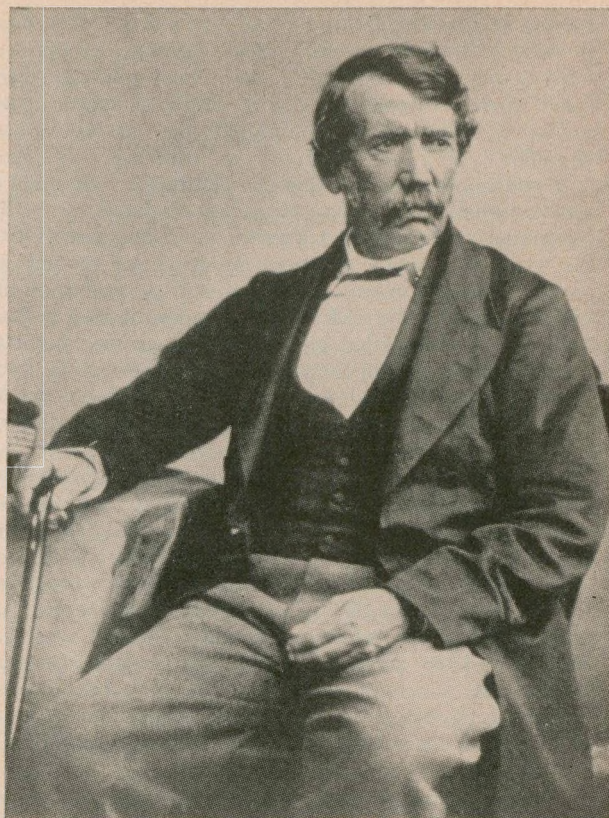


Dedicated Nomad



▪ A physician in the Scottish village of Blantyre Works once remarked on an essential difference in character between young David and Charles Livingstone: if they came to a puddle Charles would walk around it but David would stomp straight through.

This same plodding disregard of obstacles and physical discomfort drove David Livingstone through 30,000 miles of fever-ridden Africa, obsessed with the task of bringing Christianity and civilization to the continent ("I will open a path to the interior, or perish."). With Bible and surgical kit he became one of the first medical missionaries and the most famous of African explorers, mapping the unknown void of central Africa and immeasurably advancing hydrography and tropical medicine.

Youth. David Livingston* was born 150 years ago (March 19, 1813), the second surviving child of Neil and Agnes Livingstone. The father was an itinerant tea-dealer and deacon, rich in faith but poor in worldly goods. At ten David was put to work in a cotton mill, where he propped a Latin grammar on the spinning jenny and studied while he worked from six in the morning until eight at night, then attended school until ten and read until midnight.

The shy serious youth spent ten years in the mill, at which time he had qualified for a college curriculum and had resolved to become a medical missionary. He attended two sessions at Anderson's College, Glasgow, studying theology, Greek, chemistry, medicine; in 1838 he was accepted as a candidate by the London Missionary Society. He continued his medical studies at the Charing Cross Hospital in London, but nearly failed his

*The e was added later.

examinations in November, 1840, by arguing obstinately with his professors about the proper use of the stethoscope.

Two weeks after his ordination in December, 1840, he set sail for Cape Town, a middle-sized, sandy-haired man of 27, whose serious and uncompromising manner was softened by a rustic simplicity and beguiling charm, lightened by occasional flashes of wry humor.

An ox-cart trundled him the 700 miles north to a station at Kuruman, at the southern edge of a vast, unknown region. The African coast had been fairly well known since 1495, when Vasco da Gama sailed around the Cape of Good Hope into the Indian Ocean, but south of the border states (Egypt, Tripoli, Algiers) the maps showed only the names of deserts and vast areas marked unexplored.

Livingstone spent the next two years tramping the country north of Kuruman in search of a suitable station. Noting that virtually all missionaries preferred to work in the more civilized areas near the coasts, he deliberately went into virgin territory because he had already decided, with characteristic assurance, that the success of a missionary was not to be reckoned by the number of converts but rather by his success in opening up the country.

He chose the valley of the Mabotsa for his first station, entered fully into native life, learned the language, and studied the customs and folkways, helping the natives to build, plant, irrigate.

During a lion hunt the wounded beast mauled him badly. Wrote he: "Growling horribly close to my ear, he shook me as a terrier dog does a rat. It caused a sort of dreaminess in which there was no sense of pain, nor

feeling of terror, though conscious of all that was happening. It was like what patients partially under the influence of chloroform describe." The splintered arm bone, ineptly set by a missionary colleague, prevented him thereafter from raising his arm above the shoulder.

