reported in 2012. In an article titled 'Absenteeism, Caterpillars, Mathematics affect G. 9 results' for instance, Nancy Siame argued that "the number of pupils missing examinations in preference for seasonal activities like picking caterpillars from the bush has continued rising."<sup>307</sup> It could be argued that this phenomenon was a common bottleneck in northern Zambia especially in caterpillar highly populated districts.

### **Economic Impact of Edible Caterpillars**

Edible caterpillar collection did not only negatively impact on social institutions as earlier alluded to, but on people economic lives as well. It had been reported generally that caterpillar collection among the rural ethnic groups had a positive economic impact on their livelihood. In particular, the people of Luwingu and Mporokoso were part and parcel of this economic agenda. Some of these economic benefits included consumption and profit-generation, re-capitalisation of other businesses for caterpillar traders, improved standard of living through trade and barter system.

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<sup>305</sup> Interview with Chibwe.

<sup>306</sup> Interview with Chibwe,

<sup>307</sup> Nancy Siame, *Zambia Daily Mail*, 'Absenteeism, caterpillars, Mathematics affect G. 9 results', 1<sup>st</sup> January, 2012.

## Consumption and profit-generation

Edible caterpillar collection did not only economically benefit the collectors and traders, but prisoners as well. It was reported for instance that due to political turmoil that had rocked the country in 1962, the colonial government under Roy Welensky as Prime Minister of the Federation, had declared State of Emergency as a measure to enforce law and order. Consequently, some of the Ndola-based youth activists, who included Sikota Wina, were arrested and transferred to Luwingu Correctional Facility, formerly Luwingu Detention Centre.<sup>308</sup> Due to the crowdedness of the facility beyond its normal capacity, the prison often ran out of relish,<sup>309</sup> thereby bringing tension and panic among the inmates. Alternatively, the prisons' authorities coerced prisoners to start collecting caterpillars as a supplement to fish,<sup>310</sup> cabbage and beans which were eaten on a regular basis.<sup>311</sup> This benefited the inmates in terms of consumption thereby improving their diet.

In terms of profit-generation, it was a well-known phenomenon among the people of Luwingu and Mporokoso districts that the basic aim of collecting caterpillars was to supplement the diet of the local people. However, the amount of caterpillars collected each year by an individual or family, determined whether a collector would sell some caterpillars for income generation or not.<sup>312</sup> While almost everyone collected caterpillars for consumption purposes, the common phenomenon among the local people of Luwingu and Mporokoso, was to collect and sell the surplus for a profit. This meant that the people collected sufficient caterpillars and sold

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<sup>308</sup> Interview with Sikota Wina, Lusaka, 27<sup>th</sup> November, 2019. In his statement, Wina stated that "We ate a lot of edible caterpillars as relish in prison in Luwingu as well as outside."

<sup>309</sup> Interview with Wina.

<sup>310</sup> NAZ, NP 1/1/2/11, 'Mpika District Minutes', 1954, 3.

<sup>311</sup> Interview with Wina.

<sup>312</sup> *Mutende*, 19<sup>th</sup> February, 1952, 3. See also: Phillimon Ng'andwe, et al., *Forest Policy, Economics, and Markets in Zambia*, 85.



the surplus for profit. Because of collecting for profit, it was noted that the collection process was marred with confusion, caused by different collectors both nationals and internationals like Congolese.<sup>313</sup> Although Moore and Vaughan did not directly refer to the confusion caused when collecting caterpillars, they emphasised that profit made from caterpillars and other NWFP was beyond what was anticipated. It was therefore stated that:

Gathered foods from forests such as caterpillars and mushrooms and their sales or exchange with other goods ranked higher than pension money or part-time employment and vegetables marketing in some parts of the Northern Province.<sup>314</sup>

Although the profits emanating from caterpillar and mushroom sales were accumulated seasonally, they were ranked higher than pension money. It is argued here that caterpillars alone realised more profit than one anticipated. This was probably the reason why some caterpillar traders who engaged in this business activity for a longtime often endured despite facing some challenges. Despite the challenges, edible caterpillars remained a significant economic commodity in people's lives.

Arguably, holding the commodity up to the end of the year entailed higher profit that one would realise as there would be a shortfall of caterpillars on the market. This meant that some caterpillars were not sold immediately they were collected, but later. It was also common among the people of northern Zambia to store caterpillars for months so that they could use them to supplement relish during the rainy season (October to December), as this time of the year relish was scarce.<sup>315</sup> This indeed showed that edible caterpillars were harvested for either consumption or for profit.

