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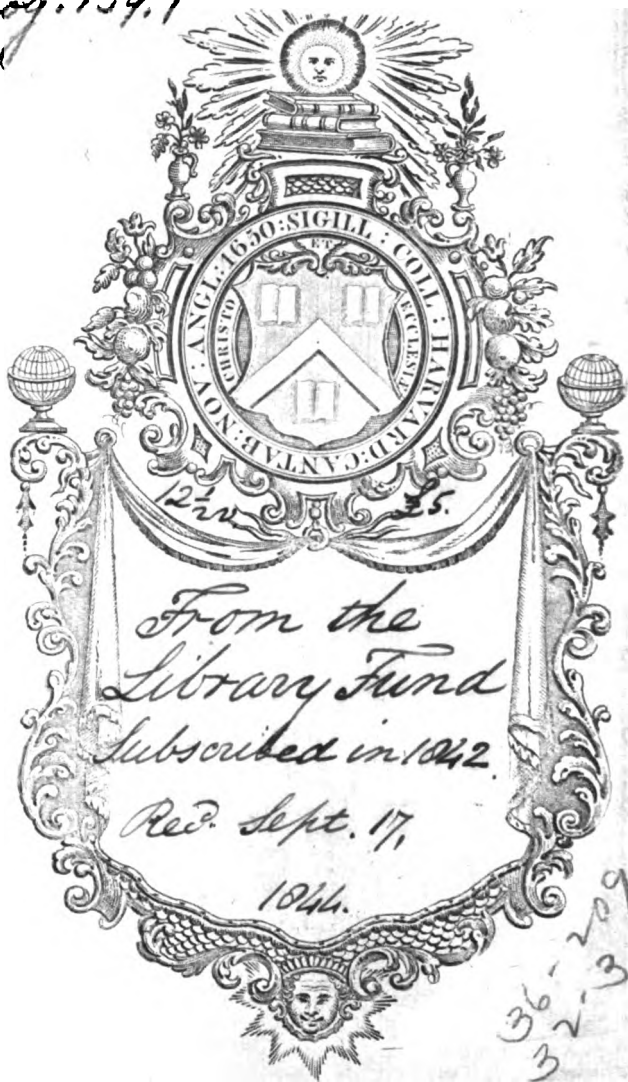
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THE JOURNAL

OF THE

ROYAL GEOGRAPHICAL SOCIETY

OF

LONDON.



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ERRATA.

Vol. VII.

- Page 215, in note, for Boerecha, read Bonechea.
 — 216, — for India, read London.
 — 221, line 8*, for W. lat., read W. long.
 — 243-270, for Count Gråberg, read Count Gråberg, *passim*.
 — 244, line 16, for 'Abdu, read 'Abdi.
 — — 19, for ben Ma'sûd, &c., read 'Abdi-s-salâmi-t-Temsemami.
 — 246, — 1, *dele* point at end of line, *insert* a comma.
 — — — 2, *move down* ر رآ r. to stand alone.
 — 247, — 23, for 'Aghla, read Aghla.
 — — 25, *add* at end of line, Elevated, height.
 — 249, — 11, for Al-mudrâwah, read Al-madrâwah.
 — — 25, *after* town, *add* and tribe.
 — 250, — 14, for محمد محمد read محمد محمد
 — — — 4*, for Azgun, read Azgan.
 — — — *ult.*, read Zuwoaghah.
 — 251, — 5, for بحر الكبير read بحر الكبير *Add* children of Mohammed.
 — — — 14, for Britist, read Betist.
 — 252, — 18, *add* Tifilett.
 — — 5*, *add* North Africa.
 — 253, *insert* بوالوان Bu-l-awân, town 32° 43', 7° 12'; Easy ford, father-passage.
 — 254, — 1, read دقالة Dukhâlah, the elevated plain.
 — 256, — 1, *add* plantation on two heights.—Ar.
 — 257, — 13, *add* 'Aith-Akensûs?
 — — — *ult.*, for excellent, read conspicuous.
 — 259, — *ult.*, *add* the Luccos of our Maps.
 — 261, — 22, *a*id and tribe; the city is properly named *Miknas*, population 55,000?
 — 263, for Cape Fegato, read Cape Fegalo.
 — 264, — 2, read Sôma' Hasan.
 — 266, — 12, read Tarfu-sh-shakhar.
 — — 17, for Tawant, read Tawint.
 — — 22, *add* filthy.
 — — 26, *add* abounding with plants.
 — 267, — 1, for west, read coast.
 — 400, — 7*, for alluded, read attended.
 — 402, in note, *dele* 'which if' to the end of the page.

Vol. VIII.

- Page 47, line 18, for W.S.W., read N.W.
 — — — for S.S.E., read S.S.W.
 — 262, — 16*, for all, read atl.
 — 264, — 13*, for altered, read allied.

(*) Count from bottom.

Royal Geographical Society.

1838.

AT THE

ANNUAL GENERAL MEETING, MAY 21, 1838,

The following Report from the Council was read:—

Since our last anniversary, sixty-five new members have been elected, and ten vacancies have occurred in the Society, which now consists of 600 members, exclusive of Foreign Honorary and Corresponding Members.

During the past year we have had to deplore the loss of our late most gracious Sovereign, William the Fourth; a monarch whose name, associated as it is in the annals of our country with the progress of discovery in Africa, Australia, and in both the Arctic and Antarctic Oceans, must ever live in the remembrance of the Geographical Society as its first munificent Patron and Benefactor.

The Council have great gratification in announcing that Her Majesty QUEEN VICTORIA has been graciously pleased to become the Patron, and to continue to the Geographical Society the same annual donation of a Royal Premium which had been originally granted to it by her royal predecessor.

Finances.—The state of the finances of the Society, the details of which are annexed, continues satisfactory. The only item of extraordinary expenditure consists in 150*l.* towards the expedition in British Guayana, but this has been paid out of the annual income without touching upon the capital stock invested in the funds.

Publications.—The Journal of the Society for 1837, as in former years, has been published in two parts; and it may be safely asserted that it is not inferior to any of the former volumes, either in the importance of its matter, or in the correctness of its illustrations.

An attempt has also been made to reduce Arabic and Oriental names to one standard of orthography; and on this subject the Council gladly embrace the opportunity afforded them of recording their thanks to their learned Foreign Secretary, to whose able and gratuitous assistance they are indebted for much of the value of the various communications, contained in the Geographical Journal, connected with the East.

The Council have also to acknowledge the continued zealous co-operation of Mr. John Arrowsmith in superintending the drawing and engraving the Illustrations of the volume.

Hitherto the Journal of the Society has been published in two parts, in the months of May and November each year, but the Council, having considered that much of the value of geographical information depends upon its being made public with as little delay as possible, have determined in future to publish the first part of the Journal in February, the second in May, and the third, as at present, in November. Acting upon this resolution, the second part of Vol. VIII. is now laid on the table.

The first edition of Part I. Vol. III. of the Journal having been exhausted, while the demand for it still continues both by the public at large and by new members desirous of procuring complete sets of the Society's Transactions, the Council has directed it to be reprinted, and it is now ready.

The Grammar of the Cree Language, by Mr. Howse, which was undertaken conjointly with the Church Missionary Society, advances towards completion; but it will not be ready for publication before the close of the present year.

Her Majesty's Donation.—The Royal Premium for 1837 has been awarded by the Council to Lieutenant-Colonel CHESNEY, of the Royal Artillery:—for his various travels in the East preparatory to the plan of the Euphrates expedition;—for the energy and perseverance shown by him in its general conduct, and during

its progress ;—and for the valuable materials both in comparative and physical geography, resulting from the labours of the expedition, in the countries of Northern Syria, Mesopotamia, and the delta of Susiana.

Nor can the Council omit while acknowledging the claims of Colonel Chesney as the original projector and leader of this expedition, to notice how materially he was aided throughout this arduous undertaking by the zealous and cheerful co-operation of the officers and men associated with him ; namely, Major Estcourt, 43rd regiment, who was in command during the ascent of the Karún, &c. ; the late Lieutenant Murphy, Royal Engineers, astronomer ; Lieutenant Lynch, I.N., and after his departure Lieutenant Cleaveland, R.N., who commanded the naval part of the expedition ; Mr. Ainsworth, as geologist and naturalist ; Mr. Rassam, a native of Mosúl, as interpreter ; the late Lieutenant Cockburn and Dr. and Mr. Staunton, of the Royal Artillery ; and Messrs. Eden, Charlewood, and Fitz-James, Lieutenants in the Royal Navy.

Other enterprising travellers have also established strong claims to the gratitude of the Society ; and among these Captain ALEXANDER, of the 42nd regiment of Royal Highlanders, for his late journey in South Africa from the Cape of Good Hope across the Orange river, and through the country of the Great Namáguas to Walvisch Bay ; thence 200 miles due east to the country of the Dámaras, and by a different route back to the Orange river. In the course of this journey several new objects in natural history have been added to our collections—some account of the Dámaras has been obtained—and the features of an extensive part of hitherto unexplored country has been traced on our maps.

Mr. W. I. HAMILTON is especially entitled to honourable mention for the zeal he has shown in the collection of geographical and other information in his various journeys, during the years 1836-7, throughout Asia Minor, from the ruins of Anni on the east to Smyrna on the west : in the course of which he has fixed the sites of several ancient cities—has given an account of the geological formation of the country—and, in comparative and physical geography, has furnished valuable *data* for the improvement of our maps of Asia Minor and part of Armenia.

Messrs. DEASE and SIMPSON claim our warmest applause; these two enterprising officers of the Hudson's Bay Company have successfully traced the hitherto unexplored country between Point Barrow and Franklin's Farthest; and thus has a continuous line of 60° in extent of the northern coast of America been explored by British hardihood and perseverance.

Lastly, the labours of Mr. SCHOMBURGK in British Guayana, which it is hoped are not yet terminated, claim especial notice, for the perseverance he has manifested, in spite of an unhealthy climate, in exploring the rivers Essequibo, Berbice, and Corentyn—in obtaining much topographical information—and for having very materially added to our knowledge of the natural productions of that rich and fertile country.

Auxiliary Association.—The Bombay Geographical Society, originally a branch of our own, has received such encouragement in India as to proceed to the publication of its own Transactions, the two first volumes of which have been transmitted to us; from these, and from the future publications of that Society, now independent, notices will from time to time appear in our Journal.

On this occasion the Council have to direct attention to the great value of the papers on the hydrography of the rivers and coasts of India and Arabia, contributed by the officers of the Indian Navy.

From the Egyptian Society at Cairo no communication has been received.

Original Expeditions.—Of the expeditions more immediately under the control of the Society, the Report of that into the interior of South Africa has been published in the First Part of Vol. VIII. of our Journal.

In British Guayana a detailed Report of Mr. Schomburgk's ascent of the rivers Berbice and Corentyn appeared in Vol. VII.; since which Mr. Schomburgk has again ascended the river Essequibo to its junction with the river Rupunúny: following the upward course of the latter, he ascended its tributaries, the Rewa and Quitaro, and on the 17th November, 1837, the date of his last letters, he had reached the latitude of $2^{\circ} 31' N.$, some

miles beyond his extreme point on the former expedition, and was then about to start to explore the mountain range of the Sierra Acaray, and to connect, if possible, his observations with those of Baron Humboldt, on the Orinoco, one of the principal objects originally contemplated by the expedition.

The Council have thought fit to give their countenance and support, in conjunction with the Society for the promotion of Christian Knowledge, to an expedition about to proceed to Kurdistán, its object being to make acquaintance with the Nestorian Christians, and the mountainous country they inhabit in the districts of Hakkari, Julamerik, Amadíyah, &c.

Mr. Ainsworth, well known as naturalist to the Euphrates expedition, and Mr. Rassam, a Nestorian Christian, a native of Mosúl, already mentioned as interpreter to the same expedition, were strongly recommended by Colonel Chesney as fit persons to conduct such a mission; and the Council, considering the exploring Kurdistán a proper object for making use of a part of the funds intrusted to their charge, have appropriated the sum of 500*l.*, to be divided over two years, for this purpose. The Society for promoting Christian Knowledge have contributed a like sum for the furtherance of the objects of this expedition.

In consequence of this decision no time has been lost in making the requisite arrangements for the departure of the expedition; the joint instructions to the travellers have been carefully prepared; they are furnished with good instruments; the necessary passports and firmans are procured; Mr. Rassam has already gone to Malta on his way to Constantinople; Mr. Ainsworth, accompanied by Mr. Russell, as his assistant, will shortly leave London to take up his head-quarters at Mosúl; and the Council confidently anticipate a valuable harvest of geographical and general information, relating to the countries of Mesopotamia and Kurdistán, from the well-tried zeal and energy of the individuals to whom the charge of the expedition is intrusted.

A proposal, originating entirely with Egyptian travellers, for exploring, by means of a native of Dongola, the course and sources of the Bahr el Abiad, or western branch of the river Nile, having been brought before the notice of the Society, the Council have

considered it right to vote a sum of 50*l.* for the furtherance of the object of such an expedition.

Foreign and Colonial Correspondence.—Three Corresponding Members have been added to the Society during the past year—Colonel LAPIE of the Dépôt de la Guerre, at Paris; Don José de URCULLU, at Oporto; and Don Pedro de ANGELIS, at Buenos Ayres, author of a valuable collection of documents relative to the Rio de la Plata; and the Council have great pleasure in noticing the gradual and steady increase of the Foreign and Colonial Correspondence of the Society.

Library.—A list of the accessions made to the Library, consisting of about two hundred volumes, is printed with this Report. For many of these works the Society is indebted to the liberality of Foreign Academies; but more particularly to the *Dépôt de la Marine*, at Paris, for several valuable donations.

At a Special Meeting of the Council of the Society, held on July 8, 1837, the following Address to the Throne was agreed upon.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

The humble Address of the President, Vice-Presidents, and Council of the Royal Geographical Society of London.

MOST GRACIOUS SOVEREIGN,

We, your MAJESTY's dutiful and loyal subjects, the President and Council of the Royal Geographical Society, beg leave to approach your Throne, and most respectfully to offer, in the name of the Society, our sincere condolence on the occasion of the death of His late Majesty.

In common with all classes of your MAJESTY's subjects, we have to deplore the loss of a beloved Sovereign; but the Royal Geographical Society has especial cause to revere the memory of William the Fourth as their first gracious and munificent Patron.

Yet whilst expressing our sense of gratitude to our late illustrious Sovereign, we feel that the cheering duty awaits us of respectfully offering our congratulations on the happy accession of your MAJESTY to the Throne of a great empire; and we beg permission to offer our heartfelt thanks for your MAJESTY's gracious condescension and munificence in granting to us the honour of your Royal Patronage and in bestowing upon the Society a Royal Premium for the encouragement of geographical science and discovery.

