Doenyo Buru is comparable in size to D. Suswa and D. Longonót.* It is situated to the north of Naivasha. Its height is estimated at 9000 feet by Thomson, and 7870 feet by Von Höhnel. It has been subjected to great denudation, and is certainly older than Longonót. On its north side are a series of steam vents, which must cover several acres in extent. The steam is attributed by the Swahili porters to Wanderobbo fires, but this is clearly incorrect.

At the south-west end of Elmeteita is a group of three faulted and denuded craters. The south-eastern one, which we may call A, consists of the crescentic north wall and a cone, which may be the remains of the central core. This crater must have risen 1800 feet above the level of the plain. The second member (B) is the most perfect of the group. It consists of a crater wall, which, though now broken up by faults and erosion, can be traced all along its former extent. A double cone rises in the centre of the crater floor.

North of Lake Baringo is yet another series of denuded basic cones, forming the Erri mountains. The cores of this group have been exposed by faults, but many of the lava streams are surprisingly fresh, and some of the craters of the steam vents on the flows are perfectly preserved. They seem to be later in age than the period when Baringo had an outlet to the north. They are older than the second set of meridional faults, which has had such a marked influence on the scenery and topography of the district.

(To be continued.)

EXPEDITION TO THE HADRAMUT.†

By J. THEODORE BENT.

In the proper acceptation of the term, the Hadramut at the present time is not a district running along the south-east coast of Arabia between the sea and the central desert, as is generally supposed, but it is simply a broad valley running for 100 miles or more parallel to the coast, by which the valleys of the high Arabian plateau discharge their

* The synonymy of these three peaks is a little confused, as is shown in the following table:—

Thomson.	Von Höhnel.	Railway Survey.	Gregory.
Lolbotat.	—	—	Lolbotat.
Longonót.	Longonót or Lolbotat.	Longonót.	Longonót.
—	—	—	Doenyo Nyuki.
Doenyo Nyuki.	Ssusswa.	Suswa.	Suswa.

† Paper read at the Royal Geographical Society, May 21, 1894. Map, p. 384.

not over-abundant supply of water into the sea at Saihut, towards which place this valley gradually slopes.

Owing to the intense fanaticism of the inhabitants, this main valley has been reached only by one European before ourselves, namely, Herr Leo Hirsch, in 1893. In 1846 Von Wrede made a bold attempt to reach it, but only got as far as the collateral valley of Doan. My wife and I were the first to attempt (in the latter part of 1893 and the early part of 1894) this journey without any disguise, and with a considerable train of followers, and I think, from this very reason, we made more impression on the natives, and were able to remain there longer and see more, and establish relations with the inhabitants, which, I hope, will hereafter lead to very satisfactory results.

There is every reason to believe that anciently, too, the Hadramut meant only this valley; we learn from Himyaritic inscriptions that five centuries B.C. the name was spelt by the Himyars as it is now (namely, $\overset{t}{\text{X}}\ \overset{m}{\text{Ƹ}}\ \overset{r}{)}\ \overset{d}{\text{Ħ}}\ \overset{h}{\Psi}$), and meant in that tongue "the enclosure or valley of death," a name which in Hebrew form corresponds exactly to that of Hazarmaveth of the tenth chapter of Genesis, and which the Greeks, in their usual slipshod manner, occasioned by their inability to pronounce a pure *h*, converted into *Chatramitæ*, a form which still survives in the Italian word *catrame*, or "pitch." The Hadramut was then chiefly celebrated for the exudations of its trees, and was the centre of the ancient trade in the various species of frankincense and myrrh. It had for its capital in the main valley a town called in the inscriptions Shabwat, on the confines of the desert, also written by ancient authors Sabbatha, Shaba, and Sabota. Hamdani tells us, in his 'Geography of the Arabian Peninsula,' that there were salt works at Shabwa, and "that the inhabitants, owing to the wars between Himyar and Medhig, left Shabwa and came down into the Hadramut, and called the place Shibam, which was originally called Shibat." Shabwa is now a deserted spot, save for Beduins, who still work the salt six days westwards from Shibam in the main valley, and the effect of salt is recognizable in the waters of all the wells of the main valley. We found an inscription at Shibam in which the name $\overset{sh}{\Sigma}\ \overset{b}{\Pi}\ \overset{m}{\text{Ƹ}}$ occurs, certainly dating from the third century B.C.; we may therefore argue that if Shibam was not the site of the original capital, it was at any rate a place of considerable importance centuries before our era, the centre of the frankincense trade, where the caravans were made up which brought the produce westwards by the great frankincense road across Arabia, accurate geographical details concerning which are given us by Claudius Ptolemy. Pliny gives us also a similar account, but says their capital was Thumna, which is also correct, as Thumna was the capital of the Gebaniti, a Himyaritic tribe west of the Hadramut, and the lords of the Hadramut were vassals of the Gebaniti. Of this fact

we got interesting confirmation at Shibam in the seal of "Yasarhal the Elder of Shibam," for in an inscription published by M. Halévy we have the two Yasarhals and various members of this valley described as vassals of the King of the Gebaniti. These facts are especially interesting, as satisfactorily proving the accuracy of the ancient geographers concerning this Arabian valley which supplied the world with frankincense.

Broadly speaking, the district which we travelled through divides itself into three distinct portions. Firstly, the narrow coast-line, or Sahil; secondly, the high plateau, or Akaba; and thirdly, the Hadramut and the collateral valleys running into it from the plateau from the south, and from the central desert to the north.

Of these, the first is the most uninteresting. We traversed nearly the whole of the coast-line from Mokalla to Saihut, and a more uncompromisingly arid country I never saw. The most prominent feature of this coast-line is the numerous hot springs which are found here, showing volcanic agency. The most considerable of these fertilizes a large district about 10 miles inland, where the inhabitants of the town of Ghail ba Wazir exist on the cultivation of tobacco, called "Hamumi tobacco from the neighbouring Beduin tribe," and many acres of waste land are brought into cultivation by conducting the hot streams by underground channels, similar to the Persian *kanats*, in various directions about the plain. At the village of Hami, 13 miles east of Sheher Bunder, the water is so hot when it comes up from the ground that the hand can hardly bear it, and the cultivation wherever it is conducted is extremely abundant. At Dis, too, and at several other points, these running warm streams lend a precarious existence to a sparse population; but the rest of this district is nothing but sand and arid waste.