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<sup>313</sup> *Annual report of the Forest Department for the year 1980* (Lusaka: Government Printer, 1982), 15.

<sup>314</sup> Moore and Vaughan, *Cutting Down Trees*, 43.

<sup>315</sup> Stein Terje Holden, 'Edible Caterpillars-A potential agroforestry resource?' *The Food Insects Newsletter*, Vol. IV, No. 2 (1991), 1-4.

Furthermore, some caterpillar traders from distant places like Copperbelt and Lusaka provinces had no choice but to travel in search of caterpillars to purchase because of huge profits that the commodity fetched on the market. For instance, a 50 kg bag of caterpillars in northern Zambia would cost K5, 980 (about \$250) in 2013 and once sold, profit amounting to double or triple the initial price would be generated depending on the demand and time of selling the commodity.<sup>316</sup> Similarly, an annual report of the Forest Department of 1982 stated in part that:

Caterpillar outbreaks in Lwitikila National Forest, Mwamba Local Forest and in some trust lands within Northern Province attracted a large number of collectors, some of them coming from as far as the Copperbelt Province.<sup>317</sup>

Lwitikila National Forest Reserve is a piece of land in Mpika, which since independence used to be part of Northern Province of Zambia until delimitation powers of former republican president, Micheal C. Sata were exercised in 2011 to create a tenth province known as Muchinga.<sup>318</sup> In this respect, one caterpillar trader postulated:

Capital injection was in form of cash or items such as salt which was sold to people collecting caterpillars for preservation purposes; mats for collectors to sit on while they are in the bush; axes to clear paths for collectors; plastic dishes for collectors to use them for keeping caterpillars, some soaps and other groceries, fritters and other foodstuffs. Once these are sold, an individual who wishes to continue with business would want to re-invest this money into caterpillar business in order to realise some profits. In a normal set up, there is no or little money that is invested into caterpillar.<sup>319</sup>

If the business enterprise could realise triple or quadruple times the initial capital injected, then it is safe to argue that edible caterpillar business was worth pursuing. Even if it was difficult to measure how much profits business men and women in Luwingu, Lusaka and Mporokoso

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<sup>316</sup> Interview with Sharon Kaoma. The interviewee emphasised that profit for edible caterpillars were higher when selling bags than sells from units (*meddas*). Also see: Holden, 'Edible Caterpillars' *The Food Insects Newsletter*, 4.

<sup>317</sup> Annual Report of the Forest Department for the year 1982 (Lusaka: Government Printer, 1983), 17.

<sup>318</sup> Jonathan Mukuka, 'Creation of Muchinga Province', *Times of Zambia Newspaper*, February 2, 2018.

<sup>319</sup> Interview with Kaoma.

districts made out of selling caterpillars for many years, few respondents in the study areas and Lusaka in particular shared their experiences. A Lusaka based caterpillar woman trader, Sharon Kaoma who has been ferrying edible caterpillar since the 1990s from northern Zambia to Central, Copperbelt and Lusaka Provinces for markets noted that profits were so huge that there was jubilation whenever the caterpillar season was approaching.<sup>320</sup> She further pointed out that:

Although I have a lot of merchandise that I do sell, other foodstuffs such as beans, rice, sardines (*Kapenta*), dry fish, meal sump and groundnuts, the greater part of the amount that came out of the realised profits from caterpillar business built me a house, sponsored children to school and improved my economic welfare.<sup>321</sup>

Another woman, Mary Tembo, in the same city asserted that since she engaged herself in caterpillar business some 22 years ago, farming, which she loved doing besides selling caterpillars, had tremendously improved.<sup>322</sup> She further noted that she had had massive profits that enabled her purchase fertilizer, increased capacity of land from one Lima to two hectares; purchased wheelbarrows and shovels as well as other personal items such as a motor bike and a bicycle.<sup>323</sup>

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<sup>320</sup> Interview with Kaoma.

<sup>321</sup> Interview with Kaoma.

<sup>322</sup> Interview with Tembo.

<sup>323</sup> Interview with Tembo.