England has achieved some of her proudest triumphs under the sovereignty of a Queen; the annals of our country record the names of Drake, the celebrated circumnavigator, and of Raleigh, the adventurous discoverer, both distinguished during the reign of Queen Elizabeth; and we confidently anticipate that the reign of your MAJESTY will be equally famed for its glory and prosperity, and for the promotion of geographical knowledge.

That your MAJESTY's reign may be rendered illustrious as the era of important discoveries which may diffuse the blessings of civilization throughout the globe, as well as endeared to the affections of a free and grateful people, is the earnest wish and ardent prayer of your MAJESTY's loyal subjects the President, Vice-Presidents, and Council of the Royal Geographical Society.

(Signed by the President and Council.)

Dr.

The above Accounts for 1837 have been examined by us and found correct.

(Signed) { J. TREMAYNE RODD.
W. I. HAMILTON.

(Signed) **JOHN BIDDULPH,**

ESTIMATE FOR 1838

Dr.

Cr.

	£	s.	d.		£	s.	d.
Balance in Hand	.	.	30 18 11	House Rent	.	.	110 0 0
Probable Amount of Subscriptions, viz.	.	.	.	Salaries	.	.	300 0 0
Entrance of 40 Members	.	£120	.	Printing Journal	.	.	290 0 0
Composition of 20 ditto	.	34	.	Illustrations for Journal	.	.	110 0 0
Subscription of 210 ditto	.	420	.	Reprinting Journal, Vol. III., Part I.	.	.	30 0 0
		—	880 0 0	Guayana Expedition	.	.	100 0 0
Arrears likely to be recovered	.	.	100 0 0	Kurdistan Expedition	.	.	125 0 0
Dividends on Stock	.	.	168 0 0	Books and Maps	.	.	100 0 0
Sale of Journal	.	.	100 0 0	Office Expenses, including Firing, Lights, Refreshments at Meetings, Attendance, Postage, &c.	.	.	100 0 0
Royal Premium	.	.	52 10 0	Collector	.	.	21 0 0
			£1320 8 11				£1286 0 0

JOHN WASHINGTON.

At a special meeting of the Society, held on Monday, the 14th May, 1838, for the purpose of presenting the Royal Premium to Colonel Chesney, the President addressed him in the following words:—

“Colonel CHESNEY,—When, on two former occasions, the annual Royal Premiums awarded by the Council of the Royal Geographical Society were presented from this chair, first, to Captain Sir John Ross, and afterwards to Captain Back, they were congratulated on the triumphs they had achieved over the difficulties which had met them in the regions of perpetual snows and ice, amidst inhospitable and untrodden deserts, and on tracts of land which they had brought to light for the first time since the world was tenanted by man.

“It is now my no less pleasing duty to offer to you the warm acknowledgments of this Society, and to present to you this Royal Premium, for the equally brilliant successes which have marked your progress, under the opposite extreme of temperature, in re-opening to the civilised world a large portion of those countries, which, in times of yore, were the seat of extensive monarchies, which abounded in flourishing and populous cities, and whose inhabitants were equally famed for their conquests, their commerce, and their science, but which countries have long been excluded from the pale of polished nations, and plunged in a state of barbarism perhaps more to be deplored than the life of the hunter in the woods, because it presents a combination of the sloth and ignorance of savage life with the vices of degenerate civilization.

“In the year 1830 you were prompted by your own ardent zeal for the honour and welfare of your country, and by your wish to confer upon it a signal service, by extending its commercial resources, with a direct view, too, to the enlargement of geographical knowledge, to visit the south-eastern provinces of the Turkish empire. You spent nearly three years in exploring these regions and in surveying the shores, depths, and shallows of the Euphrates, its resources, difficulties, and facilities, in order to ascertain the feasibility of its navigation with European vessels, properly constructed; and thus making this river, once so celebrated in the annals of antiquity, but which had for twenty centuries rolled along its majestic waters uselessly to man, again available for the noblest purposes of life,—again to be a channel for social and commercial intercourse: but not merely for the benefit of the Assyrian and the Chaldee, but for the great purpose of approximating, as nearly as possible, the shores of Britain, the emporia of Europe, with the great towns of India, now the brightest spot on the continent of Asia.

“This project, the offspring of your enlightened benevolence and patriotism, was followed up by your own characteristic energies; and after many difficulties thrown in your way by the doubts and hesitations natural to those who were to be responsible for the prudence of the undertaking, your views were adopted, and you succeeded in prevailing upon the Government to fit out the Euphrates Expedition.

“On the results of this expedition (whatever differences of opinion may still exist respecting the practicability of adopting the line of the Euphrates as the means of that regular commercial intercourse to which I have alluded), there can be but one opinion on the ability with which

it was planned, the foresight with which all the necessary accompaniments of it were provided, the skill by which it was directed, and the cordial co-operation with which it was conducted to its close by all who were assigned to you as assistants in the task. These individuals have received substantial proofs of approbation, whether by immediate promotion, or by equally acceptable testimonies in the shape of employment in the same countries; but it is the peculiar province of this Society, and a most gratifying duty at the same time, to testify their appreciation of the distinguished service you have rendered to the science of geography, as well in your first independent journeys, as afterwards, when as an officer in the public service. You have been the pioneer to point the way, and to open the road into a large range of country hitherto very imperfectly known; you, and those under your command, have really navigated for the first time in modern history two of the most celebrated rivers of the ancient world—the Euphrates and the Tigris: you have added largely to our knowledge of Syria, Mesopotamia, Assyria, and Susiana. You have carried on a line of levels from Iskanderûn to Bîr, and thence along the whole course of the Euphrates to the Persian Gulf. You have laid down the course of the Orontes from its mouth to Jisr Hadîd; and you have done more than enough to secure to yourself a place amongst the distinguished geographers of our time. These are the grounds upon which the Council of the Royal Geographical Society have judged it right to award to you the first Royal Premium, which the munificence of our illustrious Patroness Queen Victoria has placed at their disposal, for the reward and encouragement of geographical researches; and I have only to add the expression of hearty satisfaction which I feel at being the organ of the Society on this auspicious occasion."

To this address Colonel Chesney replied:—

"Sir,—The honour just conferred by the Royal Geographical Society of Great Britain would be most gratifying to almost any man; and, for many reasons, it must have an increased value in my estimation, if I thought I really had any other claim to it than that of having been at the head of the energetic men who actually performed the work.

"My individual efforts prior to the late expedition have been kindly noticed, but I must hope for permission to pass by altogether the descent of the river Euphrates in 1830, which is now but a matter of imperfect recollection, and the award being in reality for the late expedition, I cannot help feeling some regret that the rules of the Society did not permit me to urge the claims of those which were greater than mine individually; for I, at least, cannot forget that the almost unequalled labour of the transport across Syria was chiefly accomplished whilst I was confined with a brain fever, and that the leading discoveries in geography were made when I was not even present. It is true that every individual performed his part admirably; but the situations of some made them more conspicuous than others: for instance, the discovery of a new river, and the examination of Susiana, took place when I was in India, Major Estcourt being then in command; and, as you all know, the valuable mines, &c. in Kurdistan were met with by Mr. Ainsworth, when coming home from the Euphrates steamer, which had been laid up at Bagdad, after a successful navigation of more than 3000 miles of unknown rivers; and it is sufficient to observe, that this was accomplished under the direction of

Lieutenant Cleaveland, R.N., and his two persevering Lieutenants, Messrs. Charlewood and Fitzjames, without having touched even *once* the dreaded rocks of the rivers Euphrates, Karun, and Tigris, of which we hear so much in this country.

"As, therefore, both the credit of anything like the advancement of geography, as well as the more daring part of the navigation, belongs to others, I should have been still more gratified if the award had passed through me to one of the two gentlemen who remained to the close of the expedition; but as it has been decided otherwise, I accept the medal as their representative, and in doing so, I would offer my warmest thanks to the President and other distinguished individuals composing the Council of this body at large, which, I hope, will add to the distinction they have conferred, by permitting my name to be added to their numerous list of members.

"It may not be quite out of place to say a few words about the late enterprise, which, we all know, was not popular; why, I cannot say, but I am not without the hope that the distinction conferred on the expedition this evening may, in time, lead to a different state of things, as the geography of Asia becomes better known. We have had to contend with prejudice, and ignorance, its handmaid, to an extent which would have been amusing if the effects had not been so fatal.

"Men are ready to encounter the greatest dangers and the most trying difficulties for a brief period, but protracted trials like ours, during a temperature which varied between 108° under a tent, and 8° below Zero in a house, with at least *one* serious attack of illness in every individual case, are seldom met with the same unshaken constancy displayed by the officers and men throughout this gigantic operation, which alternately engaged Lieutenant Lynch, and every other person, myself excepted. This work, which would have been nothing, comparatively, if the Pasha had not broken up the judicious arrangements made as to camels, boats, &c., by Lieutenant Lynch before we arrived, was effected, after the successive illness of Major Estcourt and all the others, by Lieutenant Cleaveland, who was in charge of the operation for the second time, when he brought in the last boiler to Port William, by means of 104 bullocks and fifty-two men, guiding them through the deep mud. Besides the difficulty, there was another marked circumstance attending the transport, viz., the decided honesty of the Arabs, who were intrusted with many valuable things, which were taken, unattended by any European, from the sea to Port William, almost invariably without loss; and subsequently they continued to bring our letters and parcels of money, wherever we happened to be, with equal fidelity; indeed, we never had but one misunderstanding during the two years we were amongst the different tribes of Arabs.

"The descent and survey of the river were commenced 16th March, 1836, by the two vessels, which had been thus carried in frame from the Mediterranean to the Euphrates, and there successfully put together. All went on well up to the 21st of May, when our first and only calamity occurred by the loss of the Tigris, and with her twenty fine fellows, and most of our tools.

"Great as this calamity was, which thus deprived us of half our means, both morally and physically, it had a decisive result on our ulterior proceedings. My original instructions were to break up the expe-

dition on reaching Basrah, which were repeated in a letter I received from the President of the Board of Control about ten days before the storm, the contents of which I had kept to myself, not to discourage the others, and meaning to obey; but when the vessel was carried to the bottom I determined to continue the expedition at my own risk; and I look back with gratitude on the willing support I then received from every one, at a time when a recent calamity of such magnitude was instantly met by an offer to give up their pay, in order to lighten the expense, and lessen my responsibility. The Euphrates steamer having continued the descent to Basrah with the same marked success as before, and there being no means whatever there to replace our tools, or even to obtain plank, we proceeded to Abú-shehr, where she was refitted after much difficulty and great delay.

“On returning to the Euphrates, we examined the River Bahamishír, and Karím—then carried an Indian mail to Bagdad; and after this was done we commenced the ascent of the Euphrates, when its waters were at the lowest; but we found sufficient even for our large vessel, until an accident happened by cracking the cross-head of the air-pump, and she returned with one engine only, without the hope of doing anything more: but as it was opportunely and successfully repaired alongside the *Hugh Lindsay*, the Euphrates was despatched to continue the examinations of the rivers of Susiana and the Tigris, under Major Estcourt, whilst I proceeded to India to arrange, if possible, for the continuance of the expedition. I succeeded in my object, but it was too late; for the party at Bagdad was already broken up, in consequence of renewed orders from England.

“During an undertaking which is mixed up, like a nursery tale, with rocks, cataracts, deserts, and millions of Arabs living by the plunder of an occasional traveller, we had no accident whatever but the breaking of the cross-head, and our only regret was the loss of many valuable men—amongst whom was a most promising officer of artillery, Lieutenant Robert Cockburn, and another individual, who will long be regretted by this and other societies: Lieutenant Murphy had already completed a series of observations from the Mediterranean Sea to the Persian Gulf, which will transmit his name to posterity as having been the first to lay down a certain base for future exploratory journeys which may be made both to the northward and southward from it as a starting-point. Objects have been obtained during the expedition by the remaining individuals, to whom I hope to do some little justice in the work now in preparation; therefore, I shall now merely beg the President and the rest of his fellow-labourers in the good cause of the advancement of geographical knowledge, to accept the warmest thanks of myself and the other officers, for the marked distinction which has been conferred upon the late expedition—and may every such enterprise be equally honoured on their return by the fostering care of this Society!

“The Euphrates steamer was still at Bagdad without men to navigate her in February, but they were about to be sent from Bombay, and an engineer also. On their arrival, Lieutenant Lynch was to recommence; and if he is supplied with suitable means to return into the Euphrates, it will soon be shown that our opinion as to this river being easy of navigation was well founded, for it will then speak for itself.”

At a special meeting of the Society, held on the 8th May, 1837,* for the purpose of presenting the Royal Premium to Captain Fitz Roy, R.N., Mr. Hamilton, one of the Vice-Presidents, said :—

“Captain Frrz Roy,—In consequence of the unavoidable absence of the President of this Society, I have been unexpectedly called upon to announce to you that the Council of the Royal Geographical Society have resolved to award to you the Royal Premium, given by His Majesty, for the year 1836, in testimony of the high sense they entertain of the valuable additions made by you to our knowledge of a large portion of the South American continent and the adjacent islands, whilst you were employed in His Majesty's service, on the late survey of the coasts of Patagonia, Chile, and Peru.

“It was in the autumn of the year 1831, that you were commissioned by the Lords of the Admiralty to proceed in command of His Majesty's ship *Beagle*, to conduct this important survey, which was to open to the commercial world a new series of approaches into that part of South America, where are daily developing themselves germs of political associations and mercantile prosperity. The eyes of all who were interested in the subject were directed towards your operations, until your return to England in November last, after having surveyed, either in person or at your own expense, seven thousand miles of coast, from the Rio de la Plata on the east, to Guayaquil on the west side of South America, and after having circumnavigated the globe; and they now greet your return with a degree of pleasure and gratification, and with a large portion of national pride, commensurate with the magnitude of the scale on which you have acted, and the unceasing perseverance which you have displayed in conducting to its term the task committed to your guidance.

“During these five years, one of the first of your discoveries laid open to the commercial and scientific world the harbour of Bahia Blanco, in lat. 39° south, the only one, upon the eastern coast, in which a considerable number of line-of-battle ships can lie at anchor. On the same coast, in the face of numerous difficulties, you explored, for the first time, the deep and rapid river of Santa Cruz, from the coast in 50° south lat. to the Cordilleras; the first occasion on which, we believe, this part of the continent of South America has ever been crossed by an European. You surveyed, at your sole expense, that very interesting and important feature in the political and physical geography of those seas, the Falkland Islands. You have given to our maps, besides the great inland waters, called those of Otway and Skyring, a new and important channel through the Tierra del Fuego. On the western side of South America you have, for the first time, laid down the archipelago of islands lying to the south of Chiloe, called Chonos, in lat. 45° south. Amongst various material alterations in the old Spanish surveys of the shores of the Pacific and adjacent islands, may be mentioned, as a sample of the rest,

* Omitted by mistake in last year's Annual Report.

the important fact, that the island of Chiloe was found to be no less than twenty-five miles in error in latitude, as laid down in them. When your term of service was on the point of expiring, and you were about to proceed on your way home, your zeal for science prompted you to engage a vessel, at your own expense, for continuing and completing the survey of the coast of Peru as far as Guayaquil, the result of which has been the examination of a great number of ports and roadsteads, of which many were never before known to be capable of admitting vessels. In circumnavigating the globe, you have for the first time carried a complete chronometric chain of measurement, by twenty-two chronometers, (many of them your own property,) from east to west, round the globe. You have also enabled Mr. Darwin, the well-known naturalist, to add greatly to our knowledge of the natural history of those regions; and you have given us the best account we possess of the earthquake which took place at Concepcion in 1835, a phenomenon which has given rise to much interesting discussion among those who are engaged in physical and geological pursuits.

