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INTRODUCTION

This chapter describes and examines the nature of the Matobo Hills World Heritage Cultural Landscape where this research was specifically conducted. The study of the physical aspects of the Hills facilitates understanding the complex and intimate relationship that exists between the local indigenous communities and the natural environment they inhabit. This chapter, in part, will demonstrate and argue that human and animal settlement into the area was greatly influenced by the physical features of the Matobo Hills and that this inextricable interlink has added richness and depth to the archaeological and historical narratives of this world heritage cultural landscape.

THE MATOBO HILLS

When the Hills were proclaimed as a world heritage cultural landscape, both the natural and man-made features such as drainage, roads, and administrative boundaries were utilised to demarcate the boundary. The Tshatshani River marks the western boundary of the research area while its eastern boundary is marked by the Matobo, Nswazi, and Umzingwane communal areas. Their southern boundary is demarcated by the Khumalo communal area and parts of the Matobo communal area. In the north, the boundary is marked by large commercial farming areas and extends just north of Lake Matopos. The boundary extends further east of the lake through large commercial farming areas which border the city of Bulawayo and joins the Mzinyathini communal area in the east (Fig. 3.1). Although the area west of the Tshatshani River is an extension of the Matobo granite and falls under Bulilima and Mangwe Districts, it was not included as part of the World Heritage Site in order to curtail administrative problems. Also, even though they play a very important role as administrative centres of the entire world heritage cultural landscape, the Matobo and Umzingwane Rural District Councils are outside the designated boundary of this World Heritage Site (Technical Committee 2004). The Matobo Hills form part of the southwest periphery of the granitic shield of Zimbabwe, with an impressive relief of inselbergs and a wide-range of landforms. These hills comprise well-exposed and elevated granite blocks that were sliced up by deep drainage systems carved into joints and faults. The name Matobo is derived from the word “Matombo” in the local Kalanga language and means rocks. Legend states that the name of the Hills was corrupted by the early European settlers and, over time, the name Matopo or Matopos became more acceptable than Matobo. Many of the individual hills and locations have local names and historical narratives that are attached to them indicating the long established intimacy that exists between the local indigenous communities and their natural environment (Tredgold 1956).

GEOLOGY

In Zimbabwe, many granitic landscapes are characterised by the presence of roughly defined residual hills called inselbergs that rise abruptly from monotonously flat, endless, adjacent plains untrammelled by forests (Twidale 1981, 1982; King 1948). Most granitic inselbergs are an expression of compartments of rock that are massive and resistant to weathering and erosion (Twidale 1986). These hills formed tens of millions of years ago when overlying rocks gradually eroded away, exposing the granite rocks underneath. Inselbergs are typically found in the semi-arid or in savanna regions and especially in the southern and central parts of Africa. The granitic shield in Matobo is more deeply embedded to the south and east of the Hills (Walker 1996). The inselbergs of Matobo are steep sided, and their erosion and weathering have generated a distinct range of landforms which rises from the surrounding plains.

The most distinctive landforms of the Matobo inselbergs are the whalebacks or turtlebacks and the castellated hills, which are also known as castle kopjes. These hills are also collectively known
Fig. 3.1 Map of the Matobo Hills area showing the boundary of the World Heritage Site and, inside it, the boundary of the Matobo National Park. The World Heritage Site is bounded by communal lands, large scale commercial farming areas, resettlement areas, and small scale farming areas.