The fishing villages on the coast do, however, a considerable trade. The inhabitants dry small fish on the shore, and sell them to the Beduins who come down from the mountains, who carry them back in sacks to feed themselves and their camels in the dry season, and it is interesting to see the Beduin and his camel feeding out of the same basket on these fish. Fish oil is another very repellent production of this coast, and the odours produced by these industries are a particularly unpleasant feature of the fishing villages. Mokalla, Sheher, and Kosair are the chief towns of this district, and they carry on an active trade, with their dhows and buggalows, with Aden, Muskat, Bombay, and the Somali coast. Near Kosair a peculiar geological feature is observed in a vast area of black basaltic rock, which stretches over the flat country for miles like a field of lava. This effusion of basalt near the coast may very possibly be the source from whence the Egyptians and Assyrians got their basalt for statuary purposes. The Arabs of to-day say that this stretch of basalt is the ashes of Pagan cities. As Saihut is approached, the mountains come down close to the sea at the outlet of the great Hadramut valley. We looked earnestly for traces of antiquity along this coast-line, but, in

spite of the assertion of their existence in 'The Red Sea Pilot,' we found none, and therefore concluded that the author mistook the ruins of mud villages and towers, of which there are many, for remains of an anterior civilization. We offered money to the Beduins to show us any remains; but in spite of their keen desire to obtain our money, they were unable to show us anything, and always affirmed, "There are no Addite ruins here but in the Hadramut." The people of Ad is the name given in the Koran to the old Sabæan inhabitants of Southern Arabia, and the term Addite is still applied to all their ancient remains. The negative evidence of the non-existence of ruins here is, however, in itself satisfactory, and confirm the opinion that the ancients made little or no use of this barren and almost harbourless coast, but carried on all their trade with the frankincense country by means of the above-mentioned caravan road through the interior.

The second feature of this district is much more geographically interesting, namely, the great *akaba* or high plateau which separates the Hadramut valley from the coast. It is approached by numerous short waterworn valleys, by which the various caravan roads into the interior commence the journey from the coast. We ascended the Wadi Howari, which is the largest and longest of these; and then, after a rapid rocky ascent of two days—for progress with our long train of camels was but slow—during which a few Beduin villages were passed, we reached the plateau, which extended in every direction in a flat, unbroken line as far as the eye could reach. Beyond the fact that this plateau is divided, so to speak, into two stories, the higher story being sometimes in isolated hillocks, and sometimes in long level stretches about 80 feet higher than the lower one, this vast extent of plateau is absolutely featureless. No distant elevation breaks the horizon; there is not a single habitation on it or sign of life; it is absolutely waterless except after the rains, when rain-water is preserved in tanks dug along the paths, which get dry after the long droughts, and cause the traveller infinite discomfort.

Haibal-gabrain, our first point of halt after reaching the plateau, we ascertained, is the highest point of the whole plateau. Here it reaches an elevation of 4150 feet; it slightly slopes northwards towards the main valley, and eastwards towards the Wadi Adim, and then rises again and extends for as yet an unknown distance. On the top level of the akaba there is no vegetation whatsoever, and it is in many parts scattered with small black basaltic stones as if by a gigantic pepper-pot, resting on the sandy soil, sandstone, and limestone, of which the range is formed. In the gullies between the upper and lower stories, and at a slightly lower level at the mouths of the valleys, we found a certain amount of vegetation. Here are the frankincense and myrrh trees, and various forms of mimosa, and undoubtedly this is a portion of the district which yielded the ancient wealth of the country. The further east

we went the more frankincense trees we found growing, and I have reason to believe that a still large amount of this is still obtained from the Hasik district east of the Hadramut valley. It is a curious fact that the Beduins who own all this plateau do not themselves gather the produce of the trees, but let out districts to Somalis, who come over during the proper season to collect it. In ancient times we are told, by the anonymous author of the 'Periplus of the Red Sea,' that the frankincense was only collected by slaves, which gave rise to the quaint Greek legend that the fumes of the frankincense trees were deadly, and that for this reason the Hadramut was called "the valley of death."

Here and there along this plateau we came across a few Beduin women tending miserable, half-starved flocks. Here and there, in a few favoured nooks, vegetation struggled on at a terrible disadvantage; otherwise it is an absolutely deserted and unproductive district, almost oppressive in its vast solitude, but with a fresh, keen air that invigorated us after the heat of the coast. It appears to me highly probable that the systematic destruction of the frankincense and myrrh trees through countless generations has done much to alter the character of this highland plateau, and has contributed much to the gradual silting up of the Hadramut and its collateral valleys, to which fact I shall have again occasion to refer. The aspect of this plateau forcibly recalled to our minds that portion of Abyssinia which we visited last year; there is the same arid coast-line between the sea and the mountains, and the same rapid ascent to a similar absolutely level plateau, and the same draining northwards to a large river-bed—in the case of Abyssinia, into the valleys of the Mareb and other tributaries of the Nile, and in the case of this Arabian plateau, into the Hadramut. Only Abyssinia has a more copious rainfall, which makes its plateau more productive than the one before us. This high plateau is unquestionably the Maratha Mountains of Ptolemy, and Pliny tells us further (XII. 14. § 52), "In the centre of Arabia live the people of Hadramut, a tribe of the Sabæans, in an exceedingly high mountain."

As we proceeded northwards we soon began to come across the heads of the many valleys which run into the Hadramut; the Wadis Doan, Al Aisar, Al Ain, Bin Ali, and Adim all start from this elevated plateau and run nearly parallel. The curious feature of most of these valleys is their rapid descent; they appear as if they had been taken out of the high plateau like slices out of a cake. They do not appear to have been formed by a fall of water from this plateau; in fact, it is impossible that a sufficient force of water could ever have existed on this flat surface to form this elaborate valley system. In the valleys themselves there is very little slope, for we found that, with the exception of the Wadi Adim, all the valley heads we visited were nearly of uniform height with the main valley, and had a wall of rock approaching 1000 feet

in height, eaten away as it were out of the plateau. We were, therefore, led to suppose that these valleys had originally been formed by the action of the sea, and that the Hadramut had once been a large fiord or arm of the sea, which, as the waters of the ocean receded, formed an outlet for the scanty water-supply of the Southern Arabian highlands. These valleys have, in the course of ages, been silted up by sand to a considerable height, below which water is always found, and the only means of obtaining water in the Hadramut for drinking purposes, as well as for cultivation, is by sinking wells. The water of the main valley is strongly impregnated with salt, but is much sweeter at the sides of the valley than in the centre. No doubt this is caused by the weight of the alkaline deposits washed down from the salt hills at Shabwa, at the head of the main valley.

The steep reddish sandstone cliffs which form the walls of these valleys are themselves almost always divided into three distinct stories or stratifications, which can be distinctly seen on the photographs. The upper one is very abrupt, the second slightly projecting and more broken, and the third formed by deposit from above. The descent into the valleys is extremely difficult at all points. Paths down which camels can just make their way have been constructed by the Beduins, by making use of the stratified formation and the gentler slopes; but only in the case of the Wadi Adim, of all the valleys we visited, is there anything approaching a gradual descent. We came down into the Wadi Al Aisar, one of the narrower ones, where there are numerous villages belonging to the Beduins of the Khailiki tribe, several members of which formed our escort. The first peep down from the edge of the plateau into these very highly cultivated gullies is most remarkable, quite like looking down into a new world after the arid coast-line and barren plateau. At our feet we saw lines of villages and palm groves; behind us we looked for the last time for many weeks on the bare monotonous plateau. After a very difficult descent on foot, we reached the village of Khaila, and encamped for two days close to the house of the chief of the tribe. Even here we were struck with the large houses and fortresses constructed by the Beduins, some of them three or four stories high, with the antlers of antelopes stuck on at the corners, and our surprise was the greater because we had looked upon the Beduins on our journey as little better than naked savages.