**Figure 6: A Lusaka based woman selling caterpillars and other merchandise, August, 2020.**



Image courtesy: Aaron Mwanza

### **Re-capitalisation**

There were many reports that both Luwingu and Mporokoso districts' edible caterpillar collectors used the merchandise to resuscitate, presumably their businesses which were on the verge of collapsing.<sup>324</sup> This, arguably, could be based on the notion that since caterpillar business was seasonal, a lot of caterpillar traders were engaging themselves in multifaceted business ventures especially when it was off caterpillar season. To this effect, a prominent business woman reported that “a merchandiser would have several goods in stock to sell which included laundry soap, salt, tomatoes, onions, sweet potatoes, some vegetables and groceries in

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<sup>324</sup> Interview with Kaoma.

general.”<sup>325</sup> However, whenever the people were faced with financial crisis as is usually the case for most of the Small Medium Entrepreneurs (SMEs) in rural parts of Luwingu and Mporokoso districts, they looked at edible caterpillar collection as the best possible alternative means of reviving their small business ventures, hence the term re-capitalisation.

Despite the competitiveness that marred the market of caterpillar business especially when the insects were fresh, based on the fact that there were so many people engaged in the same business in one particular season,<sup>326</sup> some business men and women who sell these insects insisted that the re-capitalisation process was inevitable as it was the surest way of maintaining the capital for edible caterpillars so that business could continue in the following season.<sup>327</sup> It was further reported that edible caterpillar business was so lucrative that people in towns like Copperbelt and Lusaka provinces demanded for larger quantities of the stuff.<sup>328</sup> Caterpillar traders for instance, as earlier mentioned, would purchase them timeously from districts like Luwingu, Lupososhi, Mporokoso, Mungwi, Mpika and Kasama and withhold their merchandise and later, sell them at a higher price as a way of gaining more profits. In this vein, it could be argued that the economic lives of the people were transformed as a result of engaging in caterpillar collection.

### **Improved standard of living**

Due to edible caterpillar collection, a number of collectors had their standard of living improved in one way or the other. It was reported for example that through collection of

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<sup>325</sup>Interview Hariet Mwamba business woman in Luwingu district, 8<sup>th</sup> July, 2020. She is a prominent business woman who has been trading in edible caterpillars and other merchandise since 1991.

<sup>326</sup> Interview with Tembo.

<sup>327</sup> Interview with Mary Tembo and Sharon Kaoma. The two interviewees have been in business since 1990s.

<sup>328</sup>Annual Report of the Forest Department for the year 1982, (Lusaka: Government Printer, 1983), 17.

caterpillars and subsequently selling for profit either locally or internationally,<sup>329</sup> caterpillar traders met their basic needs of life such as having three meals a day, managed to purchase personal luxuries such as clothes, bicycles, farming inputs, bags of fertilizer and paying of school fees for children.<sup>330</sup> In Luwingu district, school fees which were expected to be paid by parents of some of the school-going children were instead paid by the pupils themselves who were reportedly involved in caterpillar collection.<sup>331</sup> This was confirmed by the school head teacher, Chibwe, who attested to the fact that some of the Orphans and Vulnerable Children (OVCs) at Luwingu Day school took personal responsibility of paying their own fees especially after they had engaged themselves in edible caterpillar collection.<sup>332</sup> Improved standard of living could have been conspicuous in selected areas of people's livelihood. Caterpillar collectors who managed to collect and sold their merchandise ended up acquiring new school items like shoes, uniforms and books,<sup>333</sup> culminating into an 'improved standard of living'.

Improved standard of living enhanced local trade among the business men and women of both Luwingu and Mporokoso districts. Although it was not known how much trade took place in the two districts, it was reported that both cash transactions and barter systems were proactively employed in caterpillar business.<sup>334</sup> *Salaula*<sup>335</sup> traders, who perhaps did not have money in cash form during the caterpillar season, resorted to barter system with villagers who

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<sup>329</sup> Edible caterpillars are not only sold locally but they are also exported to other countries. Details on this subject are covered exclusively in chapter 3 of this study.

<sup>330</sup> *Lusaka Times newspaper*, "Rural News", November 10, 2015, 3.

<sup>331</sup> Interview with Benson Mukuka, a grade 9 Pupil at Luwingu Day High School, Luwingu, 23<sup>rd</sup> July, 2020. During an interview, Mukuka noted that he had been paying school fees for himself since he was in grade 7, mainly after he had collected caterpillars and sold them. Two other friends to MuKuka sought anonymity.

<sup>332</sup> Interview with Chibwe and Beauty Malama aged 16 years, Luwingu Day Secondary School, 13<sup>th</sup> July, 2020.

<sup>333</sup> Interview with Mwamba.

<sup>334</sup> Interview with Mwamba.