Fig. 3.2 Shumbashaba, a whaleback hill located in the south central part of the Matobo Hills (Photo by Author).
as bornhardts, and they are steep sided, bald, and dome shaped (Twidale 1981). In whatever terrain they appear, bornhardts are known to display a homogeneity of form that is conspicuous. These rocks are also intrinsically hard and moderately resistant to weathering so that their faces are usually steep (King 1948). Whalebacks or turtlebacks elongate along one axis, and they can be hemispherical, rounded, or dome shaped (Fig. 3.2). In the Matobo Hills, whalebacks have been formed through a weathering process referred to as spheroidal exfoliation or “onion skin peeling” in which curved layers split away to produce dome shaped hills, also known as amadwala in Ndebele, one of the local languages widely spoken in the area (Nobbs 1924; Tredgold 1956; Cooke 1965, 1986; Walker 1995, 1996). Some of the well known whalebacks in the Matobo Hills are Pomongwe, Bambata, Njelele, Shumbashaba, and Malindadzimu which is also now known as World’s View Hill. These whalebacks or turtlebacks stand in marked contrast with the angular castle kopjes formed by natural fractures along the lines of weakness called joints (Cooke 1965, 1986). Castle kopjes, which are also called tors by the British or kopjes by the Dutch, are steep sided and are usually bound by essentially vertical cliffs comprising large blocks in their original form and in arrangements that reflect the pattern of the orthogonal joint sets (Twidale 1981; Walker 1995). Their constituent blocks are typically angular and essentially unmodified by weathering (Twidale 1981) (Fig. 3.3). The Matobo Hills are thus typified by rugged, hilly terrain divided by moderately narrow but plain sandy valleys. These valleys lay between enormous fracture zones which were formed along the NNW-SSE axes during the cooling of the granite (Walker 1996). The splitting, tumbling, and the natural hanging of huge granite boulders has resulted in the formation of numerous shelters and caves that are found in the Hills today (Fig. 3.4).

As indicated in the next chapter, it is in these shelters and caves where the hunter-gatherer indigenous communities lived and painted the surfaces of granite rocks, transforming this natural landscape into one of the rock art galleries of the world (Walker 1995, 1996; Garlake 1987; Walker and Thorp 1997). The descendants of the contemporary local indigenous communities also later settled and established permanent homes and sacred shrines in some of the shelters and caves of the Hills. One of the prominent shrines, Njelele, is located just outside the southwestern fringes of the Matobo National Park in the Khumalo communal area. This shrine is a part of the Matobo Hills which was discovered in a granite kopje and is similar to several others in the same area. Mwari (God), as he is known among the Shona/Kalanga-speaking people and as Mlimo or Ngwali among the Ndebele, is believed to have lived at Njelele. The personal presence of Mwari at Njelele was indicated by his voice that was believed to be heard from the rocks. The local indigenous communities in the Matobo Hills believed that Mwari/Mlimo was the highest and final authority behind their ancestors.
known as Vadzimu in Kalanga/Shona or Amadlozi in Ndebele (Nobbs 1924). After the establishment of Njelele in the Matobo Hills, several other cult centres such as Dula, Zhilo and Khozi were also established in the same locality thereby spreading their influence far and wide (Makuvaza 2008).

Like much of the country, soils in the Matobo Hills are derived from granite boulders and are characteristically sandy. Approximately 70% of Zimbabwe’s soils are comprised of granite and have limited inherent agricultural potential. These soils are light textured, generally infertile, and deficient in nitrogen, phosphorous, and sulphur. In Zimbabwe, sandy soils are also found in most communal areas and are highly leached and thus depleted of bases and contain very low reserves of minerals that would have the potential to weather and release elements necessary for plant growth (Nyamapfene 1989).