"Captain Fitz Roy,—those who are best able to form a judgment of the services you have rendered to the science of geography, feel that they give you a fair and just title to be enrolled in the list of the most celebrated navigators whose names adorn the maritime annals of this or any other country. I cannot conclude without the expression of the high gratification which I feel at being thus made the organ of communicating to you this mark of the high admiration and esteem in which you are held by this distinguished Society."

To this address Captain Fitz Roy replied in the following words:—

"Sir,—Before attempting to thank you for the deep gratification which I feel, I must indeed disclaim having such pretensions to the position in which the too favourable opinion of the Royal Geographical Society would place me.

"But, Sir, however little I may really be worthy of much that you have been pleased to say, I feel so deeply that this honourable testimonial of the approbation of my countrymen is a most ample reward for those attempts to serve my country, which I *am* conscious of having made—that I beg you will accept a feebly attempted expression of sincerely grateful feelings, which cannot be shown adequately by words.

"Permit me, Sir, to mention, that the Royal Geographical Society have removed from my breast every painful feeling which had there harboured. I now am rewarded for those services, such as they were, in the execution of which I was encouraged and assisted by the sincere friendship and decided support of the Hydrographer of the Admiralty, and by the most cordial co-operation of Mr. Darwin and the officers of the Beagle. And, Sir, to show my gratitude to the distinguished Society of my countrymen, over whom you are now presiding, I take this opportunity of declaring, that if, at any future time, my humble efforts should be thought likely to be useful, I shall be willing and proud to prefer public duty to private happiness."

"I believe, Sir, there is a gentleman now present whose name I have

already mentioned, and of whose claims to your notice I beg you will allow me to say a few words.

"Mr. Charles Darwin embarked in the *Beagle* in 1831, as a zealous volunteer in the cause of science. At his own expense he passed five years on board the *Beagle*, or travelling in those countries she visited; and at his return most liberally presented his valuable collections to the public. When it is considered that Mr. Darwin never ceased to be a martyr to sea-sickness, his perseverance may be appreciated. Of the value of his labours I understand you have already been made partially aware; and I believe I am quite correct in saying, that the best judges estimate those labours very highly.

"You have been pleased to mention the beneficial effects which are likely to result from the information obtained during this survey; and I am sure you will be of opinion that they will be much enhanced by that information being made available to the public as speedily as possible. All the charts and plans are finished and deposited in the Hydrographic Office; and the principal written information will be completed during this year.

"You have been pleased, Sir, to notice the chronometric chain of measurement which has been carried round the world from east to west. I have not yet discovered any error in the calculations or observations upon which the results of those measurements depend, and anxiously look forward to the results of some future chain of measurements made from west to east, with a large number of chronometers kept at an uniform temperature.

"Allow me, Sir, to thank yourself in particular for the very kind, and to me so gratifying manner, in which you have communicated the sentiments of this Society, upon whose time and patience I fear I have trespassed too long."

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$$x = \frac{1}{\alpha + \beta} \left(\alpha x_1 + \beta x_2 \right)$$

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ADDRESS
TO THE
ROYAL GEOGRAPHICAL SOCIETY
OF LONDON;

Delivered at the Anniversary, 21st May, 1838,

BY

WILLIAM R. HAMILTON, Esq., F.R.S.
PRESIDENT.

GENTLEMEN,

AFTER the Report of the Council, which has been just read to you, on the Progress of Geography, and the labours of our Society for the promotion of that science during the past year—for which we are indebted, amongst many other most valuable services, to the indefatigable zeal and industry of your Secretary—I fear I may not have it in my power to present to your notice any subject of very new or commanding interest; and I may, perhaps, now and then expose myself to the charge of repetition: but as this is the first occasion on which an anniversary address has been read from the President's Chair to the Royal Geographical Society since its foundation under the auspices of his late Majesty, who on all occasions extended to us his high patronage, and expressed the warmest interest in our prosperity,—and as we have now entered the second septennium of our existence, under the no less fostering hand of our present most gracious Sovereign, the Lady Victoria, I beg to solicit your kind attention to the following remarks on the importance, use, and advance of Geography, and particularly on the benefits which we are fond to believe this branch of knowledge has derived from the institution of this Society.

Science itself is one grand characteristic mark—first, of man as a rational, reflective, and improveable being; and secondly, of man in a state of civilization. Improvement in science is that which, above all things, distinguishes one man from another—one nation from another—

inhabiting between the 21st and 24th parallels, and only known to us by report, seemed to be now the chief object of geographical research, since the recent journey of Dr. A. Smith had rendered it needless to proceed with the Delagoa expedition. Accordingly, after mature deliberation, with the authority of His Excellency Sir Benjamin D'Urban, and by the advice of those best qualified to give an opinion in the colony, I determined to explore the country to the north of the Orange River, west coast, as the best means of promoting the great object for which I had left England, and carrying out the views of Her Majesty's Government, and of the Geographical Society.

Having made the necessary preparations, as detailed in former letters already published, I quitted Cape Town on the 10th September, 1836, and travelled to the northward towards Clanwilliam, with considerable interruption from rain. My party consisted of seven attendants—four Europeans, one Bengalee, and two stout Bastards (as the Cape term is for any dark man, with an admixture, however small, of European blood); two horses, a waggon, and span of fourteen oxen; and half a dozen dogs, which are the best sentries in the wilds:—my waggon was freighted with arms and ammunition, besides beads, cutlery, and, above all, tobacco, to purchase provisions in the interior, and to make my way among the natives.

The country, at this season of the year, was exceedingly beautiful—wild-flowers, seen only in conservatories in England, appeared on every side; there was nothing arid or barren in the landscape, but a verdant carpet, variegated with gay colours, was spread before us; in the distance, and on the right, were the lofty peaks of the primitive range of the mountains of Drakenstein, averaging in height more than 2000 feet above the sea.

The Dutch farmers seemed to be generally amusing themselves in following stein-boks, with horse and hound, and shooting them with their long roërs or rifles.

Our travelling dress consisted of grey broad-brimmed hats, covered with ostrich feathers on account of the heat; grey or blue smock-frocks, over cotton shirts; leather trousers, and buskins of untanned hides: we had neither stocks, socks, nor gloves; and the only preparation for going to sleep in our sheep-skins, during the year we were out, was taking off our shoes, shaking the sand out of them, and putting them on again, for fear of hungry dogs or hyenas eating them.

On our right we next saw the district of the Twenty-four Rivers, described in such glowing colours by Vailant, and then crossed the Berg River by a punt. After toiling through the heavy sands under the Picket Berg (which it is supposed would be a favourable situation for the growth of coffee), I left the waggon at Uitkomst, the residence of a worthy Dutch farmer of

the name of Vanzyl, and rode about twenty miles to the east to Clanwilliam.

From this last village, seated in a sort of basin, about half a mile from the eastern bank of the Olifant River, I made two excursions to the Cedar Mountains, ten miles farther to the east. They are a fine primitive range, the peaks of which rise from 1600 to 5000 feet above the sea, and have a very picturesque outline. The heights given to me, and said to have been measured by Baron von Wurmb, were, Sneeuw-Berg, 5000 feet; Groene-Berg, 4860; Rondebeg, 2990, &c.

The principal rock of the higher parts of the Cedar Mountains appears to be an ash-coloured quartzose sandstone; the secondary range contains many marine petrifications, shells and fish, at a height of 2000 feet above the sea. There are also black, red, and striped jaspers, hornblende, garnets imbedded in argillaceous schist, numerous ores of iron, much quartz, and a great variety of beautiful agates.

The valleys between the hills are rich in a dark-coloured vegetable mould, which is exceedingly productive. Corn, tobacco, and some wine are here produced; whilst there is a constant and abundant supply of water, which is more or less chalybeate.

I was particularly interested about the cedar-trees, "the glories of Lebanon," which formerly covered this beautiful range of mountains, and which in part still do so. They occupy ravines in the higher parts of the range, perhaps as high as 3000 feet, and one cut down in 1836 measured thirty-six feet in girth, whilst 1000 feet of plank were sawn out of its giant arms.

No care has hitherto been taken of these valuable trees; the farmers, the Bastards, and Hottentots, living in the neighbourhood, cut them down without leave or license, and burn the grass, to improve the pasture, by which many old trees, and thousands of young plants, are annually consumed.

As the cedar-trees might, if preserved, become of great advantage to the colony generally, I represented, in the proper quarter, the manner in which they are constantly and wantonly destroyed; and it is to be hoped that means will be taken for preventing the future waste of that most valuable and imperishable timber, with which the temple of Solomon was built.

There are many Boschman caves in the Cedar Mountains: they are generally at some height, varying from 300 to 1000 feet above the valley, and are not of any great depth, say 30 or 40 feet, but they are very interesting, as containing the drawings in red ochre of a wild people who have for some years disappeared from this locality. In one cave there is a spirited representation of a combat with bows and arrows; in another, a flock of large-

tailed sheep and lambs are accurately delineated: I was really surprised at the fidelity of the outlines.

From Clanwilliam I passed on to a place called Heerelodgement, where, under a huge overhanging rock, are many names of old travellers and hunters, from 1714 downwards, among others, F. VAILANT, 1783, is carved. Swimming my waggon over the Olifant River (which once in four or five years overflows its banks, when the increase is a hundred fold), I passed by the Rhenish Mission Institution of Ebenezzer, and with two of the worthy brethren rode about twenty miles in a W.S.W. direction, to the mouth of the Olifant River.

Rocks abound at its mouth, and it would be difficult to make it accessible for vessels without a great deal of cutting. Plans are continually brought forward to enter the barred mouths of the South African rivers, but if pains were taken to improve the landing at Table Bay and Algoa Bay, by means of good piers, that would be a sufficient improvement for some years to come.

Continuing northwards, with a range of mountains on our right, and passing onward towards the Groene River, we found the country less fertile than before, covered with shrubby plants, and with much brackish-water, whilst the Boors, from July to October, inclusive, live in mat-houses for the purpose of changing their pasture-grounds.

On the 10th of October, I ascended the Kamies or Lion Mountain, a continuation of the Cedar Mountain range, and took up my residence for a time at the Wesleyan Mission Station of Lily Fountain, containing about 800 persons, to make arrangements, by despatching messages to native chiefs about the Great River, for my further progress.

A remnant of the nation of Little Namáguas has been saved by missionary exertion, and settled on the table-land and in the valleys of the Kamies Mountain, the highest peak of which, about five miles south of Lily Fountain, rises about 5000 feet above the sea, which would seem to be the highest point of the range; to the eastward the view is bounded by near hills, but to the west it extends over gradually-decreasing ranges to the Atlantic Ocean. Under the old Dutch rule the free natives were almost driven entirely out of the colony, with the exception of those who remained as slaves to severe task-masters.

Having been requested by the governor of the Cape to inspect the mouth of the Orange River, I left my people to collect objects of natural history on the Kamies Mountain, and to prepare packs for bullocks when we might be forced to abandon the waggon, and rode in a north-western direction about fifty miles, to the house of Mr. Schmelin at the London Mission Station of Komákas

(signifying red clay). Descending from the Kamiesberg, we rode over a grassy plain ; at 25 miles the country became hilly, and at Keerom, or 'turnabout,' is a remarkable smooth rounded hill of granite, about 300 feet high, round which the road wound and gradually inclined to the northward to Komákas ; where are five fountains, and five or six huts, containing about thirty Namáguas, but at times as many as twenty huts, and upwards of one hundred people, are collected together here. On to the north-west the ground rises to 1000 feet above the sea. Here I ascertained the existence of a new bay called Rooé Wall, or Red Wall Bay, forty miles south of the Zwarlintjies River, and at the mouth of the Spook River. There is good anchorage for schooners and small craft in this bay, which it is to be hoped will be turned to account to open a market for this part of the colony.

Quitting Komákas, we continued to the northward over a sandy plain covered with shrubs, having a range of mountains on our right, and hills to the left : I saw many ostriches and stein-boks on the road, with the prints of zebras. The worthy old German missionary Mr. Schmelin, and two Rhenish missionaries, accompanied me to ascertain if the mouth of the Orange River was fit for a new station.

The labours of the missionaries in this part of South Africa have been attended with much success, and it is to be hoped that they will be encouraged to extend their field of usefulness further into the benighted interior, so that wars between the tribes may cease, and that trade, civilization, and Christianity may be promoted. At 25 miles crossed the dry bed of the Kowsie River about 20 miles from its mouth, and travelled to the northward over sandy plains with bushes ; to the eastward, a range of mountains about 1000 feet high ; and to the west, undulating hills of 300 feet. At 20 miles from the Kowsie, reached Ukribip, where are some Namáqua huts ; a few miles beyond is Kama, a village of ten huts ; the range of the Kamiesberg appears to extend in a north-north-west direction, about 20 miles on our right, reaching to the banks of, and perhaps 30 miles beyond, the Orange River. After 60 miles of travelling over the same description of country, we reached the village of Aris, on the banks of the river, at 25 miles from its outlet into the Atlantic.

Where I first saw the Great or Orange River, it was 500 yards across, and the banks were lined with black ebony, willows, mimosas, &c. The river was at this time shallow enough to be easily forded, but we saw marks on the trees and banks indicating an occasional rise to a very great height.

The Little Namáguas, and some Bastaards, living here, have flocks and herds, but subsist principally by the chase, and by the produce of a seal island, which I found to lie between the mouths

of the Orange and Kowsie Rivers; the latter is the boundary of the colony. The natives are clothed in sheep-skins, some of which are made into trousers and petticoats; and they would willingly exchange their stock for cloth and cutlery. They sell valuable seal-skins for five shillings each.

The land is flat about the mouth of the Orange River, and on the north side is good pasture. The breadth of the entrance at the beginning of November was about 170 yards, whilst inside was a lake about four miles across, and abounding in wild fowl. The air was darkened and filled with the cries of wild geese and ducks, flamingoes, pelicans, gulls, &c. Here is most excellent shooting-ground for the sportsman, and 'harder' and 'springer' fish abound for the seine.