Romance. In the first flush of elation on becoming a medical missionary, Livingstone had declared he would never marry but devote his entire mind and strength to his work. But while recuperating from his wound he visited a fellow missionary at Kuruman and met his eldest daughter Mary Moffat; they were married in January, 1845, and settled into a crude house in Mabotsa.

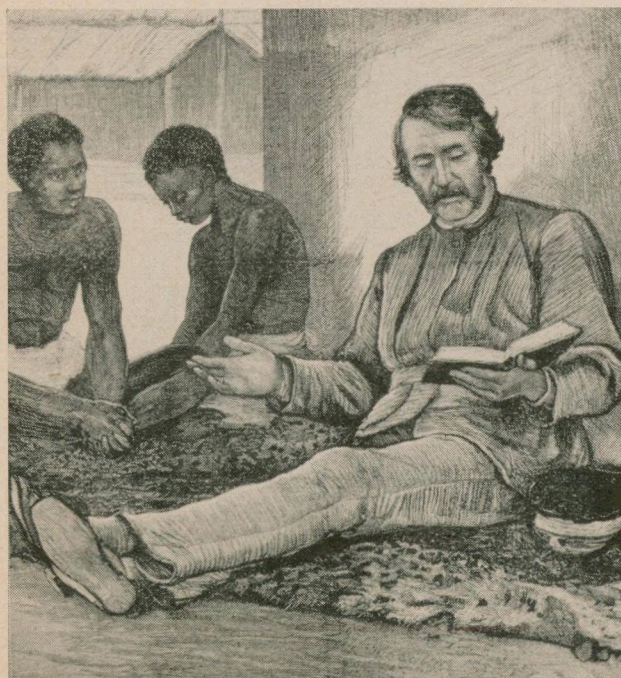
Livingstone moved twice in the next few years, both times to areas where no missionary had gone before. As her husband was of necessity a jack-of-all-trades, Mary became a maid-of-all-work, living in drafty, dusty, fly-infested houses, helping to make her own soap, candles and bread, teaching school and assisting her husband with his Bible classes and clinics. Meanwhile she bore, by 1851, five children, one of whom died in infancy.

In 1847 Livingstone wrote: "All my desires tend forward, to the North. Why, we have a world before us here. We have no missionary beyond this—all is dark." Two years later, accompanied by two English big-game hunters, he journeyed north to the Kalahari Desert, wrote the first detailed account of this unknown area, then pushed on to Lake Ngami, never before seen by a white man.

The next year he again visited the lake, this time accompanied by his family. Mary was a willing traveler in the hazardous and difficult land, but she lacked her husband's iron constitution; she became ill, and the children came down with fever, thirsted for days when the supply of potable water ran out.

In 1851, with Mary pregnant, Livingstone took the

Drawing of Dr. Livingstone reading to African natives from the Bible was made from Stanley's information.



family on another expedition to the River Chobe, the south tributary of the Zambezi, but this trip was too rigorous and the family suffered severely; the party went back to Cape Town, where Livingstone saw them off for England.

Exploration. In April, 1852, the physician-missionary, walking stick in hand, struck out into the unknown, his goal the Zambezi Basin. Livingstone's explorations were always somewhat casual, with frequent digressions because he could not resist seeing what was over the next hill. But thoroughly to the point was his scientific approach: with notebook and compass at the ready, he recorded everything that met his searching eye. The maps he made stand up today; he sent back to England voluminous accounts of the flora and fauna, shipped crates of rocks, roots and insects to scientific societies; he became a student of linguistics, ethnology, tribal lore.

Livingstone's very real affection for the Africans, and his tremendous serenity and gentle manners, permitted him to move with impunity among tribes who had been known to kill and eat white travelers; in time he became respected and beloved by thousands of natives. In every village he entered he preached the word of God, illustrating his lectures with magic lantern slides, and tended the sick. Vitally interested in native medicine, he collected more than 50 herbal remedies, wrote what is probably the first account of the tsetse fly after letting one bite him, observed the association between relapsing fever and the bite of the tick, and the epidemics following seasonal rains. His journals contain detailed accounts of scurvy, loss of vision of natives living on a predominately cereal diet; he recorded the geographic distribution of rheumatic fever, inflammation of the bowels, smallpox, measles, the boils produced by the maggot fly.

Livingstone made perhaps the first mention of the connection between the mosquito and malaria when he wrote: "Myriads of mosquitoes showed, as they probably always do, the presence of malaria." He did not understand the significance of this as he accepted the common view that malaria was due to the miasma of stagnant pools.