In Matobo, the soils tend to reflect variations in relief, vegetation, and water in different parts of the Hills. The surface weathering, which runs to unspecified depths, has resulted in intense bedrock decomposition, and this has produced the coarse grained sands common to the area. As a consequence, soils are primarily sandy to sandy loam derived from granite rocks. These soils are immature due to the short distance from their site of formation to the site of removal (nearest stream), and they contain a high proportion of incompletely weathered rock minerals (Lightfoot 1980a). Profiles are rapidly leached of clay and fertility during the short, but intense, rainy seasons and by runoff from upper slopes. Due to their nature and low clay content, these sandy soils also possess low water-holding capacity (Nyamapfene 1989). However, rich humic soils can still be found in the piles of leaf mounds behind natural barriers such as rock boulders (Walker 1995). In valleys, soils consist of siallitic and fersiallitic sands. In depressions, they are alkaline and sodic to varying degrees while minor areas where the soils are derived from basic schists range from red brown siallitic soils to dark grey vertisols. The infertile and erodible sands on steep hill slopes are held in place by a beneficial vegetation cover and the resultant organic matter (National Parks and Wildlife Management Authority 2000). Outside the national park and private commercial farms, soils are light textured and, especially in the communal areas of Matobo, Gulati, Mzinyathini, Khumalo and Nswazi, they are generally unproductive due to long-established and continuous farming practices by the local indigenous communities who mainly practice agriculture in small patches of sandy eluvia and alluvial soils between peaks and along river valleys.

**CLIMATE: PAST AND PRESENT**

The reconstruction of past climates in the Matobo Hills is exceptionally complex because studies of this nature in the research area are scarce and may not be available at all. Past climates can only be inferred and reconstructed from a plethora of studies that have been largely carried out in South Africa and elsewhere in southern Africa (see, for example, Tyson and Lindsay 1992; Tyson et al. 2000). However, these studies have been criticised for being contradictory, especially when they are applied to elucidate past climatic occurrences in the region. Walker (1995) advises that it is necessary to treat these data with caution while Pwiti (1996) asserts that, if climatic changes have occurred in the past, a generalised picture may be agreed upon as a sub-continental guide although it must also be accepted that parts of southern Africa may not necessarily experienced the same climatic changes on the same scale.

There are three major climatic periods that are generally agreed to have occurred in the past including the Medieval Warm Epoch (AD 900-1300), the Little Ice Age (1300-1850), and the Post Little Ice Age (1850 to the present) (see Tyson and Lindsay 1992; Tyson et al. 2000). During the Medieval Warm Epoch, the climate is believed to have been warmer and highly variable with warm periods being punctuated by short cool periods (see Tyson and Lindsay 1992; Ekblom et al. 2012) while, during the Little Ice Age (1300-1850), climatic conditions are thought to have changed and were cooler, widespread, and experienced globally. The early period of the Little Ice Age is deemed to have been dry and severe and is argued by Huffman (1996a, 2008) to have been the reason for abandonment of settlements in the Shashe-Limpopo basin. This period was also
characterised by alternating arid periods and warm wet periods with two wet periods extending from 1300 to 1500 and from 1675 to 1850. Between 1500 and 1675, the climate appears to have been warm and encapsulating the entire area of southern Africa. Wetter conditions are thus speculated to have returned during the Little Ice Age (Tyson and Lindsay 1992; Huffman 1996a; Pwiti 1996; Manyanga 2007). The Post Little Ice Age (1850 to the present) is considered to have been generally warm and wet while cooler and drier conditions were experienced in the first half of the 20th century (Tyson et al. 2000; Manyanga 2007). From this period forward, climate and rainfall patterns in southern Africa have been highly variable, leading to droughts of varying severity. The region is considered to have experienced regular wet and dry spells, i.e., several years of abundant rain followed by periods of scarcity (Chenje and Johnson 1996; Ekblom et al. 2012).

A study of the rainfall statistics for the Matobo Hills between 1920 and 2010 (Fig. 3.5) demonstrates that rainfall varied with extreme conditions of droughts and floods in the area. Between 1920 and 2000, nineteen severe droughts have been experienced in the Matobo Hills, which is an occurrence of one in every four years. The most severe droughts were in 1930-31, 1938-39, 1942-43, 1950-51, 1964-65, 1970-71, 1982-83, 1992-93 and 1994-95 when below 400-200 mm of rainfall was recorded in the area. The latter two periods have been described as the most severe, and they also encompassed the entire country and the whole of southern Africa. These periods were also major El Niño years, a weather condition which begins with the warming of waters in the western Pacific Ocean. These natural warming events alter the weather pattern throughout the world, and they are believed to possibly induce droughts in southern Africa or contribute to their severity (Chenje and Johnson 1996). In contrast, twelve incidences of extreme rainfall were recorded in the Matobo Hills, which is an occurrence of one in every six years. From these recordings, the most extreme rainfall was in 1940-42, 1952-53, 1956-57, 1974-75, 1978-79 and 2000-01 when more than 800 mm of rainfall was recorded in the Hills. This was