<sup>335</sup> 'Salaula' is the local name in Bemba used for Second hand clothes.

collected some edible caterpillars.<sup>336</sup> Salt was also used in the modern local trade to exchange with edible caterpillars.<sup>337</sup> In fact, it was a well-known fact that salt was used to preserve fresh foodstuff such as fish and meat including caterpillars,<sup>338</sup> hence playing a pivotal role in the local trade.

In conclusion, the chapter has demonstrated that edible caterpillar collection had socio-economic impact on the people of Luwingu and Mporokoso districts, particularly on schools, churches in the two districts. The chapter argued that learning processes were disrupted in schools due to the learners' involvement in the collection of caterpillars. In some remote areas of the study areas, it was noted that due to caterpillar collection, primary schools such as Chishamwamba, Kashinda and all remotest schools in Mporokoso district were more affected in terms of absenteeism of learners than urban primary schools such as Mporokoso High School, Mushishe and Mushinga. Despite the school authority's intervention in the absenteeism of learners, it was noted that parents, who were supposed to support the measures that the MOGE had put in place to curb the vice, were unfortunately on the side of the learners. The arguments that the parents had put across in support of their children's absenteeism from school was that caterpillar collection was a seasonal activity which came only once in a year, whereas, school was a long-term process that continued even after the caterpillar season had ended. The second argument was that the collected insects played two pivotal roles in their livelihood. They were collected both for consumption and for profit. On the part of consumption, learners who helped their parents to harvest collected enough to eat at home but where they had reached their target, they fetched some more in order to sale for profits.

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<sup>336</sup> Interview with Mwamba.

<sup>337</sup> Interview with Mwamba.

<sup>338</sup> Interview with Mwamba.

The chapter also argued that although school-going children missed lessons in preference to collecting caterpillars, school authorities through the Ministry of General Education did not sit idle. Some solutions to curb the repetitive problem on annual basis were sought. One example, among others, was the pilot project of introducing mobile teaching facilities to work as schools by the then Minister of Education, David Mabumba, though this had some noticeable hiccups. Another one was to work together with parents through PTA.

Apart from schools, churches in remote areas were equally more affected in terms of members abandoning church meetings during the period of collecting edible caterpillars. The chapter also argued that this eventually affected the church revenues such as tithing and Sunday collections through offertory. It further argued that it was not only the revenue that was affected, but many other projects stalled because there was insufficient labour force to carry out the church activities. The chapter further noted that the monies increased when the ‘Christian traders’ had come back after selling their merchandise. Statistically, it was noted that the majority of the church members chose economic benefits over religious services.<sup>339</sup> The justification to this effect was that the insects would realise profits, while the church would consume the profit generated from insects through offertory. Second, the ‘Christian traders’ argued that going for caterpillars in a three-week collection period was worth it as the church in return needed the same resources obtained from the caterpillar business to run successfully.

The chapter has also demonstrated that although consumption was one of the main reasons why the majority was involved in caterpillar business, traders were active in this business in order to make profit. The chapter has also shown that even if it was practically difficult to measure how much profit business men and women had made over the years,

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<sup>339</sup> Minutes of St. Peters’ Catholic Church, Luwingu, 2006.



available evidence in Luwingu, Mporokoso and Lusaka districts showed that caterpillar business generated double, triple and quadruple profits depending on someone's input. It was further noted that due to the profit obtained from selling caterpillars, a handful of entrepreneurs used profits to re-capitalize their already existing businesses, thereby cushioning and keeping them economically stable.

Lastly, caterpillar traders who could not physically collect the insects from the bush, mainly from big cities, were compelled to buy in bulk from Luwingu-Mporokoso districts' collectors in their quest to realise substantial profits. Certainly, it was a lucrative business for all caterpillar traders.

## **Chapter 5**

### **Conclusion**

The first objective of the study was to investigate the strategies used in the collection of edible caterpillars in Luwingu and Mporokoso districts from the 1950s to 1980s. Four strategies of collecting caterpillars were discussed. The study therefore concluded that even if the strategies were used since the people of Luwingu and Mporokoso began collecting caterpillars in the 1950s, no new methods were introduced in later years. This meant that even in the late 1980s, 1990s and 2000s, the same strategies continued to be employed in the collection process of edible caterpillars. The study therefore concludes that despite the improved technology over the years, people of Luwingu-Mporokoso districts continued employing traditional methods of catching caterpillars. To this end, it can be noted that the people of Luwingu-Mporokoso districts did not care so much about the method used to collect the insects, but what counted most was how much litters of caterpillars they collected at the end of each day. This is because the strategies kept on changing from place to place, depending on many geographical factors such as the terrain and the host trees of the caterpillars. Evidence presented in the preceding chapters shows that there was no pre-determined method that the Luwingu-Mporokoso people adopted for collection of edible caterpillars. The method to be used at the collection point would come spontaneously owing to the nature of the environment itself.