I saw no rocks at the mouth of the Orange River; there is probably, however, a shoal of sand outside, but with care it seems that the mouth of the river could be entered by a schooner. I never heard that any soundings had been taken at the mouth of the Orange; indeed, the increasing wants of the colony demand a far more detailed survey of the south, south-eastern, and south-western coast of Africa, than any that exists at present. About 30 miles east-south-east of Aris, at a distance of four days' journey, with a waggon, from the mouth of the Orange River, and near the south bank, I made, by means of a Bastaard, the discovery of a great mass of copper ore, of so rich a quality, that, by analysis of Sir John Herschel, at the Cape, to whom a specimen was sent, the ore yielded 65 per cent. of metal.*

This copper is quite accessible, and it might be either smelted on the spot with Orange River wood, of which there is plenty, or it might be floated down to the mouth on rafts, which rafts might then be sawn up and sent to the Cape, where wood is always in great demand for building.

Honey is found in such quantities about the Orange River, particularly in the months of December and January, that a Namáqua, who had a waggon, assured me, that in two days, whilst on a honey hunt, he loaded his waggon with skin-bags of honey above the side planks; a trade in bees'-wax therefore might also be carried on here; whilst on the coast there are extensive beds of muscles for shell lime. The climate is very healthy for Europeans.

I found iron also not far off, but on the north side of the river, and as the site of these valuable ores is far beyond the colony, no expense would be incurred in purchasing a right to work them. The natives also would be pleased to see strangers among them,

* Another specimen from the same place, assayed in London, yielded 28 per cent.

if they were kept under proper control. Of course careful surveys ought first to be made of the region of the ores, before any speculation is entered into, to avoid unnecessary risk or loss.

After a few days we retraced our steps to the Kamiesberg, and on crossing the Kowsie River, on the 6th of November, the thermometer was 109° Fahr. in the shade. This was now the beginning of the hot season.

I found at Lily Fountain Mr. Edwards, the Wesleyan missionary, just returned from the Cape, from whom I received every civility and assistance.

Nov. 16.—Having completed our arrangements we left Lily Fountain on our journey to the north, escorted, by the Governor's order, by a Field Cornet and twelve mounted Boors, armed with long guns, as far as the warm bath, to produce a proper effect on the Namáguas, and to show them that the expedition was a government one. None of the Boors had been at the Orange River before; and, what with the fear of lions, Boschmans, and their old runaway slaves, they did not at all relish the expedition; and I believe, from the crying we saw at leave-taking, that their wives and children never expected to see them again.

Descending from the elevated station of Lily Fountain into the plain, we crossed the dry bed of a tributary to the river Kowsie, and continued to the northward; hills about 300 feet high on each side of the road; no cultivation, and hardly an inhabitant to be seen. About twenty miles we halted at *Silver Fountain*, where are a few huts; ten miles further north reached the Copper Berg, a range of granitic mountains, without wood, about 1000 feet in height, two miles to the east of the road. Nearly ten miles to the south-west of this spot is a conspicuous mountain, called the *Vogel Klip*, or Bird Stone, about 1200 feet in height. Proceeding to the northward we passed through a stony valley, with bushes of mimosa; and about twenty miles farther reached Bezondermeid (Strange woman), a London Missionary station, under the charge of the veteran Mr. Wimmer; here are about thirty Namáguas. Beyond this, to the N.N.E., black hills, about 500 feet high, are scattered over the plain on the right, till we reach a range of sand-hills, within a few miles of the Orange River; here, turning due east, we travelled along their southern foot for about fifteen miles, to *Kárahás*, or Koran-ford.

The country, on both sides of the Orange River, is exceedingly barren and dreary for many miles from the river. Bare and black hills are surrounded by plains of yellow sand, with very scanty vegetation. One of my horses being totally unable to walk, from sheer starvation, I bought another from a Dutchman, which was better able to live on bushes.

Nov. 25.—Arrived at the Great River, we found Mr. Jackson,

a Wesleyan missionary, with the chief Abram, and sixteen swimmers, on the opposite bank ready to assist us over; but we forded the Orange River, which was only waist-deep, without much difficulty, and I looked with wonder on the wild and grotesque forms of the granite hills which enclosed its banks. The valley through which it here flows, in a due west direction, is about half a mile broad, the bed of the river from 400 to 500 yards; its banks are well wooded with willow, mimosa, &c.; the hills, both north and south, rise upwards of 500 feet above the bed of the stream.

Travelling north-east for two days, over the same description of country, I arrived, on the 27th of November, at Nabis, or the Warm Bath, the most northerly mission station, and 450 miles from Cape Town. Here I intended to halt till the thunder-rains of the beginning of the year should enable me to advance.

The station of Nabis, or Nisbett's Bath (as it is now called), is among rocks, and on both banks of the 'Hoom River, a branch of the Orange. A great plain spreads around, occasionally visited by lions, whilst spring-boks, ostriches, and zebras, are not unfrequently met with. Black conical hills of 200 and 300 feet elevation are seen here and there on the plain.

The tribe of Great Namáguas, who reside principally at the Bath, live in fifty or sixty circular huts, composed of arched boughs covered with rush mats; they sleep on skins; these and the wooden cylindrical vessels for their milk are the chief articles of furniture they possess.

The men and women of the Great Namáguas are taller than the Namáguas we had formerly seen; but they have the same high cheek-bones, small eyes and noses, and yellow (Malay) complexions. Men and women generally wear skin dresses, some mantles or karosses, others cut their clothes after the European fashion. The tribe of Abram (the Bondelzwart) is too remote from the colony, and the tribe bears too indifferent a character as yet, to be visited by traders.

One of the first things I did was to clear out the sand and stones from the Warm Bath, which is generally at 103° of Fahr., with a stream six inches broad by one and a half deep. Myself and people set the example of bathing, which was soon so perseveringly followed by the Namáguas, that it was only at night we could get near the bath, at the risk of meeting with a lion there.

I employed my people in shooting, in preparing the packs, and in training pack bullocks, which were exceedingly difficult to be procured ready trained. I bought as many sheep, too, as I could, for beads and handkerchiefs, as a stand by, in case of our being occasionally without game.

What facilities would not camels afford to travellers in this land!

—patient, enduring, eating any shrubby plant, and carrying the load of three bullocks—by means of camels the Equator might be reached without great difficulty, and yet no one at the Cape has had the enterprise to introduce a few from Bombay even by way of experiment.

I made two excursions from the Bath—first to Africaner's kraal, about 80 miles to the eastward: our road lay over the same barren plains in a south-east direction for about 40 miles, during which we crossed one small stream, the Kururú, or Noisy, flowing towards the south; at 50 miles we reached Naros, within five miles of the bank of the Orange River, and then turned north-east to the village of Africaner, the well-known robber-chief. We found a few of his descendants, altogether about 30 persons, living beside a fruitful garden, in which tobacco, melons, and calabashes, were raised, and to which the water of a tolerably abundant spring was led out. We returned by a more direct route in two days and a half to Nabís. The other excursion was down the 'Hoom River, to the range of hills called Twanos, about 500 feet high, 12 miles in a south-south-east direction from the Bath.

In the beginning of 1837, the heat at the Bath was very oppressive, daily it was 100, and sometimes 110, in the shade. We saw rain-clouds occasionally in the distance, but none came to us. The stream of water at the Bath, too, became more feeble, the grass turned black with the heat, and, tired of waiting for rain, I determined to risk a move, and accordingly, with a lightened waggon, some pack-oxen, and a flock of sheep, I journeyed northward.

Jan. 18, 1837.—Abram and sixteen of his people, armed with guns, reluctantly accompanied me, and ascending along the banks of the 'Hoom River, for six days, we passed near the spot where Trelfall the missionary was murdered a few years before, whilst attempting to travel towards the Dámaras with only two men. At Kanús we left the waggon on the banks of the 'Hoom, with half my party, and on the 24th proceeded to the north-east, for about 40 miles, into the recesses of the 'Karás (or sharp) Mountains, to endeavour to recover by negotiation some cattle and sheep, of which my old interpreter, Chaubep, had been deprived by a robber-chief. On the evening of the second day we reached the banks of the Keikap, or Witch River, which flows to the south-east, and continued to the northward along its western bank, crossing two of its small tributaries, to Henrick's Place. The 'Karás Mountains vary in height, the most elevated reaching 3000 feet above the plain.

We found the Rob Roy of these wilds in a mountain glen: at first he made a show of resistance to us, by drawing out about 30 musketeers, but eventually he was compelled to surrender the

cattle; he threatened the waggon, too, with an attack, but surrounding it with an abbatis of bushes we defied him.

We returned from the Karas to Kanús, and in crossing the plain saw many spring-boks, zebras, a cameleopard, and the *spoor* of a lion. On reaching the camp I dismissed Abram and his people, whom I found to be great cowards.

Jan. 29.—We continued our journey to the north-north-west, quitting the banks of the 'Hoom, and travelling over grassy plains; on our right were mountains about 15 miles distant. At 26 miles crossed three streamlets flowing to the south-west; 10 miles beyond passed through a *poort*, or pass, between hills 500 feet high, and crossing a grassy plain, with mimosa shrubs, reached the banks of the Kaap, flowing to the north-west; thence across undulating stony plains, 40 miles, brought us to Nanebís on the banks of the Kamop, or Lion River, flowing west to the Fish River.

Feb. 22.—Left Nanebís, and inclining to the north-west for twenty miles, we came to the 'Oup, or Fish River, flowing to the southward, through sandy banks; stream about 80 yards broad; mimosa, *dubbee*, and ebony-trees scattered along its banks, and crossed it on the afternoon of the 24th.

Feb. 26.—After much trouble with our guides, we continued our journey to the westward, but finding no water we turned more to the west-south-west, where a line of trees indicated a stream, and at 15 miles crossed the dry bed of the river Nukaníp (Black bulb), and found bad water by digging, and suffered much for want of it. Continuing our journey to the north-west, across plains of Koran (bustards), we arrived at the deserted mission station of Bethany on the 6th March. Here, on a rising ground, are the roofless remains of a church and some houses, with a fine spring of water; it is now tenanted by 50 Namáquas. Kúisip, a Namáqua chief, and three men, now offered to accompany me to the sea, for presents of muskets, ammunition, &c., which offer I was obliged to accept, although they brought with them between thirty and forty hungry followers, men who could devour 10 lbs. of wild flesh per day. Most of them wore the kaross or skin-mantle, also part of a jackal's skin in front attached to a waist-belt, whilst behind dangled a square-cut piece of leather; a few of this escort had guns, the rest carried bows and arrows, javelins, and clubs.

Quitting Bethany we travelled to the north-north-west 20 miles, when we crossed the Koan-quip River flowing south, and continuing on the same course, leaving the Tamuhap, or Drooping Hills, above 400 feet above the plain, on the left, we passed over fine grassy plains, with mimosa bushes, and saw herds of zebras, &c.

March 13.—A descent to Tuais, or Muddy Spring, on the bank

of the Gnuanuip, a tributary of the Koan-quip, to the east of which extend the range of Unuma, or Bulb Mountains, in a north and south direction for upwards of 50 miles.

March 18.—Again crossed the Koan-quip, coming from the north-west; noticed here a conspicuous table-mountain in the Unuma range, bearing north-east, which I called D'Urban Mount, rising about 2000 feet above the plain. Proceeding northward, we crossed several beds of streams, which appeared to flow in a south-easterly direction, towards the 'Oup, or Fish River, the principal drain of this part of Africa. In the 'Oup there is always abundance of water; and fish, chiefly of the *silurus* tribe, in the deep pools.

We had already experienced many of the inconveniences attending African travelling—such as the bullocks straying for hours, and sometimes for a day or two, in search of grass and water—for at night we could not do otherwise than drive them as near our bivouac as possible, and see them lie down, before we betook ourselves to our sheep-skin coverings and stony or sandy bed.

We were also occasionally much distressed for water, had long and painful searches after it—dug with our hands, and with a spade and pickaxe, many times in vain, at the site of old pools; at other times we smelt the fetid water ten yards off, the only supply for ourselves and for the cattle. It surprised me often that we did not get seriously ill from the thick and polluted water we were forced to put up with, occasionally more like chocolate than the pure element.

There being of course no roads, the waggon gave us occasionally much annoyance and occasioned great delay; it would at one time stick fast in heavy sand, whilst half-a-dozen hands lifted the wheels, and the driver plied, with great shouting, his immense bamboo whip—then a precipice was to be descended, the stones were removed and the waggon carefully conducted with hide ropes down the steep. It is difficult to conceive greater trials of patience than what occur on a South African journey, through a new country.

March 21.—We reached Aanabip, a chain of ponds; to the west was the range of the Tarup Hills; we now entered on the great plain of Kei-kaap, a dreary barren flat, which we crossed in a north direction for a few days' journey; here we saw the mirage two or three times, whilst we were in much distress and trouble for water. We were now in the country of the Boschmans.

One day Kúisip, the chief, after looking at the ground, set off at a gallop on his ox, followed by two or three of his men; I followed, expecting to fall in with some large game, as we had just

before surrounded and shot some zebras. We pushed on rapidly for a mile and a half, and then came to a hollow place, where, among the shrubs, were three hovels, composed of stakes and bushes; by one of these sat an old man—dark, dried up, and covered in part with a kaross of spring-bok skin—his bow and arrows lay beside him; he was engaged cooking some leaves in a small earthen pot, and two or three naked children crawled about on the ground beside him. This was the first family of Boschmans we saw.

Subsequent to this we saw many Boschmans, and as we were now (on the 21st of March) in the country of rhinoceroses, we saw hunters following on the spoor or track of these huge animals, to destroy them with their javelins, which they do from behind circular enclosures of stone, breast high, darting their light weapons into the tough hide as the rhinoceros passes, the monster having been previously scared from his lair by stones thrown at him.

I saw the manner the Boschmans frighten the lion from its dead prey, by shouting and springing about, in order that the "children of the Desert" may have a share; their manner of making fire with two sticks; of creeping on game; and remarked that they had no scruple to give up their women to the Namáquas for a piece of meat or tobacco.

March 24.—Still traversing the Keikaap, its surface covered with thorny bushes. In the east, about two miles distant, were flat-topped mountains, rising more than 1500 feet above the plain, not improbably the step of the table-land, or terrace, which we afterwards crossed on our homeward route; to the west were hills between us and the sea. The three or four streams which cross the plain in a south-easterly direction are bordered, as usual, with thorn-trees.

March 30.—An extensive plain lay before us, covered with grass and scattered bushes; bounding the view to the north was a range of flat-topped mountains, of 2000 feet elevation; their sides were bare and scarp'd, and broken in one place by a deep ravine; this was the Kópum'naas, or Bull's Mouth pass. Proceeding from it, and winding through the plain in a south-westerly direction, was a line of high trees, marking the course of the Chúntop River, the favourite resort of large game. The landscape was very beautiful, and we were highly excited with the prospect of much sport. Twelve rhinoceroses were seen in one day; two of which charged me, but I avoided them among bushes, and got a shot at the last as he passed me. We had plenty of wild flesh at the Kópum'naas, and all night long the Namáquas "stamped the marrow-bones."