The Bedu of the Hadramut is very different to that of Northern Arabia. He is small, thin, and wiry, naked save for a loin-cloth, and with long matted hair, which he ties up behind his head with a leathern band. On his shoulder he carries his quaint matchlock gun, and attached to his waist girdle he has his powder and priming flask; his dagger and his arms and legs are decorated with various ornaments of brass and iron. He has much about him that reminded us of the aboriginal races of Asia Minor and Northern Persia. His conversion to

Mohammedanism is merely nominal. It is rare to see a Bedu say his prayers or perform the ablutions inculcated by the religion of the country; he does not in the least object to travel or work during Ramazan, and he never fasts; and yet at the same time he has his own religious secrets, his own particular points of religious veneration, which, like the Yoruks of Asia Minor, he prefers not to communicate to strangers. The pious Arab speaks of them as heathen; but they are distinctly powerful, and often treat the Arabs and their religious observances with undisguised contempt.

Before proceeding further with our journey, I will here say a few words concerning the somewhat complex body politic of this portion of Arabia, the inhabitants of which may be divided into four distinct classes.

Firstly, there are the numerous wild tribes of Beduins scattered all over the country, who do all the carrying trade, rear and own most of the camels, and possess large tracts of country, chiefly on the highlands and smaller valleys. They are very numerous and powerful, and the Arabs of the towns are certainly afraid of them. They never live in tents, as do the Beduins of Northern Arabia; the richer ones have quite large houses, whilst the poorer ones—those in Shabwa and the Wadi Adim, for instance—dwell in caves.

Secondly, we have the Arabs proper, a decidedly later importation into the country than the Beduins. They live in and cultivate the lands around the towns; many of them carry on trade and go to India and the Straits Settlements, and some of them are very wealthy. They also are divided into tribes. The chief of those dwelling in the Hadramut are the Yafi, Ketiri, Minhali, Amri, and Tamini. The Beduins reside amongst them, and they are constantly at war with one another, and the complex system of tribal union is exceedingly difficult to grasp.

Thirdly, we have the Seyyids and Sherifs, a sort of aristocratic hierarchy, who trace their descent from the daughter and son-in-law of the prophet. Their influence in the Hadramut is enormous, and they fan the religious superstition of the people, for to this they owe their existence. They boast that their pedigree is purer than that of any other Seyyid family, even than those of Mecca and Medina. Seyyids and Sherifs are to be found in all the large towns and considerable villages, and even the Arab sultans show them a marked respect and kiss their hands when they enter a room. They have a distinct jurisdiction of their own, and most disputed points of property, water rights, and so on, are referred to their decision. They look with peculiar distrust on the introduction of external influence into their sacred country, and are the obstructionists of the Hadramut, but at the same time their influence is decidedly towards law and order in a lawless land.

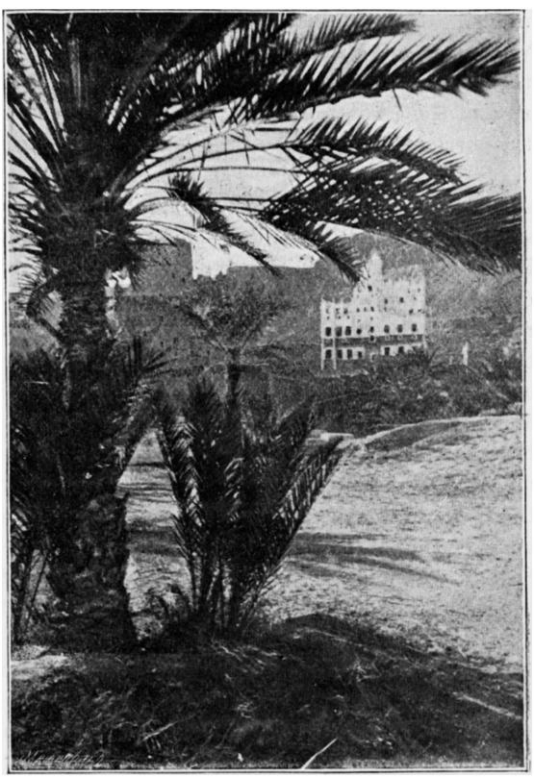
Lastly, we have the slave population of the Hadramut, all of African origin, and the freed slaves who have married and settled in the country. Most of the tillers of the soil, personal servants, and the soldiers of the sultans are of this class. They marry amongst themselves; their women never wear the veil, and mix freely with the men; many of them are well off and own good houses in the towns. They are all Mohammedans, and every new slave who is introduced into the country, if not a Mohammedan, is obliged to embrace that religion. They are not allowed to take Arabic names, but are generally known by nicknames indicative of some personal feature; nor can they ever hope to rise to a higher class. Notwithstanding this they live very contented and happy lives, especially the soldiers, who have considerable influence amongst the Beduins, and are provided with food, clothes, arms, and lodging by the sultans. Many of them have been in India, and served in the Arab regiment at Hyderabad, and acquired manners and education superior to those of the Seyyids and Arabs whose property they are.

The Al Kaiti family of the Yafi tribe is by far the richest in the Hadramut, and their history may be briefly given in a few words. About five generations ago, the Seyyids of the Abubekir family, at that time the chief Arab family in the Hadramut, claiming descent from the first of the Caliphs, were at variance with the Beduin tribes and in great difficulties, so they invited some chiefs of the Yafi tribe from the Yafi mountains halfway between the Hadramut and Aden to come to their assistance. The Al Kaiti family responded to their call, and by force of arms subdued the hostile tribes, and permanently established themselves in the main valley. Omar bin Aod Al Kaiti, the grandfather of three of the reigning sultans in the district, was a really powerful and wealthy chief. He built very fine palaces in the Hadramut at Shibam, Al Katan, Haura, and Hajarein, and his son, Sultan Nawas Yurg, the present head of the family, is now femadas or general of the Arab regiment at Hyderabad. This historical intercourse with India is the secret of the wealth of the Al Kaiti and other Hadramut families; they own properties in Bombay and other commercial centres in the East, and under their wing large numbers of the inhabitants of the valley flock to India and the Strait Settlements, where they make money more or less honestly and return to their birth-place to spend it. There is absolutely no source of wealth in the Hadramut itself, yet the valley is studded with fine palaces, and the influence of India is everywhere noticeable. Their furniture is largely imported from India, their jewelry is mostly Indian, their daggers are studded with gold mohurs; and the most peculiar feature of all this is that, in spite of this external influence, they remain fanatically opposed to the visits of Europeans into their country, and that their women by common consent never leave the country. There are instances on record of a man returning to the wife he had left in the Hadramut after an

absence of forty years, and marital separations of twelve and twenty years are of common occurrence. The marriage laws of Arabia, however, provide the emigrant with the means of getting out of this difficulty, and most of those who can afford it have their harems both at home and abroad.