Fig. 3.5 Rainfall statistics of the Matobo Hills from 1920 to 2000 (Courtesy of the Department of the Meteorological Services, Harare).
possibly as a result of La Niña which is the opposite of El Niño. La Niña occurs when the Pacific is cooler than the Indian Ocean, and the wind system moves from the Indian Ocean towards the Pacific. This brings unusually heavy rain in southern Africa (Chenje and Johnson 1996). The rest of the years received an average rainfall of 583 mm per annum.

The current climate of the Matobo Hills is strongly influenced by the country’s distance from the equator. Rainfall in Zimbabwe is influenced by the interplay of ocean and continental air masses in southern Africa converging in the area during the summer periods (McCartney et al. 1998; Ngara et al. 1998). These air masses form the Inter-Tropical Convergence Zone (ITCZ) which is responsible for most of the rain in the country. The ITCZ is an area of intense raincloud development created from a collision of the Southeast Trade Winds (from the southern section of the region), the North East Monsoons (winds from the north), and the moist Congo air masses (Ngara et al. 1998). The presence of the ITCZ in Zimbabwe marks the beginning of the major rains in the country. In Zimbabwe, rainfall and temperature is also substantially influenced by the relief and altitude of the country which is: (1) the highveld at more than 1200 m above sea level and traverses the country in a north easterly direction until it meets the eastern highlands; (2) the middleveld, which is the largest region and has elevations ranging between 900 m and 1200 m above sea level; and (3) the lowveld, which lies below 600-900 m above sea level and consists of the Zambezi and the Limpopo river basins. These low lying areas are generally dry and hot (Fig. 3.6). The influence of the rainfall weakens south of the watershed which causes the dryer conditions in the lowveld, and this also affects the Matobo Hills (Walker 1995). Rainfall occurs predominantly during the summer period which is from November to March. However, the rainfall is characterised by considerable spatial and temporal variation and unpredictability throughout the country (McCartney et al. 1998).
et al. 1998). This period is followed by a transitional season during which both temperature and rainfall decrease. The cool dry season follows, usually lasting from April to mid-August. Finally, there is a warm, dry season which lasts until the onset of the summer rains. Occasionally, the ITCZ and other main rain-bearing systems are inadequate and not effective in producing rainfall in the country and are usually caused by an atmospheric system called the Botswana Upper High (Moyo, O’Keefe and Sill 1993; Ngara et al. 1998). The Botswana Upper High is a high-pressure cell that is generally centred over Botswana between three to six kilometres above sea level. This anticyclone tends to push the ITCZ and active cloud bands out of southern Africa and over the Indian Ocean. During the winter and dry periods, the Botswana Upper High along with the eastern mountain belt stretching from the Drakensberg mountains in South Africa all the way to Tanzania blocks the moist air from entering the region (Chenje and Johnson 1996; Chiuta, Johnson and Hirji 2002). This usually causes uneven rainfall distribution and dry spells in Zimbabwe. Considering the proximity of the research area to Botswana, rainfall in the Matobo Hills differs significantly both geographically and annually while storms can be isolated. As a consequence of the Botswana Upper High, rainfall in the Matobo Hills can be erratic and highly variable both spatially and temporarily. In the Matobo area, the rain season can be delayed and highly variable both spatially and temporally. In the Matobo Hills, the rain season normally begins in November and ends in April. Rainfall variations also include delayed on-set and premature end of the season. In Matobo, rainfall can also occur as highly intense, short duration convective storms which result in severe soil erosion. The mean annual rainfall ranges from 650 mm north of Matobo to 450 mm, although precipitation is usually higher in the actual Hills than in the surrounding plains, especially in the southern and the eastern sections of the area. However, non-seasonal drizzle called guti in Kalanga/Shona is caused by an influx of cool, moist air from the south that often occurs in winter. This light drizzle usually counterbalances the high summer runoff in such a way that several natural and manmade reservoirs in the Matobo Hills generally always have plentiful water throughout the year (Walker 1995, 1996; Chiweshe 2007).