April 3.—The Bull's Mouth pass winds through mountains of

between 2000 and 3000 feet elevation, for a distance of forty miles nearly. The first part of the valley of the Chúntop River was rather narrow, but beautiful with the red and grey colours of the rocks which hung above it, and the bottom covered with the fantastic forms of various species of mimosa; under these the tracks of the huge rhinoceros was everywhere seen under his favourite trees. The valley opened out and the mountains receded on each side of us, leaving a plain between them of a few miles in breadth. We travelled through the pass first north, then west, and then north again, descending the course of the Chúntop till we reached Ababies, or Calabash Kraal.

With considerable labour we cleared a road through the Bull's Mouth, whilst baboons cried angrily round us, and for the first time a waggon was dragged through it, with difficulty. Beyond the pass we came to a region of fig-trees, each of which was about 60 feet high, and covered with ripe fruit. A dozen Boschmans (men, women, and children) were in a hole in the bank of the Chúntop River, and lived on the fruit of one of these fine trees.

April 6.—We next reached the dreary Desert of Tans, which is an immense plain of grey sand, undiversified by a single bush or shrub, and with only single blades of white and sun-burnt grass waving here and there; heat, and glare, and an awful silence were round us in this horrid waste. In the far distance, to the north-east, full forty miles, were black mountains; amongst which, most conspicuous, was a huge flat-topped eminence, rising 4000 feet above the plain, (from which I gave the Desert its name,) called the Tans or Screen Mountain, for it shuts in all the neighbouring heights. On our left were ridges of sand.

Here we nearly all perished for want of water; the thermometer was at 100°: we came to no water for two days; many of the people threw themselves down on the sand, and desired to be buried, and others were forced to resort to the last means to endeavour to allay their raging thirst. For three days the poor oxen had had nothing to drink, and could not bellow, though they tried to do so. I thought, though I did not say so, that it was impossible we could escape; but at length, on the 8th of April, with great suffering, we reached the bed of the Kúisip or Root River, flowing to the west, but with the loss of both my horses, some oxen, sheep, and dogs. Water was immediately carried back, in the stomachs of wild animals, to the more feeble of the party who had resigned themselves to their fate, and happily all the people were saved.

Where we first saw the Kúisip, its bed was between black and frowning cliffs; those on the north bank were part of a great and nameless mountain, whilst our precipitous descent on the south

was, at least, 600 feet to the water, which lay in long pools in the dark channel, 100 yards wide.

As far as we could see up the river, which was no great distance from its sudden windings, impending and perpendicular sandy crags enclosed it, whilst down the river its bed is similarly enclosed, for a distance of several days' journey. My people named the spot where we first reached the Kúisip the Devil's Den, from its frightful appearance, though here we had been mercifully preserved, by a most seasonable supply of water, from the jaws of death.

Further down the Kúisip high trees began to appear in its bed, under which we found rich grass, on which our poor cattle luxuriated.

I had abandoned the waggon to the tender mercies of the Boschmans (who were prowling about us with their poisoned arrows), for the sand-hills on the south bank of the Kúisip opposed an impassable barrier, when one of the head men of the Namáguas offered to take it back towards the Orange River. He did so, with ten men and twenty-five oxen.

I went on with the remainder of the party down the Kúisip, with riding and pack-oxen, but we again suffered much for want of water, even in the bed of the river: on one occasion we saw no water, even with digging, for a distance of thirty miles. It was often difficult to rouse the people from their despondency; but finding one day the traces of men, we hunted after them, and caught two of a tribe of Great Namáguas, belonging to a large tribe on the river. These men, being well used by us, showed us water, and conducted us to the sea at Walvisch Bay, which we arrived at on the 19th of April, being the first Europeans who had reached it by land from the Cape of Good Hope.

Before our arrival at the coast, our provisions, too, had failed us; we could get no game. Hides (reserved for making shoes) were therefore roasted, beaten between two stones, and eaten. At the sea we dug with our hands in the sand for clams, and searched the shore for fish, and fortunately found stranded *cabaljaos* of fifty pounds weight, which we ate with great relish.

Walvisch Bay extends along-shore, as it were, for twenty miles. A long spit of sand, terminating in Pelican Point, in lat. $22^{\circ} 52\frac{1}{4}'$ forms its south-western shore, and offers an effectual barrier to the roll of the South Atlantic. Vast flocks of pelicans, flamingos, geese, gulls, &c., frequent this sheltered bay.

To the east of the Bay there are long ridges of sand, covered here and there with dark bushes; behind these ridges, and in the valleys, brackish water is everywhere to be found by digging. Between the ridges and the sea, where we halted at a pool, there

was a plain covered with reeds and grass, whilst the heavy roar of breakers broke on our ear continually from the west. Morning and evening the atmosphere was obscured by a grey fog, confining our view of the landscape, which, in consequence of the mist and the dimly-seen sand-hills, had a peculiarly wild and dreary appearance.

We looked in vain for the ship-of-war which Admiral Sir Patrick Campbell had kindly promised to send round to help us. But two American whalers (the Commodore Perry and Pocahontas) came in to remain for four months, to catch whales: with the captains I exchanged rope, knives, fishing-lines, zebra head-skins, &c., for biscuit. The natives of the Bay, also, at length gaining confidence, brought us some lean sheep and goats to barter for knives and tinder-boxes. On the beach we saw the bones of several sailors who had been murdered by them, probably for interfering with their women. Interference of this sort I, of course, always tried to prevent as much as possible among my people, for it is the most usual cause of disaster on an expedition of discovery.

I now saw the mouth of the *Swakop*, or Bowel River, about fifteen miles farther north, flowing (like the *Kúisip*) into Walvisch Bay, in $22^{\circ} 38'$ south lat. The *Swakop* is the Somerset of Mr. John Arrowsmith's map of Africa: near its mouth, and extending as far as the eye could reach to the northward, are lofty mountains called the *Quanwas* or Clay-trap Mountains; they reach from 2,500 to 3000 feet above the sea, and must form a conspicuous land-mark on making this coast. They are known to sailors as the Blue Mountains. The Dámara negroes live in the upper parts of the *Swakop*, and I tried hard to get beyond it to visit a nation of red men, who, strange to say, live beyond the negroes; that is, in about 20° of south lat. probably. This nation is called the Nubbís, or many people, and has been visited by the chief of Walvisch Bay; but he unfortunately was absent when I was there, and I could persuade none of his people to guide me to them, for there was an exterminating war raging between two tribes of Dámaras on the route. The negroes were on the move, and, consequently, dangerous.

One of the American captains offered me a passage to Saint Helena, seven days' sail, for myself and my seven attendants, for 1000 rix-dollars, or 75*l.*—the price of a whale—but I thought I had not done enough yet. I now resolved, seeing that I could not get farther north, to go east as far as I could.

May 3.—Accordingly, after a fortnight spent here, we left the Bay, and retraced our steps for eight days up the *Kúisip*. We subsisted in part on an admirable new fruit called náras, the size of a shaddock, about five inches in diameter, covered with

prickles, containing inside, pulp, and seeds like those of a melon, and growing on a bush of three or four feet high, the branches of which have opposite thorns but no leaves. The náras forms the entire subsistence of the people of the Kúisip, and about Walvisch Bay, for two or three months in the year, and they require no other food, and not even water, when it is in season.*

May 11.—To avoid a considerable southern bend of the Kúisip, we crossed, in an east direction, a hard and gritty plain, without bush or grass, between it and the Swakop; and the following day saw cameleons, said to be poisonous, on the open plain, and many miles from either bushes or water. We also passed, just to the northward, a strange and fantastic pile of rocks called Einhíras, or the Hill of the Laughing Hyena, which two Boschman guides told us was inhabited by snakes with red heads and prominent brows. As we were pushing on at the rate of thirty miles in the day and night for water, we could not stop to endeavour to catch one of these extraordinary reptiles.

May 12.—On our left was *Tarahap* (Quiver) Mountain, and *Hokap* (Spotted Body) Mountain, about 1200 feet above the plain. Before us a long range of mountains extending N.W. and S.E., and called 'Túmas, or the Mountains of the Wilderness, rising about 2000 feet.

May 13.—Reached the Humaris, or Rolling River, a northern affluent of the Kúisip, and followed its course in a S.S.E. direction. Its banks were enclosed by high cliffs, and we descended as by steps 400 feet to the bed of its recipient.

We found the Humaris full of rhinoceroses. We also ate plenty of zebra's flesh here, but both are rank and disagreeable; we found, however, the soup made from the rhinoceros particularly strengthening for the chase, which, having now no horses, we followed on foot.

On two or three occasions the people got a supply of locusts, which they roasted and ate, pounded like snuff. I found them not unpalatable, and certainly better than shoe-leather.

We again reached our old acquaintance the Kúisip; and here, for the first time for three days, the oxen luxuriated in plenty of grass and water. The black rhinoceros of the Humaris lives on mimosa bushes; it is the white rhinoceros (which we had not yet seen, and which is a more timid animal), that lives on grass. The Kúisip here does not flow in so deep a channel as lower down in its course; still it was enclosed by rocks and hills, though not so impending as at the spot we first saw it.

May 14 (Sunday).—In the bed of the Kúisip we halted, and assembled the people as usual for divine service.

* I have given some seed of the náras, and a description of it, to Dr. Lindley.

May 15.—We crossed the Kúisip, which here comes from the N.N.E., and steering an easterly course we entered Dámara-land. Under a hill, and on an elevated plateau, about a mile from a pool of water, we saw the first Dámara village; it consisted of eighteen conical huts, constructed of stakes driven into the ground, brought to a point at the top, and covered with bushes. Some of the houses had a rude sort of porch, also composed of stakes and bushes, and the whole were arranged in a circular form.

Long lines of thorny bushes, miles of them in fact, were observed on the slopes near; these were placed to direct rhinoceroses or zebras to pit-falls, placed at intervals in the lines. We as yet saw no people, for there had been a scarcity of water during the last season, and we understood from our Boschman guides that the Dámaras had moved further east, and we followed after them.

Of Dámaras there are two great nations—the Dámaras of the Plains, who are very rich in cattle (and between whom and the Namáguas are frequent wars in consequence of cattle)—and the Dámaras of the Hills, who have no cattle, but subsist by hunting and on roots.

The Dámaras of the Plains extend from the Swakop, north and east; whilst the Hill Dámaras are found from the Kúisip, for a considerable distance, south and east: both tribes are negroes; black, with woolly hair, small round noses, and thickish lips. The Dámaras of the Plains, from their superior living, are much more robust than those of the hills; I saw many of the former living as slaves among the Namáguas; and, observing one day a fine Dámara boy in a state of starvation, under a Namáqua mistress, (being obliged to search for gum and lizards for food,) I offered to buy him, that I might eventually emancipate him in England, and I obtained my young shepherd for two cotton handkerchiefs, and two strings of glass beads, in value about four shillings!

The huts of the Dámaras of the Plains are also conical, but the stakes are wattled, plastered with clay, and covered with hides; the bed consists of thorn bushes, on which skins are spread. In 1834 the Dámaras of the Plains occupied the country south of the Kúisip till driven back by the Namáguas, headed by a warlike chief, to their present ground about the Swakop. Some of the huts of the Dámaras of the Plains were left standing about the Kúisip.

The Dámaras of the Plains are circumcised, and extract the two front teeth of the lower jaw; they are almost entirely naked, men and women wearing only a sort of skin kilt about the waist, and reaching to the knees. In war the men have a plume of ostrich feathers on the head, a leopard or lion skin thrown over the shoulders, the waist bound round with thongs, besides the usual

kilt and sandals; whilst their arms are bows and arrows, a club, and a stabbing assegai, or javelin, composed entirely of iron, shaft and blade. The Dámaras of the Plains speak a language peculiar to themselves, of which I have got a short vocabulary. The Hill Dámaras speak the clicking Namáqua language.*

The Dámaras of the Hills have bows and arrows, and an assegai with a wooden shaft. They generally wear a short mantle of deer-skin on their shoulders, and about their waist many flaps of leather behind and before; that behind contains a large pocket for roots.

May 16.—We crossed a great plain on which wild horses or zebras, in groups of five or six; each group under a fine-looking leader, were browsing on the abundant grass; before us were lofty mountains, and in the distance, right and left of us, they were also seen.

This part of Dámara-land is very beautiful; consisting of wide plains covered with herbage, broad and grassy slopes at the foot of hills, occasionally thorn bushes, (among which is frequently seen the black back of a rhinoceros,) and mountains rising to an elevation of some thousand feet—some of a tabular shape, and others with the most sharp and rugged profiles it is possible to conceive.

Directing our course to the east-south-east we reached the great mountain of Tans, or the Screen, before mentioned; its height is apparently greater than that of Table Mountain, which it resembles with its flattened top. Tans may rise probably 4000 feet above the plain.

With great labour, arising from the steepness of the ascent, and the packs of the bullocks continually shifting, we ascended some of the off-sets of the mountain, and found ourselves on an elevated table-land; here the thermometer was 65° at noon. In the rocky recesses of this plateau dwelt small communities of Hill Dámaras. These people had never before seen a white man, thought us very ugly, and that we had no skin; but it was said that they had a tradition among them, that white men should pass through their country, and they had been anxious to see them, as they expected to get something from them. I asked these rude people, among other questions, how they purchased their wives from their parents; they said that they collected as many onions and striped mice as they could, and gave these, as an acceptable present of food, to the father of the young woman they wished to obtain.

About this time many lions prowled about us; nor was it advisable to sit up and watch for them, as a person sitting up by a fire, or even lying on the ground with his knees up, is the most likely to be carried off by them, or shot at with poisoned arrows

* The Namáquas call the whole nation of Dámaras, *Dam-áp*; and distinguish the Hill or south-eastern Dámaras by the name of *Húmi* (hill) or *Háu* (dung or vile) *Dam-áp*. The Plain or Cattle Dámaras call themselves *Om-ot-ronlo-rondú* or *Oke-temba kachi-hiqui*.

by creeping savages. Myself and people, therefore, lay on the open plains in our sheep-skin coverings, having first arranged a few bushes (when we had not rocks to screen us) in a semicircular form to give us shelter to windward, whilst at our feet was a fire; the dogs and the bullocks lay around us; and we got up and shouted, or fired off a shot, or rang a bell, when the lions came too near. I, however, lost three head of cattle by them.

East of Tans are beautiful plains of grass and trees. We here saw brindled gnus for the first time; these the Boschmans destroyed, disguised as ostriches. We also killed and ate several zebras and rhinoceroses, white and black; but we felt the pangs of hunger severely at times, and ox-hide was roasted and eaten, as before. The water was in some places black, in others green, or impure with the visits of wild animals.

May 22.—At starting in the morning the thermometer was at 40°. Of course my poor people felt this temperature very severely, and at night we could not sleep for the cold. At noon the thermometer rose to 60° generally. We were now traversing table-land, and passed the various small rivers, and saw the mountains indicated on the sketch map.