The sultan Nawaz Jung, though residing in India, is still the recognized ruler of the country under the Yafi sway, and all important questions are referred to his decision by his three nephews, one of whom is Vice-Sultan at Sheher, the other at Mokalla, and the third at Shibam.

Sultan Sallah bin Mohamed, of Shibam, dwells in a very fine palace at Al Katan, about 12 miles from his capital, a most delightful and fascinating spot, surrounded by many acres of palm groves, and nestling beneath the rocky wall which shuts in the valley—quite the ideal home for an Arabian chief as described in the 'Arabian Nights.' Space will not permit me to give a minute description of these Hadramut towns and palaces, but they will be illustrated better by my wife's photographs than by any description I could give. There is a decided monotony about Arab architecture. Most of the houses are exceedingly high, some reaching eleven storeys; they are built of sun-dried bricks, and are externally decorated with chevron and zigzag patterns. There is always a terrace on the roof, where the people sleep in the hot weather, and they are usually decorated with turrets, domes, machicolations, buttresses, etc., which give them quite a mediæval appearance. Outside in the courtyards the flocks and herds are kept and the horses are stabled at night. The lower storey is devoted to the storing of goods, the second storey is inhabited by the servants, the third



AL KHOLLON.

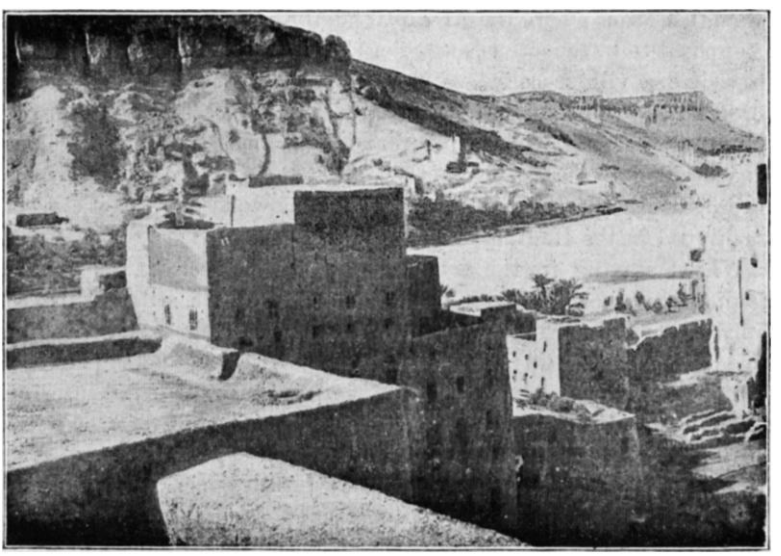
by the guests, and above that come the harem and the family dwelling-rooms.

The wood carving is very well executed. Most of the doors are elaborately carved; the unglazed windows are fitted with pretty tracery; the beams, the cupboards, the invariable coffee corner, and the household utensils, are all subjects for the carver's art, and in this they excel exceedingly. Dados, with quaint patterns, run up the sides of the walls, and each storey is furnished with its skin or *mussack* of water, which is hung in a draught so that the contents may be kept cool. Each storey, too, has its bathroom, where a big jar called *Kazba* is placed, and the bath taken by throwing water over the body by means of a smaller utensil. The drainage is lamentably deficient, and is carried by long wooden spouts into the yard below; the dry climate and sandy soil are the only security against disease. The palaces of the sultans and great men of the Hadramut are exceedingly imposing, and, when seen through the surrounding palm groves, form delightful pictures.

Sultan Sallah received us most cordially, and encouraged us to stay some time under his roof, so that we might more comfortably make excursions to places of interest in the neighbourhood. Of all the men we met in the Hadramut we found Sultan Sallah the most enlightened. He complained bitterly of the benighted life he had to lead amongst his rascally and fanatical fellow-countrymen, and took great interest in all our collections and varied pursuits. He greatly envied me the possession of a wife who could do other things besides paint herself with turmeric and antimony, and lead a listless life of seclusion and squabbles in the harem, and through us he made a formal request that a trained Mohammedan doctor might be sent to the Hadramut from India, whose presence there would do an immense amount of social and political good; and I am sure that if the Indian Government acceded to this request, Sultan Sallah would be prepared to bear the greater part of the expense himself. The medical condition of the country is terribly deficient. Burning the part affected with hot irons is a favourite remedy called kayya, and one which we saw frequently applied. Then, again, they have an idea that certain smells are dangerous for certain wounds, and those afflicted are obliged to wear stoppers in their noses for fear of inhaling the smell. On to a wound they will tie iron or tin; and as women are not allowed to see medical men, their husbands take a hair from their head, from which the doctors profess to divine what the lady is suffering from. Sultan Sallah told us of a curious case which had lately come under his notice. A man for a wager consumed all the fat of a goat, and when he was subsequently taken ill, the doctor ordered a fire of wood to be lighted all round him to melt the fat, which had congealed in his inside. During our prolonged stay at Al Kaṭan, which off and on lasted for nearly a month, we were able to see a great deal of the life and customs of the inhabitants, their mode of agriculture,

and other points to which I could not do justice within the short limits of this paper.

Whilst waiting at Al Katan, it will be as well to review the principal archæological features which we observed in this district. In the Wadi Al Aisar we visited the remains of an extensive Himyaritic town, but unfortunately found no inscriptions. We saw nothing more of this character until we reached Hajarein, a town built on an isolated hill in the centre of the valley, which, as a continuation of the Wadi Doan, is thence known as the Wadi Kasr until it joins the main valley of the Hadramut. From here we visited the remains of a very extensive Himyaritic town called now Raidun by the inhabitants, being about two miles distant from Al Meshed, a somewhat sacred spot amongst the



HAJAREIN.

Arabs, into which the Seyyids would not allow us to penetrate. The ruins cover many acres of ground, and may be traced for a distance of two miles, and they showed us clearly the nature of the wholesale destruction which has come across the ancient civilization of the frankincense country. The ruins of certain lofty square buildings stand up on hillocks at isolated intervals; from these we got several inscriptions, which prove that they were the high "platforms" alluded to in so many Himyaritic inscribed stones raised in honour of their dead. As for the town around them, it has been entirely engulfed in sand; the then dry bed of a torrent runs through the centre, and from this fact we can ascertain, from the walls of sand on either side of the stream, that the town itself has been buried some 30 to 40 feet by this sand.

Wherever we found ruins elsewhere in the Hadramut, they were always on some elevated spot above the sand-level, so that we may argue therefrom that all traces of ancient civilization in the centre of the valleys lie deeply buried in the sand, which has come down into the valleys in devastating masses from the plateau and the central desert. The nature of the sand in this district is twofold: firstly, we have the firm sand which can be cultivated, or *loess;* and, secondly, the disintegrated sand from the desert, which forms itself in heaps and causes sandstorms when the wind is high. I think there is every reason to believe that this ruined city near Hajarein is the Θαβάνη of Ptolemy, the Toani of Pliny, and the Doan of Hamdaui, which name is still retained in the adjacent Wadi Doan.