Daily mean temperatures tend to be moderately high while the mean night daily range can be as low as 8.6 degrees Celsius, making the nights relatively cool. High temperatures are recorded during the months of September to November, with October being the hottest and having a mean monthly temperature of between 32.8 degrees Celsius and 21.9 degrees Celsius and a daily range of 11 degrees Celsius. Temperatures tend to decrease during the months of December to March due to overcast days. The period of May to mid-August experiences temperatures between 20.4 and 14.6 degrees Celsius. This period is also characterised by cloudless days and cold nights with frequent frost (Technical Committee 2004).

DRAINAGE AND HYDROLOGY

The majority of the rivers that rise from the Matobo Hills are ephemeral with a declining annual unit runoff but are artificially semi perennial, especially those which are dammed downstream. Many of these rivers are closely flanked by cliffs, rock pillars, and steep, boulder-strewn wooded hilltops with an occasional open grassland backdropped by granite domes. The flow of these rivers is generally restricted to the months when the rain occurs which is usually from November to March with most of the flow recorded between December and January (Chibi, Kandori and Makone 2005; Love et al. 2005). During years of drought, these rivers are reduced to a few stagnant pools, and the water level in the nine dams constructed in the Matobo Hills between 1942 and 1956 decrease or dry out completely (Gargett 1990). To the east, the Matobo Hills are flanked by the Umzingwane River and by the Shashani River to the west. The Umzingwane River is a major left bank tributary to the Limpopo River. It emerges near Fort Usher in the Matobo communal area and flows into the Limpopo River near Beitbridge, downstream of the mouth of the Shashe River and upstream of the mouth of the Bubye River (Love et al. 2005). Major tributaries of the Umzingwane River include the Insiza, Inyankuni, Ncema, Mtshabezi, and Mtiengwe. The Shashani River arises near Figtree in Botswana and forms part of the international
boundary between Botswana and Zimbabwe. The Shashe is a major left bank tributary to the Limpopo River on the Zimbabwean side.

The Matobo Hills are also dissected by several rivers which emerge from the Hills and are tributaries of the Thuli River. The Thuli River develops near Matobo Mission and flows southwards through various communal lands to its confluence with the Shashe River. Thuli River is also sub-perennial in its upper reaches (above Thuli-Makwe) and ephemeral in its lower reaches. The major tributaries of Thuli River are the Mtshabezi, Maleme, Mtshelele, Whovi, and Mwewe Rivers which all develop in the Matobo Hills (Fig. 3.7). A series of dams on the Whovi River and its tributaries in the upper part of the Thuli basin supply water to the Matobo National Park for recreational and domestic use while the Mtshabezi Dam on the Mtshabezi River augments the water supply for the city of Bulawayo. The outcropping of the granite frequently creates barriers to water movement such that certain valleys are marshy or contain permanent water pools. Therefore, within the Hills, ground water is usually available within one square kilometre even during the drier months of the year. Also, during the rainy season, increased runoff from the Hills transform some grasslands into marshy vleis or swampy areas, and they can remain as such late into the dry season (Walker 1995; Chiweshe 2007).