As he followed the Zambezi northward, Livingstone reflected that preaching Christianity would be of little use unless the interior was opened to commerce; what was needed was an easier way for missionaries and traders to reach the heart of Africa. He thereupon struck overland for the west coast, leading his party of 27 natives through swamp, bush and jungle, guided by his compass and the stars. Two years and 1400 miles later he reached the Portuguese town of Luanda.

The boiling African sun, the rugged terrain, bad food and unremitting toil had left him half-dead with malaria, dysentery, and malnutrition. He rested for five months, then turned eastward, determined to ascertain if the Zambezi led to the Indian Ocean and thus offered a route to the interior. On this trip he discovered the mist-shrouded waterfall called by the natives Sounding Smoke, the mightiest in the world. Livingstone named it Victoria Falls, in honor of the queen, and pushed on, arrived at the port of Quelimane on the east coast on May 20, 1856, having traveled from ocean to ocean across the trackless Dark Continent. Of this most remarkable journey, the Royal Geographic Society said: "The greatest triumph of geographical research which has been effected in our times."

Livingstone's delight in the Africa he loved was marred by one aspect: slavery. Portuguese and Arab slavers then trafficked openly in human bodies, Negro tribes warred against one another in order to capture prisoners who could be bartered for guns, tools, clothing. Livingstone saw villages burned, children wantonly butchered, their mothers dragged off in chains, old people tied to trees and left to starve when they could no longer keep up with the rest of the captives. He wrote bitterly of examining slaves who had collapsed into a semicoma at the side of the road in whom he was unable to find any organic dysfunction. Wrote he: "The strangest disease I have seen in this country seems really to be brokenheartedness, and it attacks free men who have been captured and made slaves." Absolutely essential, he decided, was the opening of the interior to commerce; only then would the slave trade wither through competition from legitimate forms of trade.

Fame. After 16 years in Africa, Livingstone returned to England, arriving in time to join his family for Christmas, 1856. The modest missionary was amazed at his hero's reception: all England was avid to hear of his adventures on the mysterious continent. He was embarrassed at the honors that were heaped on him,^{*} but made a lecture tour and wrote a book. His *Missionary Travels*, published in 1857, was an immediate best seller, and Livingstone, always pressed for money, found himself moderately wealthy.

The British government offered Livingstone the post as consul at Quelimane and also the command of an expedition to explore the central and eastern parts of the continent. Livingstone sailed for Africa in March, 1858. With him were his brother Charles and, once again, his wife. Many friends were critical of Living-

stone's wisdom in exposing his wife to the rigors of Africa, and with some reason. Shortly after arriving she became ill with fever, recovered to have their sixth child in 1859. In 1862 she developed paralysis of the face and died on April 27.

After this Livingstone became grim, more solitary and aloof, drove himself unmercifully. He was dismayed to find his explorations had unwittingly aided the slavers; they had used his excellent maps to penetrate deeper into the interior.

Whereas Livingstone was gifted in dealing with Africans, immensely sympathetic to their shortcomings and hardships, he was impatient with any weakness in himself or his white colleagues. They found him dictatorial and unreasoning; later some of them were to call his travels the aimless wanderings of a fanatic.

In 1863 the government recalled the Zambezi expedition and Livingstone returned to England. This time he was poor, lonely, bereaved,^{*} almost friendless; he was hated by the Boers and regarded with suspicion by many of his countrymen, who felt his passionate outcries against the slave trade would alienate England's allies. His second book, *Narrative of an Expedition to the Zambezi and its Tributaries*, lacked the sparkle and verve of the first.

Last Journey. Livingstone's iron frame showed the effects of his struggles, but Africa drew him irresistibly, and he prepared to embark on another expedition. The government appointed him consul to Central Africa without salary and contributed some £1500 to the undertaking, but most of the necessary funds he raised privately. Livingstone declared that there were victories yet to be won: the suppression of slavery by means of civilizing influences, the exploration of the watershed

^{*}In Glasgow, the Faculty of Physicians and Surgeons made him an honorary Fellow.

^{*}His eldest son Robert had enlisted in the Union Army and died of wounds sustained at the Battle of Gettysburg.

Engraving of the meeting of Dr. Livingstone and Henry Morton Stanley at Ujiji Lake, Tanganyika, was based on information supplied by Stanley. It was published with Stanley's testimonial averring it as correct as a photograph.



between Lakes Nyasa (which he had discovered) and Tanganyika, and, greatest of all, the solution of the long-sought mystery of the source of the Nile.