From Hajarein to El Katan we saw no definite traces of antiquity, although Haura, where the Al Kaiti family have a magnificent palace, is supposed to be the site of an ancient Himyaritic town. From El Katan we visited a village called Al Gran, at the southern edge of the main valley, built on the foundations of a large Himyaritic fortress; it stood on a slight elevation above the plain, and must once have been a place of considerable importance. From the mosque there we got two inscriptions, one a dedication to the god Sayan, who is known to have been especially worshipped in the Hadramut in ancient times.

Whilst staying in the town of Shibam we were taken to see a peculiar rock in an adjacent valley, on which are still legible some Himyaritic words in red distemper. We noticed the peculiar position of this stone, blocking up as it does the end of a valley, and so placed that it would receive the first rays of the morning sun. This red inscription is of great antiquity, for it is in the boustrephedon form of writing, which at once relegates it, according to the best authorities, to at least the third century before Christ. On my return home, I found out, from Prof. Hommel's invaluable dictionary of the hitherto ascertained Himyaritic words, that one word meant "morning light" and another "sacrifice;" hence we had before us an undoubted site of an ancient sun-worship, and we were forcibly reminded of the large stone on the Zimbabwe ruins and its simular orientation.

The most interesting and productive expedition which we made from Al Katan was northwards up the Wadi Ser, in the direction of the central desert. The mouth of this valley is about six miles from Shibam, and even here it is a mass of loose shifting sand. As we proceeded northwards up the valley we found the traces of habitation few, the cultivation very scanty, and fields being prepared by scraping the ground with wooden boxes or ploughs, called *mishap*, attached by chains to camels. These boxes take off the upper layer of sand, and thus form dykes, which retain the rain-water if rain does fall. Sometimes it does not fall for three years, and their labour is in vain; but one favourable season in three years, they told us, repaid them for the trouble.

At the mouth of the valley a few Arab villages of the Katiri tribe can boast of palm-trees and fair-sized houses, but further in the whole of the valley is occupied by Beduins, and as you proceed up it the masses of sand increase; here it is shifting and loose in many places, and the hills on either side of the valley grow distinctly lower.

We penetrated up this valley to a spot called Al Had, where there is a solitary house and farm occupied by a Beduin tribe, and a deep and ancient well in the centre of the valley, which is the last water before the central desert is reached, and all around us stretched masses of sand and absolute barrenness. We were told by the Beduins that formerly there had been a caravan road starting from this point across the desert, but that, owing to the want of water, it had been abandoned some time ago. The character of the valleys here is pretty much the same as that of those to the south of the main valley, only they are narrower and much lower, and thus the deep indenture of the valley system of the Hadramut gradually fades away into the vast expanse of sand of the central desert of Arabia.

A couple of miles north of Al Had we visited the very interesting site of a ruined Himyaritic town, with traces of buildings of huge stones like those of Al Meshed, and a great rock with a Himyaritic inscription chipped upon it, but unfortunately too shallow for us to make a squeeze. The central word of this inscription appears to me to be *Masabam*, or caravan station, and this spot would be exactly one long stage from Shibam on this road to the desert, which was probably either the great frankincense road itself or an important branch of it. My copy and Mrs. Bent's photograph are now in the hands of Professor Müller, of Vienna, and I hope that when it has been carefully studied it will throw some interesting light on the ancient geography of this part of Arabia. That it was a landmark is obvious, and as the inscription is evidently chiefly a list of names, we may be able to identify some of them as those mentioned by the ancient geographers.

In the Wadi Ser, near to the village of Al Garun, we found a row of very ancient stone monuments situated on slightly elevated ground above the sand. At first I imagined them to have been tombs, but on closer inspection we discovered that the stones, which are large unhewn stones of the dolmen type, are decorated on the inside with geometric patterns, somewhat similar to those found in the Mashonaland ruins, and therefore I feel more inclined to believe that they were originally used for religious purposes. The buildings are about 20 feet square, and several of them are surrounded by circular walls; they are apparently of extreme antiquity, doubtless far anterior to the other Himyaritic remains which we saw in the Hadramut.

At Al Garun the Wadi Ser is entered by a short collateral valley called the Wadi Khonab, in which valley is the tomb of the prophet Saleh, one of the principal sacred places of the district. Kabr Saleh is

equally venerated with the Kabr Hud, also called the tomb of the prophet Eber—for, from what we could gather from the statements of intelligent natives, Eber and Hud are synonymous terms—which tomb is to be found in the Tamimi country further up the main valley. We encamped for the night at Al Garun, and met with considerable opposition from the Beduins and our escort when we proposed to visit the Kabr Saleh next day. However, this was overcome by threats of reporting the opposition to Sultan Sallah on our return to Al Katan. So next morning we started.

A short ride of two hours brought us nearly to the head of the Wadi Khonab, and there, situated just under the cliff, in an open wilderness, is the celebrated tomb. It consists simply of a long uncovered pile of stones, somewhat resembling a potato-pie, with a headstone at either end, and a collection of fossils from the neighbouring mountains arranged along the top. Hard by is a small house where the pilgrims take their coffee, and the house of the Beduin mollah who looks after the tomb is about a quarter of a mile off. Beyond this there is no habitation in sight. A more desolate spot could hardly be found. The tomb is from 30 to 40 feet in length, and one of the legends concerning it is that it never is the same length, sometimes being a few feet shorter, sometimes a few feet longer. The Beduins have endless legends concerning this prophet. He was a huge giant, they said, the father of the prophet Hud, or Eber; he created camels out of the rock, and hence is especially dear to the wandering Bedu; and he still works miracles, for if even unwittingly any one removes a stone from this grave, it exhibits symptoms of life, and gives the possessor much discomfort until it is returned. Once a domed building was erected over the tomb, but the prophet manifested his dislike of being thus enclosed, and it was removed. All our men treated the grave with the greatest respect, and said their prayers around it, barefoot. At the time of the ziara, or pilgrimage, we were told, crowds of Beduins from all the valleys and hills around flock to worship.

When we first got there, we were permitted to approach within a few yards of the tomb, so that we saw it very distinctly; but when, after eating our luncheon, and a siesta under a tree, we again advanced to inspect it, the Beduin mollah attacked us with fierce and opprobrious language, and, fearing to further arouse the fanaticism of these wild people, we speedily mounted our horses and rode away.