May 24.—We came to the Kei-kúrú, or “first Ugly River,” flowing through beautiful plains of grass and trees, and abounding in game. Here, also, we saw many picturesque and detached mountains. Under one of these the plain was covered with mat-houses of Namáquas, and bush-huts of Hill Dámaras; in short, there was here a town of about 1200 persons, called Ni-ais, or Black; while to the eastward from north-east to south-east a range of mountains, some reaching 2000 feet in height, bounded the horizon in that direction.

A party, mounted on galloping bullocks, came out to meet us, and I was conducted with every courtesy to the hut of the chief, Aaramap. He had lately fought some bloody battles with the Dámaras of the Plains, endeavouring to regain their old ground, where we now were, and the possession of some hot and cold springs, beside a small lake, three days to the north-east of us.

Our wants were now abundantly supplied; we got sheep to purchase for knives and cotton handkerchiefs, and bullocks for shawls and axes. We also drank milk till we were tired, purchasing it with needles. Honey-beer was drunk; and the reed, pot, and Dámara dances were performed to welcome us.

The first of these, the reed-dance, is performed by men standing in a circle, facing inwards, and blowing into reeds of various lengths, and stamping on the ground, whilst the women, clapping their hands and singing, dance round them. The pot-dance consists of one man dancing in the midst of a number of women, who sit on the ground singing and clapping their hands, whilst one beats with her fingers on a wooden vessel covered with skin; and

the Dámara dance consisted of half a dozen women standing in a line, clapping their hands and singing, whilst a man, with a pair of spring-bok horns on his head and rattling seeds on his ankles, stamped before them.

From information obtained while here, we learnt that to the north-east, and three days' journey from Ni-ais, are very abundant supplies of water and grass; hot and cold springs issue from both sides of a ridge of hills; to the north they unite their waters, and form a stream which falls into a lake, of several miles in extent, its shores in many places covered with reeds. Wild-fowl and fish are to be got here. The stream from the lake then forms one of the sources of the Swakop. On the south side of the ridge the hot and cold springs lose themselves in a plain covered with rich grass. This altogether is a most highly-favoured and beautiful part of Dámara-land, which, however, is said continually to increase in fertility to the north. We were also told that about ten days, or 150 miles from Ni-ais, E.S.E., is the Nósop, or Kaffir River, full of trees and elephants. The chief of Ni-ais shot fifteen elephants at the Nósop last year. It is said to flow from near the source of the Swakop and Kúisip, with an easterly bend, to the Orange River. We were also told that the rainy season at Ni-ais is in the month of August.

We had now got about 200 miles into the interior, from the coast, and had reached the fine cattle country indicated (from native report) on Arrowsmith's map. We were at a short distance too from the sources of the Kúisip and Swakop, and had crossed beyond the principal sources of the 'Oúp, or Fish River. We desired much to go further north or east, but we could get no guides to show us the waters to the north, for the Dámaras of the Plains lay there ready for war, and no one would, for any consideration, convey a message to them; whilst to the east there was said to be an impassable desert, which no one at Ni-ais had ever ventured to cross. In fact, the chief told me, that without going first south, nearly to the Orange River, it was impossible to go easterly towards Latakú, which lay south-east of us.

I had now, therefore, got to the utmost limit of my range, north and east—and I saw that, in the present state of affairs between the Dámaras of the Plains, those of the Hills, and the Namáguas, that it was impossible to pass through the country of the former from the south, and that the best chance for future travellers, to visit the interior about 21° of south latitude, is to come down from the Portuguese settlements, extending to 17° S. on the west coast, and whither the Dámaras (by reports of prisoners) resort to barter cattle for iron, &c. I therefore turned my face to the south, having first had a grand lion hunt, on foot, at a run for eight miles, at the end of which the monster turned, charged us, and fell within four yards of the muzzles of the guns. As soon

as we had got the skin off, the Hill Dámaras cut up the flesh of the lion, and carried it off to eat.

On the 31st of May then, accompanied by the Chief Aaramap, and many of his people, we travelled to the S.S.W., along the banks of the Kei-kurúp—thermometer at noon 65° in the shade. At thirty miles from Ni-ais we came to a beautiful valley, enclosed with low hills, and commanding a view to the N.E. of the lofty mountains before mentioned. There was quite a forest of thorn-trees, of several miles in extent, in this valley; the grass stood in it like corn, and amongst it were flocks of pheasants and guinea-fowl.

In the centre of the valley, among rocks of granite, rises a warm spring, at 126° of Fahr.; the waters flowed freely from it, and were lost in the plain. Moreover, some attempts had been made to cultivate calabashes and tobacco by means of it, and I gave some melon and cucumber seed, which I had with me, to the chief, to extend his garden.

We shot some new and rare birds here; and as the valley is fertile, wood and water abundant, and as it is in the midst of game, and of a numerous population of Namáguas and Hill Dámaras, this spot seems well adapted for the establishment of a mission station, and accordingly I have indicated its existence and its advantages to the Wesleyan Missionary Society, as, although a distant point, it might yet be connected with their present stations at Kamiesberg and Nisbett's Bath.

The people are anxious for missionaries; the women in particular said, "send us teachers for us and for our children;" we therefore ought speedily to respond to their appeal.

We saw indications of the Dámaras of the Plains at this new Warm Bath, such as the head of an ox placed on a tree to mark the grave of a warrior below. Here, some time before, a fearful tragedy had been enacted. The Namáguas, living at the Bath, were aroused one night by the howling, as it seemed, of wolves, when there was a fearful rush of negro savages, who destroyed the women and children, whilst the men, less encumbered, escaped to a neighbouring hill. The wife of the chief was secured by the Dámaras, and had her hands cut off by the wrists next morning, before her own castle, previous to her being put to death.

We saw here, and at other places on the journey, occasional traces of Haiji Aibib, or of the Namáqua deity. A long pile of stones was pointed out, on which lay a few branches, the offerings of wayfarers. Under the pile dwells, say the Namáguas, a person they call Haiji Aibib, of whom they stand in some fear, but of whose appearance and power they entertain no distinct ideas.

The only trace of religion I found among the Boschmans was

at a pool of water commonly choked up with sand, near the Tans Mountain, where, before they dug for water, they presented an arrow, or a piece of skin or flesh, to a large red man with a white head, who is supposed to inhabit the place; at the same time they repeated a prayer for success in hunting. To dig for water here without this ceremony, they say, occasions sickness and death.

From the Hill Dámaras I could make nothing out to show they had any, the most imperfect, religious impressions. "Who made the sun?" I asked them. "We don't know; we are a stupid people, we don't know anything—only let us get plenty to eat, that is all we care for,"—was the common answer I got from this benighted people.

By a present of tobacco I found I could always get the people to speak; by means of my medicine-chest a certain influence was obtained over them; and by a violin, tambourine, &c., they were kept in good humour.

June 1.—We crossed the *Oanop* (Tell-tale) River, running to the south-east, and which is lost in the sands of the desert, in that direction. Yet the Nósop, or Copper River, was said to be ten days from us in that direction, and full of elephants. After a march of ten miles we came to a place called *Gnu-tuais*, or Black Mud, where, on the side of a hill, was pointed out to me a trench of some yards in length, where the Dámaras are in the habit of digging for copper, of which they manufacture rings. I collected some of the ore near the surface of the ground; it seemed rich and abundant; but this of course is not so valuable as the copper-mine formerly mentioned, from its remoteness and difficulty of access.

Meeting with various hunting adventures, and killing kudús, &c., we travelled steadily on to the S.S.W., crossing several beds of streams flowing to the S.E., through plains on which were white rhinoceroses: we walked in the morning and evening, and rode our oxen in the middle of the day.

June 6.—We were out of Dámara-land, and found ourselves in a flat and uninteresting country, though everywhere to the east of the Fish River we found grassy plains and a good cattle country.

After crossing the Kukama (Brown) River, we turned to the S.S.E., towards the Cho-unp (Calf) River, which is a tributary to the Great Fish River; we crossed the Cho-unp on the 8th of June, and afterwards recrossed it three times. We now began to see many cameleopards; they were commonly in herds of a dozen, with two yidettes on an eminence looking out over the bushes. We ate the flesh of the giraffe, which we liked better than that of any of the other wild animals we had tasted, and we had partaken of everything from a lion to a locust.

I need hardly say that flesh every day, and often of the most disgusting description, and eaten without bread, salt, or vegetables, becomes tiresome enough—such we felt it.

The appearance of the country throughout this tract was undulating, without any marked features—grass, bushes, and occasional pools of water, besides the streams we crossed, but we did not see a single inhabitant: we knew that there were Dámaras on the hills to our right, but they kept out of sight—our only associates were wild beasts.

On the 10th of June we recrossed the Great Fish River, just below its junction with the Cho-unp, and by means of a small net, of thirty-five feet long, and swimming and wading with the people, we got out of deep pools in the river many dozen fish of the genus *silurus*, and also others resembling mullet. On several previous occasions we got good meals by means of the net. The bed of the Fish River was here about 150 yards broad; the banks low, and well wooded.

We now found the vast and silent plains to the west of the Fish River most monotonous to traverse, and sufficient to take the spirit of wandering out of the most determined traveller—that is, for some time.

On the 16th of June I parted with the Chief Kúisip, who wished to go home by a short route, to fight a man who threatened him. I had found him very faithful, and of great assistance, and he and Choubip went away pleased with a handsome present of a new musket each, ammunition, cloth, cutlery, beads, and buttons.

Quitting the banks of the Fish River, we proceeded to the S.S.W. for about fifty miles, over dry, stony, and dreary plains, till, on the 18th of June, we reached the banks of the beautiful *Hiantop* River, which we had before crossed on our outward journey, about fifty miles farther to the north-west.

June 20.—We reached the Kei-sú, whence we turned much more to the westward, and winding among hills we ascended to the summit of the *Unuma* mountains, the great table range we had before seen from the west, and passed along them with a small escort, headed by Henrick Boys, our chief hunter, who was fleet enough to catch and kill a zebra with a knife. We suffered much from cold; the thermometer was at freezing point, and we rose every morning, from our sandy or stony bed, with the kaross covered with hoar frost. We had also one or two showers of rain; and were in some danger from pools poisoned by the Boschmans for zebras. After a few days, descending into the plain of the Koan-quip, I recovered my waggon on the 30th of June.

The Namáguas of the Koan-quip are in the yearly habit of resorting to Angra Pequena Bay, on the west coast, to barter their cattle for powder and lead with whalers; thus they receive

only two bottles-full of coarse powder, or forty balls, for a good ox. Sometimes, however, they are made drunk, and get nothing at all.

I asked the Namáguas why they did not come into the colony to exchange their cattle with the colonists for cloth, &c.? They answered, "We are afraid to do so." But it is evident that, if they were to be protected by a magistrate, living near the frontier, they would have no cause for apprehension; and I therefore represented the case strongly to the Government at the Cape, that a trade may be commenced in Namáqua-land, the beneficial influence of which may eventually be greatly extended.

July 13.—Having retraced our steps down the Koan-quip we again reached Bethany, and after two days' halt, we proceeded on our journey, in a more south-westerly direction than our outward route had been. The country at this season of the year was parched and burnt up till we got as far as Herís, or wet ground. We travelled over broad plains, with mountains to the left, but without a single inhabitant, from seven miles to the south of Bethany, (where there were a few Namáqua families on the Quahanap, or Javelin River,) to the Gariep: during the first part of the distance the country abounded in lions, which, as we advanced, were succeeded by leopards.

July 25.—Crossed the Heineip, or Thick Bush River. Here we saw iron occurring in veins on the side of a hill. There is also said to be to the N.E. of Bethany, near the Great Fish River, a plain covered with large masses of iron, some of which require several men to lift them. I have got specimens of this iron. It is not unlikely, too, from the indications we saw, that coal may be found to the south of Bethany.

July 27.—At Herís the first signs of the South African spring were seen; the plains were covered with dark-green shrubby plants, relieved by the bright hues of flowers; and as we walked after our cattle in the morning and evening march, the sense of smelling was regaled with the aromatic scent of desert plants, which burst, in a variety of forms, from the soil which had recently been moistened with showers. About this time we subsisted for two or three weeks on ostrich eggs.

July 30.—We found the region of the Orange River wild and barren as before—the hills scattered in great confusion. We crossed the river at the ford called Kunarúsip, or that of the Ebony Black Sheep, distant about forty miles from the sea; the stream was about 450 yards wide, and flowing briskly, yet I forded it with water only up to my waist. The banks were low: looking towards the east mountains closed in the view, affording a wild and romantic scene. To the westward high hills intervened between us and the sea.

August 1.—After a day's halt, we left the banks of the Great River, and though it was the beginning of the South African spring, the poor cattle had about this time no grass, only the tops of bushes, and the leaves of the ebony-tree, for a fortnight. My cattle, therefore, were fast knocking up; we had already left at intervals on the road a span of fourteen, and had eaten another span. I therefore sent into the colony to Komákas for assistance, which was immediately rendered by the excellent Bastards under the care of the Rev. Mr. Schmelin. At fifty miles farther south we regained the route we had followed on our way to Aris; and, travelling southwards, on

August 8, I again gladly crossed the Kowsie River, the boundary of the colony, and tarrying a short time with the hospitable old missionary, Mr. Schmelin, who has translated the four Evangelists into the Namáqua language, I journeyed to the Olifant River, and by the beautiful district of the Twenty-four Rivers, by the Paarl and Stellenbosch, and during the finest season of the year, when the face of nature was fresh and green with verdure and brilliant with wild-flowers, I reached Cape Town on the 21st of September in health and strength, feeling very grateful for the manner in which myself and people had been mercifully preserved during the year of our journeyings in the bush and on the road.

In justice to my people, I must say that they were animated by a good spirit throughout the expedition (certainly the roughest I had undertaken during an experience of sixteen years of voyages and travels); they were respectful and obedient, and showed no want of courage; and, above all, they severally submitted with patience to the privations and hardships to which such an expedition was always exposed.

During the whole journey the rocks were found to be chiefly of primitive formation; granite, old red sandstone, mica slate, (particularly about the Kúisip,) quartz with imbedded crystals of feldspar, hornblend, &c. I brought away many specimens of copper and some of iron.

I made several drawings of the natives and of remarkable scenery, such as the Table Mountain of Tans, the Bull's Mouth Pass, and of the mountains to the eastward of Ni-ais.*

The accompanying map has been compiled from my original daily tracks, showing the course by compass, and the distances calculated from the rate of a waggon drawn by bullocks, travelling three British miles an hour; when we rode on pack-oxen, four miles an-hour have been allowed. At starting I was well provided with instruments, but being without any companion or

* These, with my extended Notes, I hope to be able shortly to lay before the public.

assistant, added to the difficulties attendant on travelling in Africa—the necessity for making personally every arrangement for our march and for our night's halt—the difficulty of providing food—of dealing with the natives—of preventing drunkenness and quarrels among a party at times fifty in number—and the constant exertion required to keep all in good humour, occupied my whole time, and did not allow me leisure to make as much use of the instruments as I could have wished; yet as the route chiefly lies between known points, and as the daily tracks have been revised by that careful geographer Mr. John Arrowsmith, there can be little doubt that the present map of the western region is a very near approximation to the truth, and offers a route of upwards of 1500 miles which has never appeared in any former map of Southern Africa.