Fig. 3.7 Map depicting the drainage system of the Matobo Hills.
FLORA AND FAUNA

In the Matobo Hills, vegetation and wildlife is primarily concentrated in the national park and in private commercial properties where there is protection and management, therefore, the park has become a sanctuary for wildlife. Outside these areas, vegetation is less dense, however, even though this is the case, a diversity of vegetation and wildlife still thrives in much of the research area. Both the vegetation and wildlife have economic and social significance for the local indigenous communities living in the Matobo Hills. The Matobo Hills area has a variety of vegetation much of which grows on soils derived from granite rocks. The variety of this vegetation is also largely determined by the topography of the area, the nature of climatic conditions as described previously, and human factors. Soil texture, depth, and moisture content also determine the vegetation pattern within this geological unit.

The Matobo vegetation is typical of vegetation found in the higher rainfall areas of the country (Grobler and Wilson 1972; Chiweshe 2007; Walker 1996). The vegetation is primarily located on hills, slopes and bases, along river banks, and in open valleys. Outside these areas in much of the Matobo, Khumalo, Gulati, and other surrounding communal areas, vegetation is generally restricted to areas such as river valleys and hill slopes where local indigenous communities are unable to cultivate crops. In the open flat valleys which are traditional settlements and agricultural lands, vegetation is generally less dense. However, much of the vegetation in the Matobo Hills thrives as an effect of ideal climatic conditions.

Vegetation has major ecological, economic, and social importance among the local indigenous communities of the Matobo Hills. Apart from its contribution to the natural balance of the Hills, there are also a wide range of products that the vegetation provides to the local indigenous communities and their livestock. There are many vegetation species that have nutritional value and can be utilised as plant foods and herbs, browse for both livestock and wildlife, and as timber and wood (Palgrave 1977; Hedberg and Staugård 1989; Timberlake, Fagg and Barnes 1999). A comprehensive study of plant foods in the Matobo National Park by Walker (1995) indicated that there are approximately 42 edible fruits within the park as well as almost 35 outside its boundaries. Underground foods such as tubers, bulbs, corms, and rhizomes as well as cereals and other plant foods are also elements of the vegetation that is found in the Matobo Hills although these may no longer be part of the diet for contemporary communities. Most of these plant foods are found in the kopje areas and in woodlands and a few in grasslands and on watersheds of the park. Some of these plants may have been exploited by the hunter-gatherer communities and by the farming communities who later settled in the Matobo Hills (Walker 1995). Currently, however, the availability of alternative modern foods and medicines and the lack of knowledge about plant use make vegetation less relied upon by the contemporary local indigenous communities of the Matobo Hills.

Apart from vegetation and regardless of their location in the dry semi-arid savannah, the Matobo Hills represent a western extension of the ranges of many fauna species characteristic of the higher rainfall areas in eastern Zimbabwe and parts of Mozambique (Grobler and Wilson 1972). The combination of physical and climatic factors has, in fact, resulted in the establishment of unique habitats for diverse wild animals in the Hills. However, much of the wildlife that is found in the Matobo Hills is confined only to the national park, and this includes rhinoceros species (Diceros bicornis and Ceratotherium simum), rock dassie (Procovia capensis), and the yellow spotted hyrax (Heterohyrax brucei). The Hyrax population density in the Matobo Hills is considered to be one of the highest in southern Africa (Barry and Mundy 1998; Chiweshe 2007). Other herbivores such as the klipsringer (Oreotragus oreotragus), the common duiker (Sylvicapra grimmia), and the steenbok (Raphicerus campestris) also habitat in the Matobo Hills (Smith 1977). In total, there are approximately 13 species of antelope and 25 different rodents found in the Matobo Hills. The diversity of herbivores provides major prey for vertebrate predators such as the leopard, baboon, raptors, and humans. The leopard (Panthera pardus) is considered to be the biggest predator residing in the Matobo Hills,
however, is also almost exclusively confined to the national park. In Matobo, leopards prey on small mammals which comprise about 69% of their diet (Grobler and Wilson 1972; Smith 1977).