These two primitive tombs of their legendary prophets, zealously guarded and venerated by the Beduins, are a peculiar and interesting feature of the Hadramut. We were unable to visit the Kabr Hud, but I am told, on reliable Arab authority, that it is similar in every way to the Kabr Saleh—just a long pile of stones, about 40 feet in length, uncovered, and with its adjacent mosque. It is a curious fact that when one turns to the tenth chapter of Genesis—the best record we have of the

earliest populations of our globe—we find the patriarchal names Salah, Eber, and Hazarmaveth, which name, as I previously stated, corresponds to Hadramut, following one another in their order. I am at a loss to account for these names being still venerated by the Beduins, unless one admits a continuity of legendary history almost too wonderful to contemplate, or else one must consider that they were heathen sites of veneration, which have, under Moslem influence, been endowed with orthodox names. Certain it is that these tombs in the midst of the wilderness are peculiarly the property of the Bedu, and, though visited, and to a certain extent venerated, by the Arabs, they do not attach so much importance to them as they do to the tombs of their own walis, or saints, which are always covered tombs, near or in the centre of the towns. Another curious point I may mention in connection with these tombs is that the Arab historian, Yaqub, in his Mu'gam ii. 100, tells us of a god in Hadramut, called Al Galsad, who was a gigantic man; perhaps this god may have something to say to the giant tombs of Saleh and Eber. Also Makrisi, who wrote in the tenth century A.D., speaks of a giant's grave he saw near Shabwa.

On our return to Al Katan, Sultan Sallah informed us that the negotiations with the hostile Katiri tribe, which he had entered into with the view of our being allowed to pass through their dominions to Kabr Hud and Bir Barhut, a curious volcano or solfatare in a cave near the grave of Hud, had failed, and that the sultans of the Katiri tribe had proclaimed, at the Friday's prayer in the mosque, that they would not admit the infidel; but that the tribes to the east of the Katiri—the Menhali, Tamimi, and Amri—had all sent us cordial invitations. Under these circumstances, Sultan Sallah advised us to return by a devious route to the coast at Sheher, and, if time permitted, to make our journey to the Eastern Hadramut direct from there. This volcano of Bir Barhut should be an extremely interesting spot. Makrisi mentions it as an awe-inspiring volcano in his book, and the Arabs to-day say it is the spot where the souls of unbelievers are sent after death. It is just possible that it may be the *Fons Stygis* of Ptolemy, though, if it is, the position he has given it is erroneous.

On leaving Hadramut, we were handed over to the tender mercies of one Talib the son of Abdullah, the chief of the Jabberi tribe, who inhabit the Wadis Bin Ali and Adim, and also trace their descent from Jabber, a friend and counsellor of Mohammed's. This journey was long and tedious, but afforded us much interest and opportunities of observing the life of the Beduin tribes through which we passed. We found other Himyaritic ruins in the Wadis Bin Ali and Adim. This latter valley, the entire course of which we traversed, has many peculiarities which distinguish it from the other valleys running into the Hadramut. It has in it a running stream called Ghail Omar (and here I may mention that all the running streams, and there are very few of them,

are called Ghail), and is very fertile and full of palm groves. Excellent honey is made in the Wadi Adim, and the Hadramut is celebrated for its honey all over Southern Arabia; it is made from the palm flowers, and has a deliciously scented taste. Pliny alludes to this honey in his sixth book as being, with frankincense and flocks and herds, one of the chief products of this district. Then again the Wadi Adim gradually slopes up to the high plateau, and does not come to an abrupt termination like the other valleys. During the dry season, when there is no water in the tanks on the plateau, all the caravans to the Hadramut pass up this valley; it is far more tortuous than any of the other valleys, and stretches so far down towards the coast that the traveller has but little of the plateau to cross before descending to the sea, and seems to be the natural drain of this high plateau.

Owing to the fact, of which we were previously ignorant, that the Jabberi were at war with the Hamumi, who dwell in the narrower defiles of the Wadi Adim, we were exposed for some time to considerable difficulties and danger on this road, but eventually, with the loss of a little money paid in black mail, and having been fired at on four different occasions, we safely reached Sheher at the beginning of March. As a rule I consider travelling in Arabia, though arduous and productive of endless worries, is on the whole safe. Before entering the territory of a tribe you must have a *sayyir*, or guide, from that tribe, and when you have paid the *sayyira*, or toll money, you may travel with safety. Dangers in Arabian travel have generally arisen from travellers entering tribes without the *sayyir*, and though we were menaced, and on more than one occasion frightened for our lives, we never lost a thing during our whole journey. Sultan Houssein Al Kaiti, of Sheher, willingly engaged to send us with a sufficient escort to Bis Barhut and the Eastern Hadramut, but the season was too advanced and our resources too low to permit us of again penetrating into the interior. So we contented ourselves with making an expedition along the coast towards Saihut, which was chiefly of interest from a geographical point of view, enabling us to determine the course of the Hadramut to its outlet, and the configuration of the plateau, whilst we reserved further explorations in the interior for another season.

In conclusion, I wish publicly to tender my thanks to Imam Sharif Khan Bahadur, who accompanied us as surveyor from the Indian Government, and who worked assiduously at his map and observations during the journey, for his great assistance throughout the whole of our expedition. Owing to the distinct opposition to our expedition which was manifested by our own Government at Aden, we should have found it difficult to do even what we did do without Imam Sharif, who could in Hindustani freely converse with those of the natives who had lived in India; and I am further convinced that if our own Government had given us a more willing support, we might have been easily able to