With respect to the objects in natural history collected during my journey, I have the gratification to subjoin the notes of Mr. W. Ogilby on the mammalia; of Mr. John Gould on the birds; and of Professor Lindley on the plants. Their names alone will be sufficient guarantee for the accuracy of the descriptions; and I may be here permitted to offer them my sincere thanks for their kindness in so promptly acceding to my request.

List of new and rare Mammalia collected by Captain Alexander during his recent expedition into the country of the Dámaras:—

I.—QUADRUMANA.

1. *Cynocephalus Porcarius* (Boddeart).

II.—CHEIROPTERA.

2. *Nycteris Affinis* (Dr. Smith).

III.—INSECTIVORA.

3. *Chrysochloris Dámarensis* (Ogilby), new species.
4. *Macroscelides Alexandri* (Ogilby), new species.
5. *Macroscelides Melanotis* (Ogilby), new species.

IV.—CARNIVORA.

6. *Gulo Capensis* (Schreber).
7. *Mustela Zorilla* (Desmarest).
8. *Viverra Felina?* (Thunberg).
9. *Herpestes Melanurus* (Dr. Smith).
10. *Cynictis Ogilbii* (Dr. Smith).
11. *Proteles Cristata* (Penny Cyclopædia, i. 2).
12. *Canis Megalotis* (Cuvier).
13. *Canis Mesomelas* (Erxleben).
14. *Felis Leo* (Linnæus).
15. *Felis Nigripes* (Burchell).

V.—RODENTIA.

16. *Bathyergus Damarensis* (Ogilby), new species.
17. *Graphyurus Elegans* (Ogilby), new species.
18. *Geosciurus Capensis* (Dr. Smith).
19. *Lepus Rupestris* (Dr. Smith).

VI.—PACHYDERMATA.

20. *Equus Zebra* (Linnæus).
21. *Rhinoceros Africanus* (Desmarest).
22. *Rhinoceros Simus?* (Burchell), an imperfect skull.
23. *Hyrax Capensis* (Schreber).

VII.—RUMINANTIA.

24. *Antilope Eucore* (Forster).
25. *Antilope Tragulus* (Forster).
26. *Antilope Traguloides* (Ogilby), new species.

It will be observed from the preceding catalogue that nearly a fourth of the mammals collected by Captain Alexander are new species, that is to say, six out of twenty-six; and of the remaining twenty, seven, viz., Nos. 2, 9, 10, 11, 12, 20, and 21, are still rare in cabinets of natural history. This is a very large proportion of new and rare specimens from a country so repeatedly and so carefully explored as South Africa; and I heartily congratulate Captain Alexander upon the success which has attended this part of his mission. I have endeavoured to acknowledge the obligations which Captain Alexander has conferred upon the cultivators of natural science, by connecting his name with one of the new species which he has discovered.

W. O.

Upon examining the interesting collection of Birds brought home by Captain Alexander from the interior of South Africa, I find many rare species, and several which appear to me to be new to science. The collection consists of 320 specimens and 125 species. The following is a slight enumeration of them:—

Of the Raptorial order, or birds of prey, there are thirty-four specimens and sixteen species, viz., two vultures, *Neophron Peronopterus* and *N. Monachus*; twenty-two falcons (ten species), among the more remarkable of which is a very beautiful eagle, with a red breast and white tail, and a very diminutive true falcon, half as large again as a sparrow, with a red back and spotted tail; eleven owls (four species); one of the genus *Surnia*, two of *Scops*, and one of *Athene*.

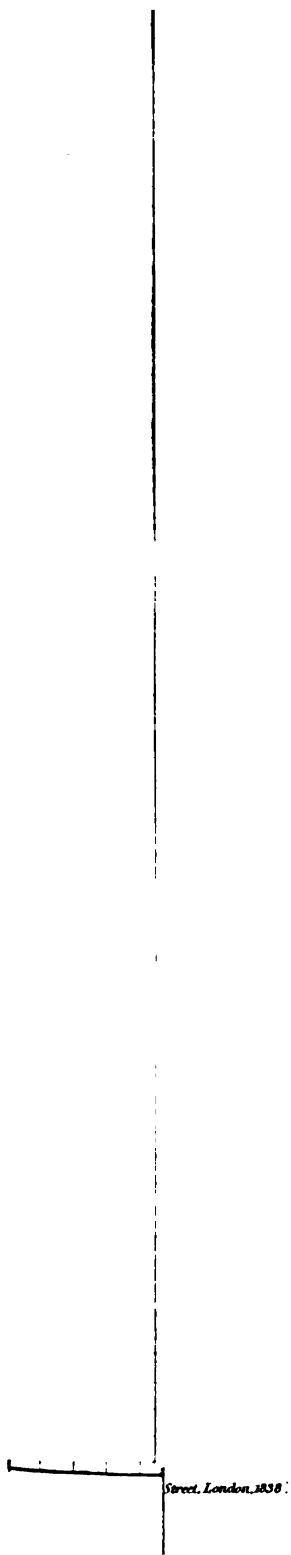
Of the Insessorial order, or perching birds, there are 235 specimens and seventy species. Of these seventeen specimens (six species) belong to the Fissirostral tribe, viz., 1 *Caprimulgus*; 2

species of *Coracias*; one of which, the natives say, alights on the horn of the rhinoceros. These examples are highly interesting, as showing the southern limit of the range of this beautiful tropical form. Two species of *Merops* and one *Alcedo*. Of the Dentirostral tribe there are sixty specimens (twenty-two species), among which occur examples of the following genera:—*Lanius* (two species), *Crateropus bicolor*, *Petrocincla*, *Saxicola*, *Ixos*. Of the Conirostres eighty-six specimens (twenty-five species), comprising examples of the genera *Euplectes*, *Estrilda*, *Amadina*, *Ploceus*, *Pastor*, *Lamprotornis*, and *Corvus*. Of the Scansores there are forty-two specimens (twelve species), of the genera *Colius*, *Bucco*, *Picus*, a very rare *Corythaix* described by Dr. Smith, and an apparently-new *Agapornis* or small parrot. Of the Tenuirostres thirty specimens (six species), of the genera *Upupa*, *Rhinopomastus*, *Cinnyris*, &c. Of the Rasorial order there are eight or ten species, among which are two or three species of pigeons and examples of the genera *Otis* (three species), *Cursorius bisinctus*, *Pterocles*, *Francolinus*, *Struthio*, *Charadrius*, &c.

The collection is not so rich in birds of the Grallatorial and Natatorial orders as in those of the preceding. Among the Grallatores are examples of the genera *Numenius*, *Ardea*, *Tringa*, and *Umbretta*, and in the Natatores, *Anser*, *Anas*, *Gallinula*, and *Podiceps*.

J. G.

Among the Plants, collected beyond the country usually visited by strangers, occur two or three species of *Pappophorum*; a curious spiny plant with hoary leaves and large flowers, somewhat resembling an *Escobedia* in size and appearance, but belonging to the natural order *Solanaceæ*; several *Acanthaceæ* plants, particularly one with bright blue flowers and spiny leaves, allied to *Barleria* and *Acanthodium*; the rare *Otoptera Burchellii*; a fine plant related to *Sesamum*; two trees belonging to different species of the genus *Ficus*; several *Amarantaceæ*, and an apparently-new species of *Aptosimum*. The most curious plant is, however, what is called the *Naras*, bearing a spiny fruit double the size of an orange; of this the single specimen is so imperfect that even with the assistance of the seeds it is impossible as yet to form any decided opinion concerning it. The specimen resembles *Schepperia juncea* so much, that it would be mistaken for it if it were not for the seeds, which are extremely like those of some cucurbitaceous plant.



II.—*Itinerary from Tabriz to Tehrân,* via Ahar, Mishkín, Ardabil, Tûlish, Gilán, and Kazvín, in 1837.* By E. D'ARCY TODD, Bengal Artillery, Major, serving in Persia. Communicated by John Backhouse, Esq.

[The following Itinerary was accompanied by a map on the scale of six British statute miles to an inch, or $\frac{1}{100,000}$ of the natural scale: this has been reduced, and made use of in the annexed map of the north-western portion of Persia. The bearings in the Itinerary are all *magnetic*, and were taken with a Kater's compass; the distances are in British statute miles, and estimated from the pace of a horse walking on level ground at the rate of four miles an hour. The positions of latitude and longitude depend upon the town of *Resht*, which, according to the observations of Mr. Baillie Fraser, is in $37^{\circ} 17' 30''$ N. latitude, $49^{\circ} 43'$ longitude E. of Greenwich. Part of the route was examined by Colonel Monteith in 1827, but in this Itinerary many more names are given, with the advantage of being written according to one standard of orthography, for which see vol. vii. p. 245.—Ed.]

Dec. 27th, 1836.—To Khojeh,† N. E. 20 m. On quitting Tabriz, the road for about a mile runs along the right bank of the Bosmiyeh river, and then ascending, approaches the hills to the north-east of the city. At 6 m. reach the summit of the ascent, which is stony, and in some places exceedingly steep. The descent is shorter and less steep than the ascent, and leads into a fine cultivated valley. The road level and free from stones. The village of Khojeh contains about sixty or seventy houses, and yields to Nasru-llah Khán, Seri Keskli Báshí, to whom it belongs, 300 *tómáns*,‡ and 140 *hulwáns* of grain yearly.

Dec. 28th.—To Kizil Kapán (Red Barn. T.) N. E. 20 m. After leaving Khojeh, the country is covered with small isolated green and red hills, varying from 30 to 100 feet in height. At 8 m. passed the village of Shebrek, three or four miles to the left of the road. At 16 m. crossed a richly-cultivated valley running N.W. and S.E., with a small hamlet at some distance to the right. Afterwards gently-undulating ground. A range of snowy mountains bearing S.S.E. The road level and passable for carriages. The village of Kizil Kapán, half a mile to the left of the road, has suffered dreadfully from a late earthquake, which has shaken every house in the village.

Dec. 29th.—To Ahar N. E. 8 m. East 12 m. The road gradually descends from Kizil Kapán into a valley. At 3 m. a

* Properly Tihrán (the pure), *i* being commonly pronounced *e*. See Uylenbroek's *Itinæ Persicæ Descriptio*. Lugd. Bat. 1822. 4to. pp. 13, 18.—F. S.

† Khwájah (*w* not sounded), pronounced Khójah, 'a husband, old man, preceptor,' by the Turks, with the stress on the last syllable.

‡ A *tómán* is worth about 16 shillings. A *hulwán* is an ass-load.

ruined kárávánseráí marks the commencement of a gentle ascent, about a mile in length, by the side of a small stream; the descent for three miles is more abrupt. A ruined kárávánseráí stands at the foot of the pass. One mile beyond, the road turns to the eastward, and follows the course of the Ahar river on its right bank. A range of hills to the north sprinkled with snow. The road, after clearing the pass, is excellent, being hard, level, and free from stones. Much cultivation; wheat and barley on both sides of the river.

The town of Ahar is the capital of Kárá-dágh,* and the residence of the governor, Mírzá Moḥammed Rahím Khán; it contains about 700 houses, and has been surrounded by a wall, now in ruins. Mount Savalán† bears S. 71° E. distant 50 m. from Ahar. The range of mountains to the south of Ahar is called Kashka‡ by the people of the district.

From Ahar to Árdabil, E.S.E. nearly, distance eighty-two miles, by the road.

Dec. 30th.—To Kishlák,§ S. 80° E. 10 m. At 4 m. the road crosses the stream of Ahar, and continues on its southern bank. From 4 m. to 10 m., a rich tract of country occurs, called Savalán Shámí, about six miles in length and four in breadth, covered with cultivation, except in the vicinity of the river, which is reserved for pasturage. A range of mountains called Shaivek, distant about eight miles to the north of the road. At 9 m., passed the village of Kázeh Kond, containing twenty or thirty houses, situated on the left bank of the Ahar stream; after crossing which, the road passes over a succession of ridges and ravines which descend to the river from the Kashká range, distant about four miles on the right, and crosses several small streams. Kishlák is a village containing about thirty houses.

To Seyyidler|| S. 85° E. 2 m. A small village half a mile to the left of road.

Dec. 31st.—To Kullah Báshí¶ S. 60° E. 2 m. A small village to the left of the road, situated on the pinnacle of an isolated hill, at the foot of which flows the Ahar stream. It is surrounded by a wall, and contains about twenty poor huts.

To Yengjeh** S. 80° E. 9 m. For the first four miles the road is uneven and stony, over hills on the right bank of the stream. At 4 m. the road quits the river, which flows to the N.E. to join the Kárá Sú. At 7 m. passed the village of Mízár, containing about twenty houses, situated on the spur of a hill to the right. After

* Kárá-tágh (T.), 'black mountain.'

† Sayalán, or Sallán in Jihán-numá, p. 364.

‡ Kashaghá, or Kashaghi (T.), 'a curry-comb.' § (T.) 'Winter quarters.'

|| (T.) 'The Seyyids,' i. e., Descendants of Moḥammed.—F. S.

¶ (T.) 'Chief Tower.'

** (T.) Little-New-Town.

leaving the river, the road leads over undulating ground, sloping to the north, and richly cultivated with wheat and rice.

To Súj Búlák N. 75° E. 3 m. A small village to the right, and another half a mile on the left. Half a mile beyond is the small village of Hawashí on the right, and half a mile further the village of Khanchel. Rich cultivation on both sides of the road.

Jan. 1st, 1837.—To Ahmed Beglú N. 50° E. 4 m. A considerable village, situated on the side of a deep ravine running from the hills to the right in the direction of the Ahar river.

To Karramaú S. 85° E. 3½ m. Large village, with a fine stream. At 2 m. the large village of Mírkend half a mile on the right, and the small village of Zerdán Zamín at the same distance on the left. The village of Ush Tepah,* about a mile to the north of Karramaú, and 1 m. beyond, the village of Iyák to the right.

To Nasr-ábád† E. 2½ m. Large village with abundance of water. A range of mountains sprinkled with snow about twenty miles distant, extending N.W. and S.E.

Jan. 2nd.—To Barzil N. 65° E. 1½ m. Large village with abundance of water. The residence of Rustam Khán, chief of Mishkín. Rich cultivation of wheat, barley, and rice, on both sides of the road.

To 'Alí S. 80° E. 2½ m. Large village, with fine stream. One mile beyond Barzil, the village of Khíyú to the right of the road.

Jan 3rd.—To O'nár N. 60° E. 8 m. Large village surrounded by gardens and orchards in a valley running down from Mount Savalán. Abundance of water. The valley richly cultivated. Between 'Alí and O'nár is the vilage of Kará Kaya, about four miles to the left of the road, on the left or southern bank of the Kará-sú.‡ Within two miles of O'nár lies the village of Lóró, about a mile to the left of the road.

