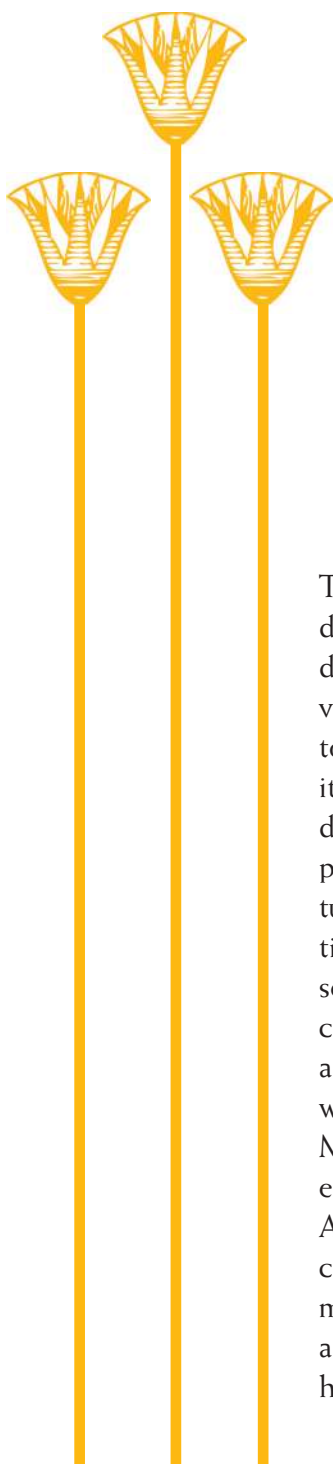


## 1



# The Black and the Red

## Geography and Environment

The Greek historian and traveller Herodotus famously described Egypt as the gift of the Nile. Although this description was particularly true at the time of Herodotus's visit to Egypt in the fifth century BC, there was far more to the country's prosperity than just the Nile River with its attendant annual floods. Egypt's natural boundaries of deserts, seas, and boulder-strewn river rapids helped to protect the country from invaders and allowed its culture to flourish in relative security. Its geographic location as a crossroads between Africa and Asia, where it served as a cultural and economic bridge between the two continents, made it an important entrepôt. Ideas, objects, and people travelled across Egypt, providing its people with a rich material and cultural life. Its borders on the Mediterranean Sea to the north and the Red Sea to the east offered access, respectively, to Europe, the Levant, Arabia, and India. Egypt's geographic location played a critical role in its social, cultural, and economic development, as well as in its interaction with other areas of the ancient world, and contributed to its diverse history and heterogeneous population. Of all the ancient cultures,

Egypt is perhaps unique in having maintained roughly the same boundaries throughout its history. (Fig. 1.)

Brief Geological History

The land that the country of Egypt now occupies emerged during the Cenozoic period (some 65 million years ago), when the current configuration of continents was being formed. For several million years geological forces were at work, forming the topographical features that were the precursors of what we see today. For hundreds of thousands of years Egypt was covered by a vast ocean, called Tethys by geologists, that gradually drained off to form what is now known as the Mediterranean Sea, leaving a land consisting of layers of granite covered by layers of sandstone and limestone. Many of the sea creatures that were denizens of the ocean were trapped in these newly formed rock layers and became fossilized. It was perhaps the discovery of such fossils that helped engender ancient peoples' views of mythological beasts and divine creatures.

The early part of the Cenozoic era (starting about 30 million years ago and continuing through about 500,000 years ago) can be characterised as a time of dramatic climatic variation, with torrential rainfalls feeding precursors of the modern Nile River, and carving up parts of the land, creating the *wadis* (valleys) that riddle the surface of Egypt today. About 10 million years ago in the late Miocene, a deep north to south furrow cut through the land and formed the first Nile, known as the Eonile. Over time, the river became known as the Paleonile (c. 300,000–180,000 BP), the Prenile (c. 800,000–400,000 BP), and, finally, the Nile as we know it (from c. 12,000 BP to the present). These earlier phases of the Nile did not follow the same physical course as the current Nile, and might even be considered to have been three different rivers.

The groove carved through the landscape by the Nile reveals the different rock formations that had been created over time. Most of Egypt, from north to south, consists of limestone beds. At Gebel Silsilah, near Aswan, this morphology changes to sandstone, with granite emerging at Aswan and along the Red Sea coast. In these early periods of Egyptian history the bed of the Nile was much higher than it is at present, and the Delta was tiny although it was gradually extended by deposits of soil brought from Upper Egypt by successive Nile floods.