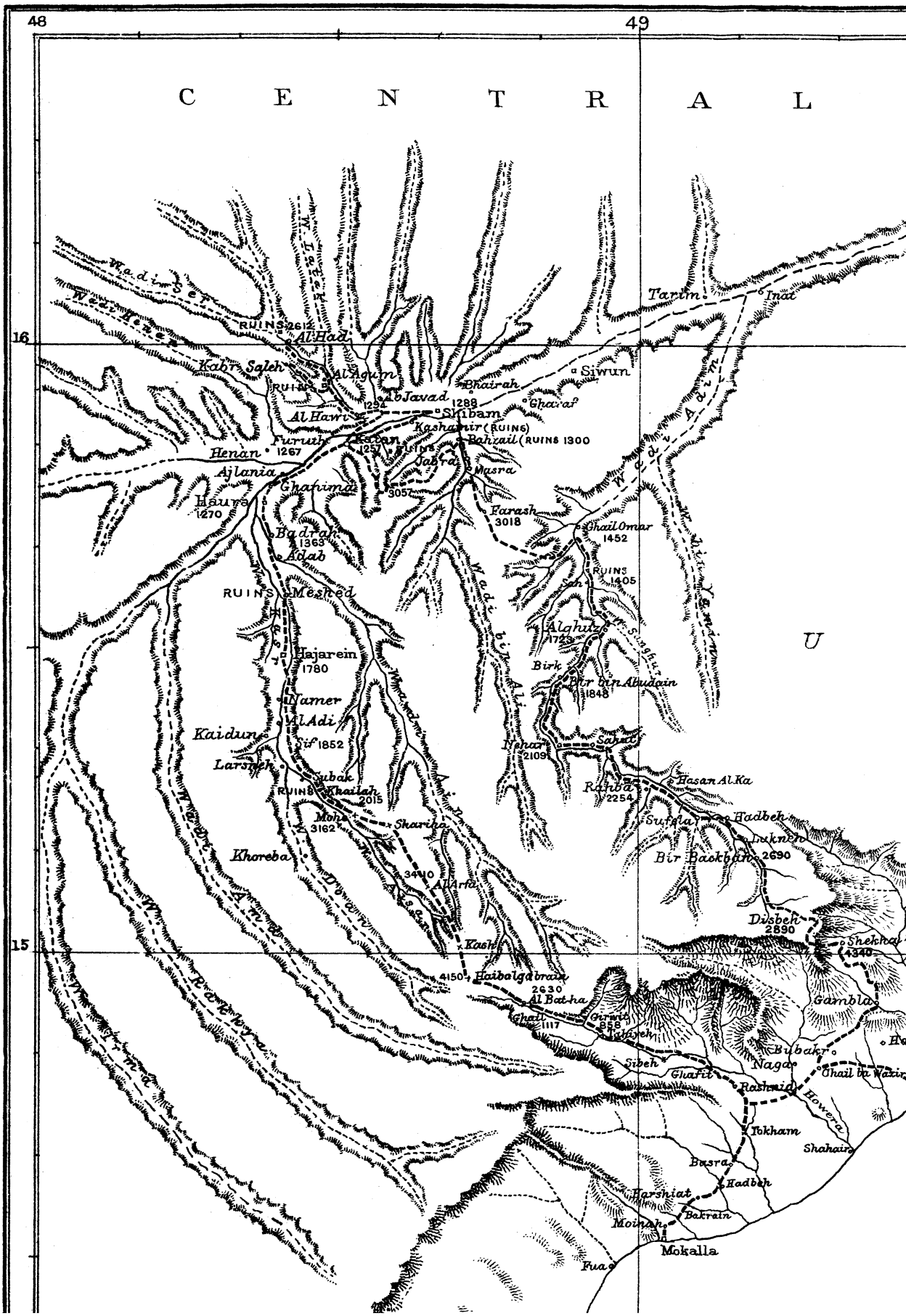
accomplish much more. As it is, thanks to Imam Sharif, we are now able to constitute a survey of a little-known district to the geographical world. Also Wm. Lunt, who accompanied us as botanist from Kew, with a grant from the Royal Society, worked indefatigably at his collections, which are now in the hands of Mr. Thiselton Dyer; and Mahmoud, the Egyptian naturalist, who was sent out by the British Museum, has, I am told, made a very satisfactory collection of reptiles, a complete set of which will be presented to the Museum.

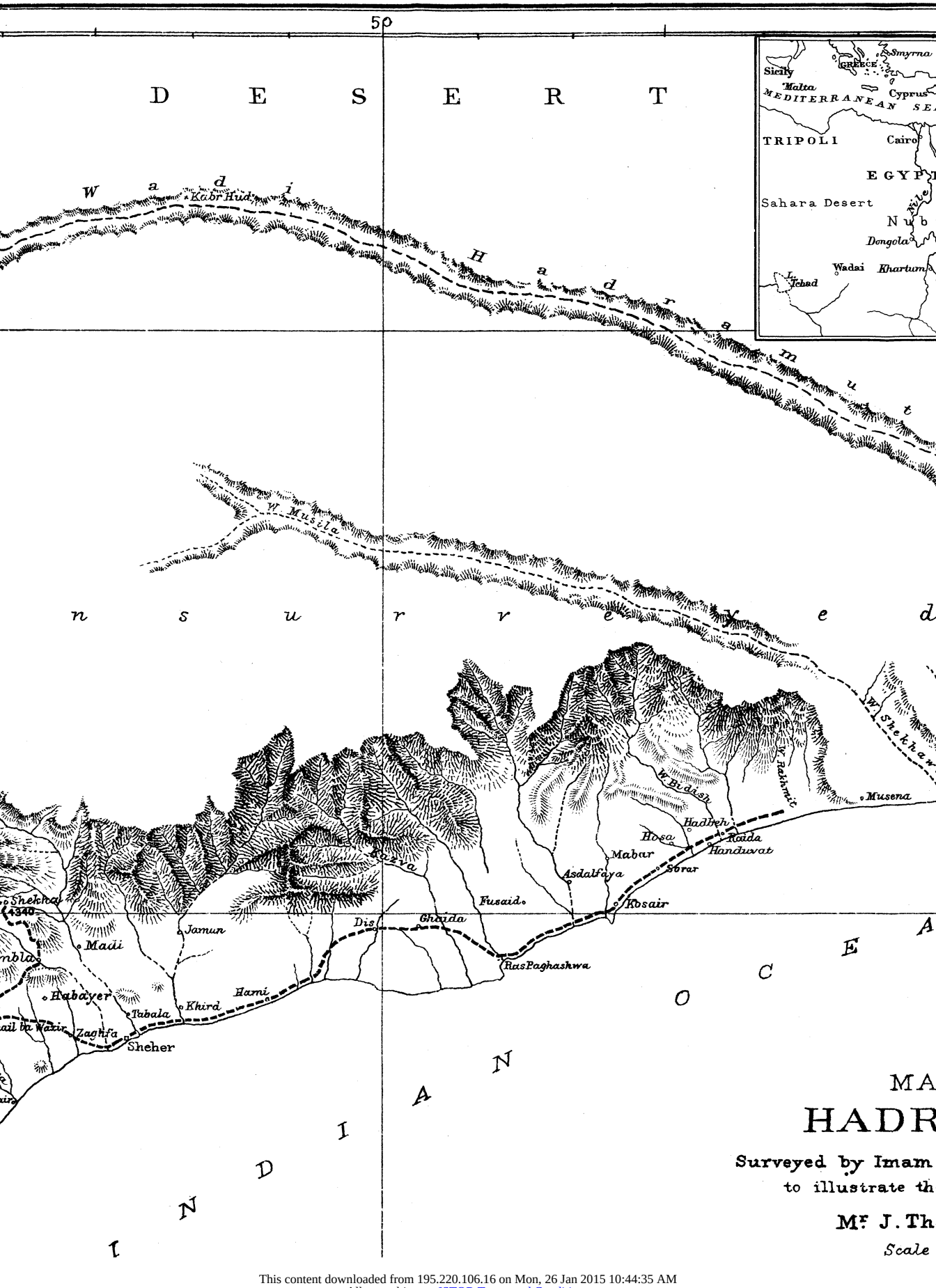
The PRESIDENT made the following remarks before the reading of the paper:—