The Matobo Hills are also known for their importance as a sanctuary for birds of prey such as the black eagle (Aquila verreauxii) (Garget 1990). The eagles are known to defend extensive territories and, in Matobo, nest in very close proximity with more than seventy other pairs also nesting in the area. This has been attributed to the abundance of the dassie populations which comprise almost 98% of the eagles’ prey (Barry and Mundy 1998). The enormous concentration of raptors in the Hills is closely associated with the availability of a high range and density of niches and suitable nest sites as well as the unusual substantial population of prey species, especially small mammals, birds, and reptiles.

**PRESENT LAND USE**

This section will explain the present land use in the Matobo Hills in regard to the agro-ecological regions of the country. The use of the agro-ecological regions helps to understand a range of human contemporary economic activities in the Matobo Hills based on the research area’s land use. Vincent and Thomas classified the country into five agro-ecological regions based on the natural potential of the different parts of the country for various agricultural activities (Fig. 3.8). In Region I, annual rainfall is the highest and encapsulates approximately 2% of the land area. It is a specialised and diversified farming region with plantation, forestry, fruit, and intensive livestock production. Region II, which covers 15% of the land area, receives less rainfall than Region I. It is suitable for intensive farming based on crops or livestock production while Region III is a semi-intensive farming region and encompasses 19% of Zimbabwe.
Although rainfall in this region is moderate, severe mid season dry spells make it marginal for maize, tobacco, and cotton or for enterprises only based on crop production. The farming systems are, therefore, based on both livestock and cash crops. Region IV is a semi-extensive farming region covering about 38% of Zimbabwe. Rainfall is minimal, and periodic seasonal droughts and severe dry spells are common during the rainy season. Crop production, therefore, is risky except in certain favourable localities where limited drought resistant fodder crops are grown and livestock is kept. Region V, which is the last, is an extensive farming area covering about 27% of the country. Rainfall is too low and erratic for the reliable production of even drought resistant fodder and grain crops, and farming includes only grazing natural pasture. Extensive cattle or game ranching is the only stable farming system for this region (Vincent and Thomas 1961). Based on the above classification, the Matobo Hills is categorised under Region IV, which is a semi-extensive farming region of the country. The existing climatic conditions and infertile sandy soils, as discussed above, make the Matobo Hills less viable for serious agricultural pursuits. Although this is the case, mixed farming is practised involving growing a variety of crops and keeping livestock, especially in Khumalo, Matobo, Gulati, and other communal areas. Cattle, goats, sheep, and donkeys are kept while subsistence farming of drought resistant crops such as millet and sorghum is practiced. Maize is also grown, especially in flat valleys and in several marshy swamps and sponges, although on a very small scale. Local indigenous communities living near these areas also engage in market gardening and selling their produce at small shopping centres such as at Whitewaters, Silozwe, Ntunjambili, Natisa, and even as far as Kezi and Maphisa in the south or at Esigodini, Esibomvu, and Mawabeni in the east, and in Bulawayo.
The continued farming in the communal areas that has resulted in the exhaustion of the soil means that there is demand for more arable and grazing land. This has caused encroachment into fragile areas such as marshy swamps and on the outer edges of the Hills. This has also caused additional pressure on the national park and on private commercial farms which ultimately threatens the conservation of resources (Fig. 3.9). As a result of too many livestock and inadequate pastures in the communal areas, cattle are often illegally driven into the national park for grazing. Considering that land is communally owned, there is always competition for resource extraction, particularly firewood, timber for construction and fencing of homesteads, and farming fields. As will be shown in the next chapter, the areas that are currently the Matobo National Park and private commercial farms were historically communal lands, and the local descent communities subsisting near or in these lands believe that they still have a right to utilise them. This has often incited disagreements with government administrative departments in the national park. Apart from subsistence farming and livestock rearing, there are also a number of commercial activities performed in the communal areas including the selling of wood carvings, pottery, and other artefacts to tourists who visit the park. However, the primary issue relates to over exploitation of some vegetation species, especially the grey mukwa (kirkia accuminata), which is used for carving wood crafts.