Under the first objective, it was noted that caterpillar collection in Luwingu-Mporokoso could not go on without rituals being practiced. This was done in form of prayers, incantations to the ancestral spirits whom they believed in as the living-dead. Chiefs who once lived with them

and later passed on were highly honoured as it was strongly believed that they were the heroes who provided any form of foodstuff that included caterpillars for the living. Certainly, as a measure to control the collection process of caterpillars, it was necessary to put up measures that ensured that caterpillars were collected with a lot of rules and regulations. It can be concluded therefore that inasmuch as rituals and religious ceremonies were important, they were a strategy by any chiefdom of the study areas to control the collection process. It has been demonstrated by the study that the more the collection of edible caterpillars in one area is done in one year, the less caterpillars the area would have in the following year.<sup>340</sup> This is because the breeding process of caterpillars would be disturbed. Simply put, rituals, religious ceremonies before caterpillar collection season were necessary as they helped the breeding process of caterpillars to remain steady and undisturbed.

Similarly, the traditional laws, beliefs and myths associated with caterpillar collection played a pivotal role in as far as controlling the collection process was concerned. Although the laws of the land for both Luwingu and Mporokoso districts aimed at maintaining order and discipline of the subjects, its objective was not achieved as anticipated because caterpillars were at times pre-maturely collected by the *mwachusas* from the Congo whose main aim was to make profit. This posed a challenge on the local people, as by the time they began collecting, caterpillars were no more. On the other hand, by obeying the law of the land, the subjects of the two study areas maintained their status quo of good citizenry. Therefore, the study concludes that while the disobedient *Mwachusas* collected enough insects for profit, the obedient owners collected little caterpillars for consumption only. Apart from the laws of the land playing a

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<sup>340</sup> Interview with Mbata.

significant role in the caterpillar collection process, myths were used as a measure to control how the collection process of caterpillars was to be done. This is evident in the way the people of Luwingu and Mporokoso believed in them. To this end, the study concludes that although myths aimed at maintaining order in the collection process, they instilled fear in the local collectors who in turn ended up believing in them.

The second objective attempted to examine the dynamics of edible caterpillar harvesting in Luwingu and Mporokoso districts from 1976 to 2006. The study notes that commercialisation of edible caterpillars began in 1976 when TAZARA was commissioned. The study established that the railway line enhanced mobility of caterpillar traders who purchased their merchandise from northern Zambia and sold them to the southern part of the country which had bigger markets like Lusaka and the Copperbelt Provinces. In this regard, the study concludes that even if TAZARA contributed heavily to promoting commercialisation, it was not the only factor. The study further concludes that more caterpillar business men and women realised huge profits between 1976 and the 1980s whenever it was the caterpillar season.<sup>341</sup> This demonstrates clearly that TAZARA became the main contributing factor to the commercialisation of caterpillars.

Other fabrics dealt with the barter system whose argument was that caterpillar business became prominent despite the money economy being in place on the market, and vice-versa. The study therefore concludes that it was not the money economy that determined whether to use cash or not on caterpillar business, but the demand for any particular commodity on the market.

The third objective has demonstrated that edible caterpillar collection had socio-economic impact on the people of Luwingu and Mporokoso districts, from 1982 to 2019.

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<sup>341</sup> *Mutende*, p.6.

Institutions like schools and churches were the main ones whose results were conspicuous. On schools, the study concluded that the learning processes were disrupted due to the learners' involvement in the collection process of caterpillars. It was further noted that in remote areas of the two districts, some selected, remote schools especially, ended up completely closing down as there were no learners in schools. Despite this challenge, the study concludes that school authorities in the two districts remained mute over non-attendance of learners for fear that they would unnecessarily implicate themselves to higher authorities. On the contrary, notable peri-urban schools in both study areas did not close despite the poor attendance of pupils. The study concludes that caterpillar collection was more prominent in the remotest parts of Luwingu-Mporokoso districts than it was in urban areas. It can also be concluded that it was the most important economic activity in the rural area that the villagers could not afford to miss. In the urban areas of both districts, the people had a number of economic activities, implying that caterpillar business was just one of those seasonal businesses they engaged in.