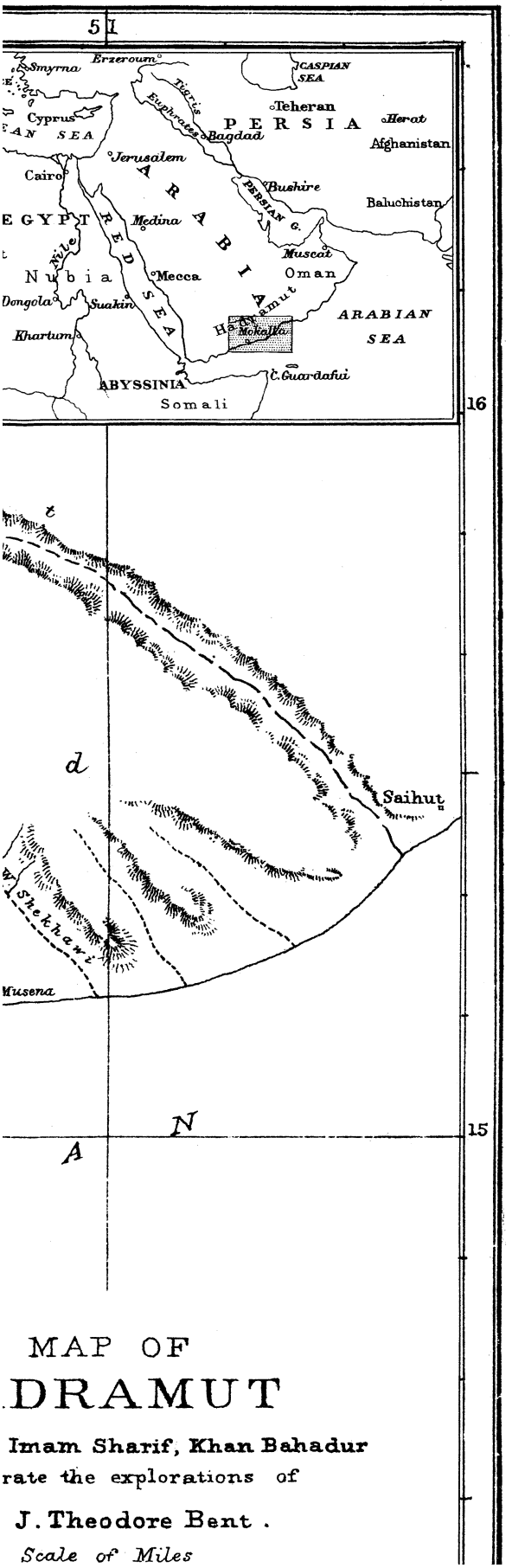
I am sure the meeting will cordially welcome the return amongst us of Mr. and Mrs. Theodore Bent. It seems so short a time since they were here and since we bade them farewell, that it is difficult to believe they have gone through so many adventures, hardships, and perils, and have explored an almost unknown country to Europeans in the interval. I regret to say they have met with very serious and very wanton official obstruction at Aden, which very much increased their difficulties and also the danger of their undertaking. I will not detain you any longer, but will now request Mr. Bent to read us his communication.

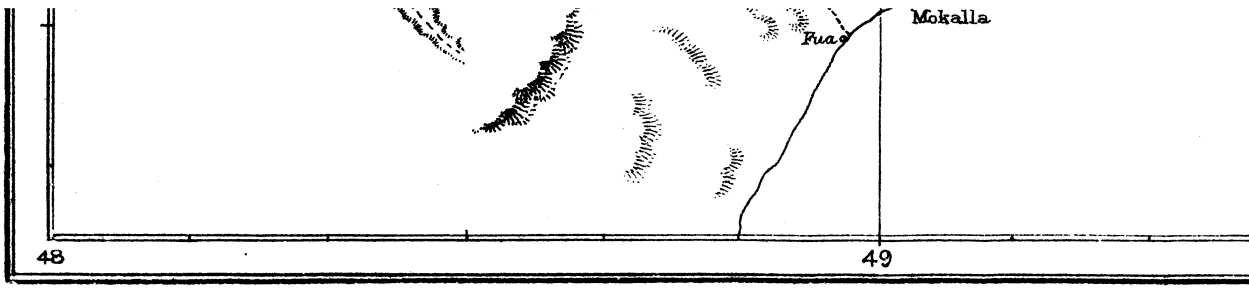
After the reading of the paper the following discussion took place:—

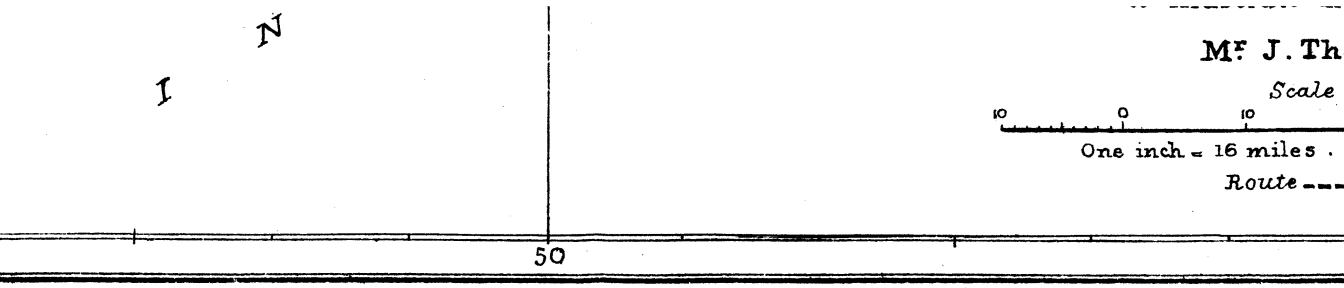
Mr. THISELTON DYER: I cannot imagine that the Royal Geographical Society can often have listened to a more fascinating narrative of travel than that which has been laid before us to-night by Mr. Theodore Bent, and I think we must all have felt an agreeable kind of disillusion on hearing the account of what he had actually seen compared with what we thought before he started he might have to endure. I certainly for my part did not suppose that we should get such a glimpse as we have had of Oriental civilization as it seems to exist, with magnificent palaces and splendour, in the Hadramut valley. With regard to my interest in the result of Mr. Bent's journey, I shall not trouble you with more than a very few words. Of course, the geographer has to consider the world's surface from the point of view of its physical features and political divisions. The botanist, on the other hand, simply studies the vegetable productions of the soil and their relations in any one case to those of other areas which he has examined. I shall perhaps surprise you when I tell you that although undoubtedly in the geographical, and to a certain extent political, sense, Arabia belongs to Asia, yet if you study the vegetation, it is equally undoubtedly a part of Africa. It is a very extraordinary thing, and one which the scientific botanist has always felt some despair about, that, although Arabia confronts us at every point of the world's history, it is the one part of the world of which I may say at present we really, as far as natural history is concerned, know least. And even at the present time, although some amount of information has been obtained, it is almost entirely derived from the south-west corner, the province of Yemen. The botanical history of Arabia can be told almost in four words, beyond the little we read in the Bible about the myrrh and frankincense which former Phœnician commerce carried up the Red Sea and introduced into the Mediterranean. From that time until the end of the last century, we knew practically nothing more about the vegetable productions of this great peninsula. At that date an intrepid Dane, Forskal, spent some time in exploring the province of Yemen. He did admirable work, but unhappily left his bones in the country with which his name will ever be associated as the first botanical explorer. A hundred years later, Deflers, a Frenchman who had lived in Egypt, fired with enthusiasm to continue the work of Forskal, made an











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