Egypt's climate varied, with wet intervals alternating with dry ones. This oscillation in rainfall affected the path of the Nile, creating a terraced effect

on both sides of the river as its levels fluctuated and its course changed. Prior to c. 90,000 BP, the whole of Egypt was a much wetter and greener place than it is today. Much more of the country was habitable then, not just the areas along both sides of the Nile and around the oases, as became true later. The land supported a more diverse flora and fauna than is seen today, with acacia forests and different species of grasses, reeds, rushes, and flowering plants, and a vast range of animals, including lions and leopards, monkeys, elephants, hippopotami, rhinoceri, giraffes, foxes, hyenae, wolves, several kinds of antelope, and wild cattle, and hundreds of species of fish and birds, including ostriches. Many of these species persisted well beyond the Pharaonic period (c. 3050–30 BC), with, for example, hippopotami becoming completely extinct in Egypt only in the late 1800s!

During the course of the Palaeolithic period (between 90,000 and 10,000 BP) the Egyptian environment changed further, and the land became a savannah-like plain similar to what is seen in parts of East Africa today, becoming decreasingly green over time. The Nile ran through the country, and fed by the rains in the highlands of modern Ethiopia and Uganda, the river flooded annually. Gradually, starting from 30,000 BC, and increasingly around 8000 BC, because of continuing climate change, hunter-gatherer populations started to settle closer to the Nile as it provided a more stable source of water, although other areas continued to be exploited as well. These early inhabitants of Egypt left their traces in the form of stone tools,

### Egypt's Name

Ancient Egyptians called their country *Kmt*, meaning the Black Land, after the colour of the fertile soil deposited annually by the Nile floods. Egypt was also known as *Tawy*, or the Two Lands, referring to Upper and Lower Egypt, as well as perhaps to the 'black land' of the Nile Valley and the 'red land' of the surrounding deserts. Another designation for Egypt was the 'Two Banks', referring to both sides of the river, as well as to the desert and the flood plain. The word *Egypt* is derived from the area's Greek name, *Aegyptos*, which may have had its origins in the mispronunciation of the ancient Egyptian name for the city of Memphis, *hwt-ka-Ptah* (the dwelling of the soul of the god Ptah). As a result of the Greeks' habit of pronouncing only some of its letters, the ancient name for Memphis may have morphed into *Aegyptos*. The modern Arabic name for Egypt is *Misr*, which means land or fortress and refers to the fortifications on Egyptian soil near Cairo.

crude shelters, and rock art, found on the higher terraces along the Nile and in the oases. By 5000 BC, there was a further push by early people to settle along the river as outlying areas became increasingly desiccated, although still able to support considerable wildlife. This movement of hitherto nomadic hunter-gatherers to the Nile Valley presaged a new and settled lifestyle, one based on agriculture and domesticated livestock, such as sheep, goats, and cattle. It was during this period of its history that much of Egypt's culture was conceived and established. Egypt's now essentially dry climate remained fairly stable throughout most of the Old Kingdom (c. 2663–2160 BC), after which time there were further intermittent climatic fluctuation.

### The Areas of Egypt

Geographically, Egypt can be divided into five main regions that are defined by their relationship to the Nile River: the Nile Valley, the Delta, the Eastern Desert, the Western Desert, and the Sinai Peninsula. Each has a unique character based on its geography, which has influenced not only the development of each area but also the history of Egypt as a whole.

#### *The Nile River*

The river Nile, the longest river in the world, dominates the Egyptian landscape today as it did in the past. The ancient Egyptians called it simply *Itrw*, or 'the River', as it was the only river that they knew. In the ancient world the Nile River was regarded as unique in flowing from the higher ground in the south and emptying into the sea in the north; thus the southern part of Egypt is known as Upper Egypt, and the northern part as Lower Egypt. The hieroglyphic sign that indicates going north (downstream) is a boat with furled sails, showing that it is going with the flow of the current, whereas the hieroglyphic sign for travel to the south is a boat with an unfurled sail, using what the Egyptians called 'the sweet breeze of the north'. (Fig. 2.)