He arrived in Africa early in 1866 and started for the interior in April. His outfit was well-found: 26 men, camels, buffalo, mules, donkeys, trading goods and medical supplies. Trouble began almost at once: his Indian bearers melted away, taking with them much of his supplies; he was frequently attacked by natives fearful of the slavers, was presently left with only five men. Short of food, racked by recurrent fevers, he pressed on, mapping the previously-unexplored country south of Lake Tanganyika, surveying Lake Mweru,* and discovering Lake Bangweulu. This area was so ravaged and depopulated by the slave trade that Livingstone nearly starved, and natives stole his precious medicine chest. Wrote he: "I feel as if I had now received the sentence of death." Gaunt and weak, he arrived at the Arab town of Ujiji in March, 1869.

His wanderings now took on a mystic character. While laid up for three months with foot ulcers, he had pondered on Herodotus' description of the Nile source as springing from fountains of bottomless depth at the foot of high mountains and he determined to find them. English explorer John Speke, in 1858, had concluded that the Nile's source was the river that flowed out of the north end of Lake Victoria, at a point he named Ripon Falls. But Livingstone decided that the Nile's source must be further south, and he believed that he might find evidence that Moses had visited this area.

In March, 1871, he was resting in the town of Nyangwe when he witnessed the wanton massacre of several hundred natives by Arab slavers. Cried he: "I am heartsore and sick of human blood." He sent home a burning account of the atrocity that for the first time

*Discovered in 1798 by the Portuguese Lacerda.

Dr. Livingstone's last journey, 1872-73. Suffering from dysentery and pneumonia, he had to be borne on a litter.



aroused England's indignation against the slave trade.

Livingstone made his painful way back to Ujiji ("A den of the worst kind of slave traders.") He was in despair at the lack of response to the letters and scientific reports he had been sending home, not knowing that all his mail had been lost or stolen by Arabs; no word of the explorer had reached England for five years, other than vague rumors that he had been massacred.

Sick with pneumonia contracted in the swamps, destitute, hungry, without medicine to combat the fevers, Livingstone was near the end of his tether when on the morning of November 10, 1871, through the bush marched a white man followed by a splendid safari, an American flag flying from a baggage wagon. The man came up to the old explorer, lifted his hat and made the immortal remark: "Dr. Livingstone, I presume?"

This was Henry Morton Stanley, a journalist who had been sent by James Gordon Bennett, publisher of the New York *Herald*, to find Livingstone regardless of the expense; his eight-month search culminated in one of the greatest stories of modern journalism.

The reporter had come well supplied with food, medicine, as well as letters for Livingstone, and, in the four months that he remained with the explorer, the two became fast friends. The hard-bitten journalist developed a great respect for the older man. "Each day's life with him has added to my admiration for him. His gentleness never forsakes him; his hopefulness never deserts him. This man has conquered me."

Last Journey. Stanley tried to persuade Livingstone to return to England, but he refused, insisting that there was work still to be done. Stanley left to bring the great news to the outside world, promising to send Livingstone men and supplies. They arrived five months later and on August 15, 1872, Livingstone set out on his last journey, a futile, forlorn search for the legendary "fountains." Dysentery attacked him, and by April, among the swampy jungle bordering Lake Bangweulu, he was so weak he could travel only a few hours a day and then only in a litter. Wrote he in his journal: "Cannot walk; pneumonia of right lung. Sputa rust of iron and bloody; distressing weakness." He noted profuse rectal bleeding, feared he was losing arterial blood. On the morning of May 1, 1873, his bearers found him kneeling in an attitude of prayer by the side of his cot, dead.

His loyal men, Susi and Chuma, eviscerated the emaciated body, buried the heart beneath a mvula tree, spent 14 days in a crude embalming process. They wrapped the remains in bark and sailcloth, set out for the east coast across from Zanzibar, a 1000-mile journey as remarkable as any Livingstone had undertaken.

The explorer was buried in Westminster Abbey, and on the crypt are inscribed his own words: "All I can add in my loneliness is, may Heaven's rich blessing come down on everyone, American, English or Turk, who will help heal the open sore of the world."

Livingstone's contributions to hydrology, natural history, and in interpreting Africa and the Africans to Europeans were considerable. And five years after his death England signed a treaty with the Sultan of Zanzibar abolishing slavery, after which the heart of Africa was opened to commerce and Livingstone's dreams were launched into reality.

Summing Up. From Livingstone's diary: "The day of Africa is yet to come." 