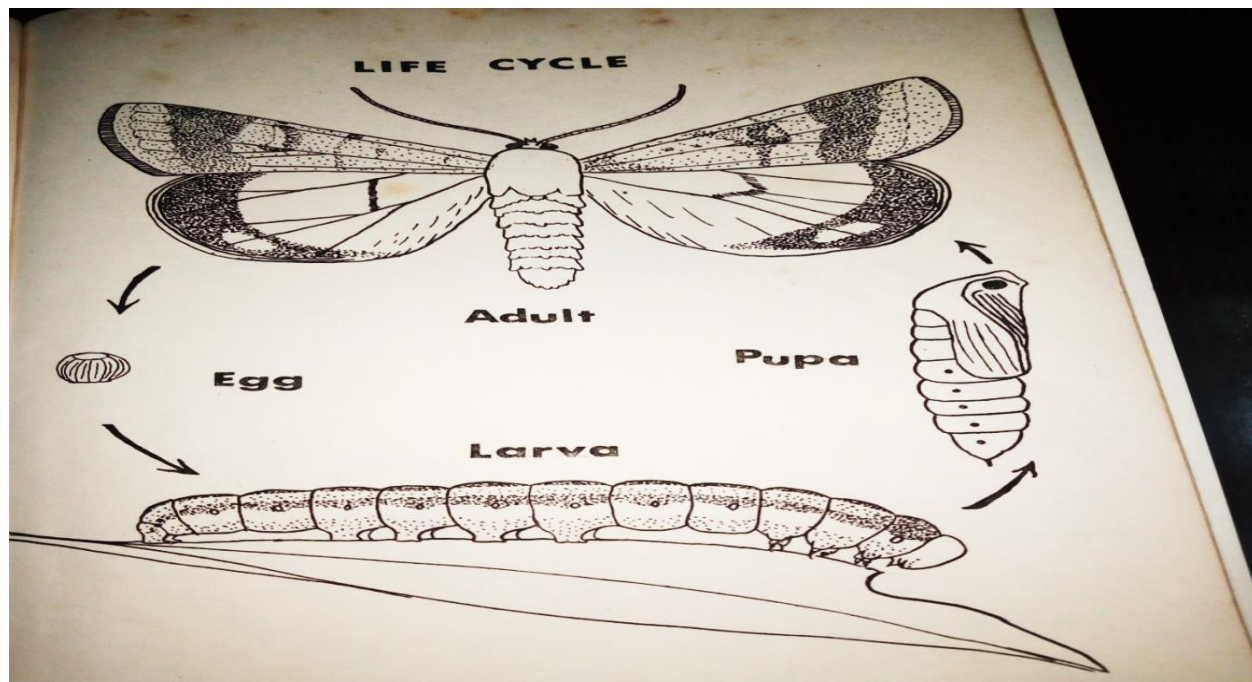
Furthermore, the study noted that tithing and offering of the two districts in selected churches also drastically reduced due to absenteeism of most of its membership who had preferred caterpillar collection to worshipping God. Even if one may argue that there was no correlation between collection of caterpillars and church absenteeism, glaring evidence shows that revenue collection for Bread of Life, Brethren church and UCZ increased when the 'Christian traders' had come back after selling their caterpillars. To this effect, the study concludes that Christian traders collected caterpillars for the purpose of feeding them as relish in their households and definitely sell some surplus for profit. This also entails the reason why

every collector would want to collect as much as he/she could in order to improve themselves economically.

The study has also demonstrated that although consumption was one of the main reasons why the majority was involved in caterpillar business, traders were active in this business due to profit-generation. It was further noted that due to generated profits, a handful of entrepreneurs used edible caterpillars to re-capitalize their already existing businesses. Certainly, the study concluded that edible caterpillars were collected for both consumption and profit-generation.

## APPENDICES

**APPENDIX 1: The life cycle of an edible caterpillar. At larva stage, edible caterpillars are ready for collection as relish.**



**Source:** ARPT, 'Research Proposal', Misamfu Regional Research Centre, Kasama, 1977, 4.

**APPENDIX 2: Gabriel Chambeshi (66) demonstrating how *mpasa* branch tree looks like. This is a tree species on which butterflies predominantly lay eggs for edible caterpillars.**





Image courtesy: Aaron Mwanza



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