The current Egyptian Nile is a combination of the waters of the Blue Nile flowing from the Lake Tana in Ethiopia and of the White Nile originating in Lake Victoria in Uganda, which unite at Khartoum. Further on, in northern Sudan, other, smaller, tributaries, such as the Atbara River, add to the Nile's flow. Within the borders of modern Egypt the river measures about sixteen hundred kilometres (some 1,000 miles), running from Aswan to the



*Figure 2. The Nile is bordered by fertile black soil that supports lush vegetation. Beyond the margins of this soil is the 'red land', or desert, that is inhospitable to humans and most animals. It is possible to put one foot upon the black fertile soil and the other on the barren desert sand. Stark limestone cliffs enclose the Nile Valley and the low desert on either side, providing a natural boundary for those living within the Valley. Photo Salima Ikram.*

Mediterranean Sea. Until the development of seafaring, the Mediterranean acted as a natural boundary, and even after, because of its tides, currents, and winds, the Nile could be navigated only with care. The Egyptian name for the Mediterranean Sea was *wadj-wer*, meaning 'the Great Green', or '*shen-wer*', translated as 'the Great Encircler'.

At Aswan, the Nile meets with the First Cataract, an outcropping of large granite boulders that creates dramatic rapids, making navigation impossible for about ten kilometres. This cataract generally marked Egypt's southern boundary, although throughout its history the land that Egypt has controlled has included more southern areas, including parts of what is now Sudan. Five additional cataracts punctuate the river between Aswan and Khartoum. (Fig. 3.)

From Aswan, the river continues through Egypt, with a narrow flood plain; it makes a sharp turn in the area known as the Qena Bend, just to





*Figure 3. The tip of Elephantine Island at Aswan with a felucca steering around the island. Just further south of Elephantine lie the densely scattered treacherous granite rocks of the First Cataract, which marks the southern boundary of Egypt. Photo Salima Ikram.*

the north of Luxor, and the flood plain enlarges dramatically. North, in the Delta, the Nile diverges into several branches and sub-branches before emptying into the sea. During the Graeco-Roman period seven major branches are recorded; now only two of these (Rosetta or Rashid, and Damietta or Damyat) survive.

Owing to the torrential rains of the African highlands, the Nile flooded annually, its rising waters reaching Egypt in late June and finally abating in September in Aswan, and by the end of October farther to the north. The peak flood months in Egypt were late July to early September. On average, the Nile used to carry 200 million cubic metres of water, until the time of the flood, when the volume increased to 700 million cubic metres a day. The flood deposited rich black silt in its wake, a minimum of 10 centimetres every century, thus providing the Egyptians with fresh arable land on an annual basis, as well as supplying the country with reserves of water that could be distributed by canals and stored in reservoirs for use later in the year. The deposits of earth and minerals not only enriched the flood plain but also



*Figure 4. The inundation at Dabshur, with the village encircled by the flood and the pyramids in the background. Photo courtesy of Lehnert and Landrock.*

helped build up the Delta and provide nutrients at its edge, thus supporting a rich variety of marine life near the shores of the Mediterranean Sea that could be exploited by fishermen. The inundation further aided agriculture by regularly washing the salt from the soil that was omnipresent from the time when an ocean had once covered Egypt. (Fig. 4.)

The rich, fertile, black soil that the Nile deposited in the flood plain gave Egypt its ancient Egyptian name, *Kmt*, referring to the black land that together with *Desbret*, the desert or red land, made up ancient Egypt. Although alien and threatening, the desert was nonetheless a part of Egypt, providing a contrast and balance to the flood plain, as well as a source of mineral wealth. Not only was the silt from the Nile useful in agriculture but it also provided the Egyptians with the raw material for their ceramic industry and for the mud bricks that were the main component of their domestic architecture. Of course, care had to be exercised to keep the settlements along the Nile well out of the reach of the floods. Villages were frequently located either away from the river or on the natural high dikes constituting the Nile's bank, and cemeteries were located in the desert, well beyond the flood plain. As will be discussed, in the Delta the problem was avoided by founding towns and cities on high parcels of ground that effectively became islands during the annual inundations.