In large commercial areas, some farmers engage in crop farming while others keep livestock, especially cattle for beef and dairy products. These products are sold in the city of Bulawayo and in the rest of the Matabeleland region. In addition to cattle rearing, tourism has become an important economic pursuit on some private commercial areas, which offer accommodation for tourists who utilise the park for scenery and game viewing, close to the national park. Some of the lodges that are found in the Hills offering accommodation are Amalinda, Ingwe, Shumbashaba, Big Cave, and Touch the Wild, which is also known as the Matobo Lodge. Within the national park, the main land use is the conservation of nature and wildlife. As such, the park is an invaluable game sanctuary used to breed and reintroduce endangered faunal species such as the rhinoceroses. The national park, which is state land, is primarily managed by the ZPWMA. There are also site museums in the park, which have been constructed at archaeological and historical sites. The site museums and the archaeological and historical sites are under the jurisdiction of the department of the NMMZ, and it charges entrance fees to tourists who visit these places. In an area just north of the Matobo Hills in the Sauerdale farm, which borders the city of Bulawayo, there are several formal and informal gold mining activities. This section is part of the Rhodes Matopos estate which is currently being administered by the ZPWMA on behalf of the Rhodes Matobo Committee (Makuva and Burret 2011).

Historically, prospecting and mining of gold in the north-western parts of the Hills and the entire region of Matabeleland began in the late 19th century when Europeans penetrated the south western part of the country. This was motivated by the false belief that a second Witwatersrand was found north of the Limpopo River after the “discovery” of the first in South Africa in 1886 (Oliver and Atmore 2005, 127). An archaeological survey conducted in the northern parts of this farm around the site of Old Bulawayo, a 19th century Ndebele settlement, revealed numerous ancient gold mines spread all over the cultural landscape. Old Bulawayo was a royal capital of the Ndebele state established by King Lobengula in 1870 but abandoned in 1881. The survey was performed as a component of the reconstruction and development of the site by the NMMZ as a theme Park between 1993 and 2006 with staff reliving the 19th century Ndebele life (Hughes 1995, 2000; Hughes and Muringaniza 2003; Makuva and Burret 2011; Makuva and Hubbard 2012). Currently, panning for gold is rampant in the eastern part of the Matobo Hills, especially along the Umzingwane River near Esibomvu and along the rivers that feed the lower and upper Ncema, Inyankuni, and Insiza Rivers. Panning in these areas and other parts of the country is being carried out by small scale miners largely in response to the ever deteriorating economy of the country. It is now one form of economic survival and a way of livelihood for local indigenous communities who live along the banks of rivers that generally originate from the Hills.
SUMMARY

In this chapter, a summary of the physical background of the Matobo Hills has been presented. It has been demonstrated that much of the research area is a broad granite landscape. These Hills have been settled from the prehistoric times to the present, and the present traditional communities in Matobo have long been associated with them. These granite rocks produce sandy soils which are shallow and not suitable for serious agricultural activities. This is exacerbated by the low and erratic rainfall frequently experienced in the entire area, thus droughts are quite common in the Matobo Hills. Keeping of livestock has become a major economic activity of a number of private commercial farmers while, for others particularly in the north of the national park, gold mining is the main economic pursuit. The traditional communities also keep livestock and grow crops along river basins and in marshy areas where water is usually available. In the national park, the primary economic activities are mainly viewing of archaeological sites, scenery and the offering of accommodation by tour operators and hoteliers.

There are several vegetation communities in the Matobo Hills. There are, however, no major differences between the vegetation communities found in the national park and private commercial farms from those which are found in the neighbouring communal areas. This vegetation is utilised more in the communal areas than in the national park and in private commercial farms where it is safeguarded. Some plant species are edible while others are therapeutic and generally used by the local indigenous communities as traditional medicines. Wildlife is also abundant in the Matobo Hills but is more confined in the national park and in private commercial areas where it is protected. The physical environment of the Matobo Hills appears to have been the main attraction of the area for both human beings and wildlife.