The rhythm of the Nile also directed the Egyptian year. The Egyptian calendar was based on the inundation, with the year being divided into three basic seasons: *akhet* or 'inundation', which lasted from June through September/October; *peret* or 'coming forth' or 'growing', when the land emerged from the water and could be tilled, lasting from October to mid-February; and *shemu* or 'drought', when the crops ripened and were harvested, lasting approximately from February to June. The New Year festival coincided with the advent of the flood. This event was linked to the very bright star, Sothis (probably modern Sirius, the dog star), which vanished from the sky for a period of seventy days in the late spring and whose reappearance in the sky marked the arrival of the inundation. The Nile also defined the Egyptians' sense of direction: they viewed their origins as coming from the south, the source of the Nile, and so they considered the south to be a 'head' for the country.

The Nile River provided the Egyptians with their water for drinking, irrigation, and washing, and was the main conduit for the transportation of people, technology, objects, and information. (Fig. 5.) It supported a vast variety of birds and fish that were a mainstay of the diet of the ancient



*Figure 5. Boats transported people, animals, and goods along the length of the Nile until quite recently. This 5th Dynasty scene from a tomb at Saqqara shows boats loaded with pottery vessels and sacks. Photo Salima Ikram.*



Egyptians. The plants that grew alongside the river, such as papyrus, reeds, lotus, and lily, all contributed to the Egyptian economy. (Fig. 6.) Parts of the papyrus and lotus could be used for food; additionally, papyrus became the source for papermaking. Reeds and rushes, together with papyrus, were the raw materials the Egyptians used for building houses, shelters, and boats and for making baskets, mats, and sandals.

Egyptian theology and iconography were also derived from the Nile. The inundation that renewed the land was a symbol for rebirth and re-creation, and the river itself was part of the divine landscape. The lush growth of papyrus in the wetlands of Lower Egypt made it that region's titular plant, while the lotus and the lily became associated with Upper Egypt, where they were commonly found; thus each half of the country was identified by the riverine growth common to it.

### Controlling the River

During the last one hundred years or so, with the construction of a series of dams and barrages in the area of Aswan, and with an ever-increasing population, the climate and geography of Egypt have been in flux. The dams have saved Egypt from famine and provided it with the power and electricity vital to economic growth. Even though the Nile still rises, the river no longer floods the land and washes out the salts in the soil. Large amounts of fertilizer must now be added for the land to be productive. The Delta suffers, as there is no reinforcement of the land by fresh silt deposits, and its marine life has less to sustain it. Salts in the soil dissolve and rise up through the groundwater, decreasing the land's fertility. The salts also cause problems for Egypt's ancient monuments. The stones of the ancient temples absorb the salts, and as the stones dry in the sun, the salt precipitates, leaving a deposit that ultimately undermines the strength of the rock and destroys the reliefs and paintings that may decorate it. Archaeologists are struggling to record and to conserve monuments whilst they can, and environmentalists are seeking ways to balance the needs of Egypt's heritage and its living population.

### *The Nile Valley*

Egypt's Nile Valley encompasses an area that starts at Aswan and ends roughly at Cairo. For political, practical, and theological purposes, the ancient Egyptians divided their country according to its geography, with the Nile Valley proper being regarded as the land of Upper Egypt, or *Ta Shemaw*



*Figure 6. Lotus, or lilies, and papyrus used to be commonly found in Egypt. They have both been reintroduced, and the latter is used to make sheets of papyrus. Photo Salima Ikram.*

to the ancient Egyptians, and the Delta as *Ta-mehu* (see the next section), its complement. In modern terms, Upper Egypt is the area south of Beni Suef, and Lower Egypt is the area north of Beni Suef, although in ancient times the division between the two parts of the country lay further north near ancient Memphis. Physically, the Nile Valley is characterised by its narrowness: it is rarely wider than five kilometres, and at some points it is reduced to the river itself and a narrow strip of cultivation adjoining the river's course. Generally, in southern Upper Egypt the wider flood plain is located on the east bank and the more narrow area is on the west. This fact may have contributed to the Egyptians' decision to found the majority of their settlements in Upper Egypt on the eastern side of the river, although there are also metaphysical reasons for this choice (see Chapters 5, 7, and 9).

Upper Egypt can be divided into two sections, one more northern than the other, which is sometimes called Middle Egypt today. The northern part of Upper Egypt is the area between Asyut and Cairo. This section of the Nile Valley is rich agricultural land and is broader than areas further south, measuring from 15 to 25 kilometres or more in width. In contrast to Upper Egypt, in Middle Egypt the majority of arable land lies to the west of the river. Perhaps this is why some of the settlements in this area were established in the west rather than in the east.