Twenty-two villages are said to be within a short distance of O'nár, namely, Lóró, O'rdú-lí, Jálir, Kangerlú, Dádsbeglí, Sheikhlú, Kapakhah, Kádirlí, Lumber, Lahak, Takhtábád, Argá, 'Alí-ábád, § Kaviyet, Dashkesán, Noghdí 'Ulyá, || Noghdí Şuflá, ¶ Berazmiyán, Arbáb, Lájawah, Babiyan, and Shaáb-u-d-dín.

O'nár yields 400 tó máns revenue. Mount Savalán bears from O'nár S. 7° W. about 17 m.

To 'Alí-ábád N. 40° E. 1½ m. Small village.

The Kará Sú about three miles on the left of the road. From 6 m. to 10 m. beyond O'nár, steep ascents and descents occur. At 9 m. is the ravine of Dújakh, which marks the boundary between Mishkín and Ardabíl.

* Uch tepah, or tapah, (T.) Three Hills?

† 'Black Water.' (T.)

|| Upper Noghdí. (A.)

† Abode of Victory. (P.)

§ 'Alí's Abode.' (P.)

¶ Lower Noghdí. (A.)

Jan. 4th.—To Samarín S. 60° E. 17 m. Large village with abundance of water. Small village of Kurd Kishlák* on the left of the road.

To Sháhsewár† S. 35° E. 4 m. A considerable village. The village of Bári 2 m. on the right of the road. The Kará-sú is about 2 m. on the left. Passed the two small villages of Gerján and Sumah.

Jan. 5th.—To Ardabíl S. 45° E. 10 m. Rich cultivation of wheat, barley, and rice, between Samarín and Ardabíl; road excellent; gradual slope of country from the skirts of Savalán to the Kará-sú.

The town of Ardabíl has suffered much within the last two years from visitations of the plague, the population has much decreased, and the town presents the appearance of a mass of ruins; the fortress lies 500 yards to the E.S.E. of the town.

There is a great deal of waste land in the vicinity of Ardabíl, but much of this might be brought under cultivation at a trifling expense. The waters of Nohúr, about twenty miles S.E. of Ardabíl, are described as being surrounded by hills and having only one outlet; but as there is no dam across this opening, they find egress at one season, and are thus lost. These waters are said to be sufficient to irrigate a tract of country that might contain a hundred villages, but which at present lies waste. The expense of a dam, according to Persian calculation, would be about 5000 tómans (4000*l.*)

Mount Savalán‡ bears from Ardabíl N. 85° W. nearly 25 miles.

The plain of Ardabíl is about 5000 feet above the level of the sea, from a rough experiment made with a thermometer, water boiling at 202° Fahr.§

From Ardabíl to Germi in U'jarúd, N.N.W. nearly; distance seventy-three miles by the road.

At 3 m. passed the village of Chenzenek, with the village of 'Alí-búlák adjoining on the right. Abundance of water; road perfectly level. A small tributary of the Kará-sú passes close to these villages from the S.E.

Cultivation of wheat and barley on both sides of the road.

Jan. 14th.—Noadeh N. E. 10 m. A large village on the right bank of the Kará-sú, which we cross. The river forms the boundary between Ardabíl and Velkhí, but contains very little water at this season, while in the spring it is a considerable stream.

* Kurd's winter-quarters (T.)—F. S.

† Royal-rider. (P.)

‡ Mount Savalán was ascended by Captain Shee of the Madras Infantry and some other Englishmen in 1827, who state that water boiled at its summit at 188° of Fahr., which would give, says Colonel Monteith, a height of nearly 13,000 feet above the sea. See Journal, Vol. iii. p. 28. This requires confirmation, and it may be hoped that some of our countrymen wandering in Persia will obtain barometrical measurements for the height of this mountain.—Ed.

§ Ardabíl contained about 3000 inhabitants in 1822.—Ed.

Námín N. 35° E. 5 m. Village, the residence of Mír Kázim Khán, chief of Velkhí, Astarah, and U'jarúd. Abundance of water; road excellent. Námín is situated in a ravine descending from the mountains to the N.E.* Between Nowahdeh and Námín, four villages on the right and right front, the road turns to the westward.

Amberán N. 30° W. 8 m. A large and populous village on the right; village of Ammigán on the left. Abundance of water; road passes over hills which slope to the west.

At 2 m. road enters and ascends for 2 m. the ravine of Shattehderra, stony and bad; the hill of Gerhlar, a holy place, to the left, and 1 m. beyond Kishlák. Descend 1 m. to Pilá-Chái, or Pilá-rúd, a village of seventy houses, scattered along the banks of the stream which flows from the N.E., and gives its name to the village. The hamlet of Ushná lies 1 m. higher up the stream. Much cultivation near the banks of the river.

From Pilá-Chái the road turns due west, and at 5 m. enters a ravine. Sherif Beglú at 9 m. a large village on the right bank of a ravine.

The range of hills which marks the Russian frontier, about eight miles on the right, extends N.W. and S.E.

At 2 m. Rezi, a village of about twenty-five houses, on the right bank of a stream which has its source in the hills to the right, and flows towards the S.W. The village of Rahím Beglú 2 m., and Khalífablú 4 m. higher up the stream; road excellent.

At 6 m. cross in a north direction the ravine and village of Bak Chái, and gradually approach within 2 m. the frontier range of hills.

At 9 m. cross the dry bed of the Cholph Chái. The peak of Histír, the highest point of the frontier range, bearing E. 3 m.

At 13 m. a ruined caravanserai; the range of hills 3 m. on the right, called Dáyimán. Low rounded hills to the left of the road.

At 15 m. an opening in the hills, marking the northern extremity of the Dáyimán range, and the commencement of the mountains of Kullah Básh; road ascends.

At 17 m. reach the summit of the pass called Agzí Gadúk, which marks the commencement of the district of U'jarúd; an abrupt descent of two miles leads into a valley.

At 20 m. the road turns N.E. and crosses some hills to the right.

A large black stone called Beldásh, to the right of the road, marks the summer encamping place of a portion of the Persian tribe of Peránbilí.

* That is, from Mount Shindán, distant only four miles to the N.E.; and, according to Colonel Monteith, reaching the height of nearly 7,000 feet above the sea. See *Journal*, Vol. iii. p. 26.—Ed.

At 23 m. enter a defile, and cross the Dizdeh Chái, a small stream running from the eastward.

At 26 m. the pass of Sukkál Lishl in a north direction: the descent steep and very stony; the road turns to the eastward after clearing the pass, and crosses over some hillocks affording fine pasturage.

Jan. 23rd.—At 30 m., Germí, chief place of the district of U'jarúd, a large and populous village on the bank of a ravine; the inhabitants chiefly pastoral, possessing large flocks of sheep and droves of cattle.

From Germí to Permír, and thence, *via* Adíná Bázár, return to Germí, distance thirty-three miles.

At 5 m. Sengír, winter encampment of the Peránbilis; ravine running N. and S. from the hills called Jekír, with the village of Alazar (upper) on the east side. Much pasturage.

Immediately after crossing the ravine, the road turns abruptly to the S.E. for 5 m., leaving the village of Tapah half a mile on the right, and crosses an offset of the Jekír hills by a steep ascent; a gradual descent of 1 m. in a south direction, by a sheep track, rather than a road, with a deep valley immediately on the left, leads to Permír, a village of fifteen or twenty houses, situated in a deep glen; abundance of water. The frontier said to be 5 m. distant to the south.

Directly after leaving Permír, turned N.N.E., and continued along the left bank of the Permír Chái, which flows to join the Wáisel Chái at 10 m. distance.

At 2 m., Demir-chelú, a village of the tribe of Míránkúh.

At 6 m., Duninkend, a kishlák of the Dilloghardalus.

At $\frac{1}{2}$ m., on the right, passed the site of Órtákend, a small village; 1 m. beyond, the site of Á'tálú; and 1 m. further, the site of Hasan-ábád, all three villages destroyed during the last summer by the Russians.

At 10 m. reach the Adíná Cazor river, or Wáisel Chái, and continue N.W. along its left bank; it here marks the Russian frontier, and at 8 m. below falls into the Balahrúd, which flows to the N.E.

After two m. along its bank, quit the stream, and ascend the hills in a S.W. direction; pass a kishlák of three or four tents, and at 8 m. reach the village of Alazar (lower), rejoin the road to Germí, and retrace our steps to Sheríf Beglú, where we turn off to the S.S.E. for 7 m. over a good and level road to the village of Tagh-dizdeh Chái, containing twenty-five houses, built within the last four years. The ground gently sloping towards the Kará-sú; and at 12 m. beyond, by an excellent road, again reach the village of Námín.

From Námín to Enzelí, distance 114 miles.

On quitting Námín, 1 m. to the S.E., is the village of Dáderán, whence the road turns E. by N., leaving Khán Aghá (old), on the right, and crossing the brow of a hill sprinkled with underwood, passes within about half a mile of Mount Shindán,* a perpendicular rock, which marks the south-western point of Russian Tálísh.

From this point the road descends through thick wood, scarcely passable at this season from mud and melting snow, leaving the village of Venabín on the brow of a hill, a quarter of a mile on the right; 7 m. beyond is the hamlet of Hájí Amír. An abrupt descent through thick underwood, till we reach the stream of Kalá Kúshí, a feeder of the Astarah river, which we cross, and continue along its left bank over the projecting offsets of thickly-wooded hills. The Kalá Kúshí is said to mark the frontier from its source near the mountain of Shindán to the point where it joins the Astarah river, which thence becomes the boundary between Russia and Persia, to its embouchure in the Caspian.

At 28 m., having crossed and recrossed the river eight times, reach the village of Astarah, seated on each side the stream, at a quarter of a mile from its outlet into the Caspian.

Feb. 1st.—To Heví, or Hevír, south, 20 m. Fine, hard, level road along the sea-beach. A range of hills, three or four miles to the right, covered with a dense forest which stretches down to the water's edge. At half a mile cross the embouchure of the Khójeħ Kerri stream, which is said to contain a considerable volume of water after the melting of the snow; at present it is fordable; water up to horses' girths. At $7\frac{1}{2}$ m. forded the stream of Búz Kúsham, or Khán-rúd, a village of the same name, said to be about two miles up the stream. Very little water at this season. At 9 m. cross the stream of Levandavil. At 10 m. that of Chilivand. At 16 m. that of Lemír, which separates Astarah from Kerganah-rúd; at 18 m. that of Chúbár.

Hevír, a small village half a mile from the sea, on the banks of a stream;† the wood partially cleared, the houses scattered in groups, surrounded by rice-fields.

At 6 m. from Hevír, cross the stream of Khutwah Seráï, fordable at this season. At 11 m. a Russian fishing station at the embouchure of a small stream. Passed several other small streams, the names of which I could not ascertain. The coast forms a succession of fine bays, with forest down to the beach. Several Russian vessels at anchor two or three miles off shore.

* The abandoned fortress of Shindán stands on the summit of a bare, isolated, and rugged rock, nearly 7,000 feet in height, and forms the leading feature of this range of mountains. See Journal, Vol. iii. p. 26.—Ed.

† This stream will admit a vessel of fifty tons, says Colonel Monteith. Journal, Vol. iii. p. 26.—Ed.

At 23 m. is another Russian fishing station of five or six huts, immediately after which the road turns to the west, and ascends by its left bank the Kerganah-rúd (Kerganah river, P.); the pathway through thick underwood.

The village of Kerganah-rúd lies on both sides of the stream; it is the winter residence of Balá Khán,* the chief of the district. The houses are scattered amongst half-cleared thick wood and rice cultivation.

Returned by a narrow pathway through the forest to the sea-shore. The district of Kerganah-rúd ends, and that of Asalim begins, about a farsakh to the south of the Kerganah-rúd.

Seven miles beyond is a small village in the district of Asalim, under Mustafá Khán, about a mile up a stream of the same name.

Road similar to that of yesterday. Hills about two miles distant from the shore, their offsets projecting into the sea, with fine bays between the points.

Hills and forest gradually recede from the shore. Road continues along the sea-beach.

At 14 m. from Káláh-seráí, is the village of Chái-bijáh, nearly depopulated by the plague. Forest gives place to swamps and brushwood. Soon after leaving Chái-bijáh, the road enters upon a tongue of land, 13 m. long, and varying from 300 to 600 yards in breadth, extending in an E.S.E. direction, which separates the Caspian from the Múdáb,† or backwater.

Road excellent; a sandy ridge hides the Caspian from view.

Enzelí, or Inzilí, is a town of 200 houses,‡ situated at the eastern extremity of the sandy spit; the houses are scattered over a space of half a mile in length, and separated from each other by reed enclosures. Here is a tolerable bázár, the population chiefly Russian. A narrow strait, about 500 yards broad, divides the tongue of land upon which Enzelí is built from a similar strip of sand called Kázerán. There is not depth of water in the entrance to admit vessels of any great burthen into the bay, as it seldom exceeds five feet. At some seasons the water of the bay is so fresh as to be drinkable, there being, it is said, about seventy streams that discharge themselves into it.

From Enzelí to Kázvín, distance 114 miles.

S. 35° E. 11 m. leads across the Múdáb, or backwater, to the southern shore, which is covered with thick underwood, and ascend the Yóderúd, a small winding stream not more than fifteen yards broad, to the landing-place at Pírí-bázár (old man of the market, P.), so named after Pír Hasan, a saint who lived here in the reign of Sháh Ismá'il.

* Upper Inn. (P.)

† 'Amúd-áb ?

‡ Two thousand five hundred inhabitants, says Colonel Monteith, in 1827. See Journal, Vol. iii. p. 18.—Ed.

The road for the next $5\frac{1}{2}$ m. is through a quagmire, the mud of which is in some places up to the horse's girths. Dense wood on either side. Such is the communication between its sea-port and Resht, the capital town of the province of Gilán. The present town of Resht* is comparatively modern; it was built near the site of a more ancient city about 350 years ago. The date of its foundation after the Hijrah being preserved in its component letters رش ت by their numerical value.†

On quitting Resht in a S.S.E. direction, forded a small stream, and continued along a made road in tolerable repair, although in some places it has been cut through by streams, and rendered nearly impassable for laden mules.

Dú Shambéh-bázár (Monday market, P.), at 8 m., is a small hamlet. Diverged to the left at Dú Shambéh-bázár leaving the high road which leads through Jehennam (Hell), a quagmire said to be utterly impassable at this season, and followed a circuitous pathway over rice-fields, ditches, and marshes, through a wilderness of mulberry-gardens, interspersed with detached huts and small villages.

At 6 m. reach the village of 'Ain-yeh Ver, or 'Ain-weh Vezán, on the north-western bank of the Safid-rúd,‡ and follow its course upwards in a S.W. direction; the road excellent, hard sand and gravel along the bed of the river, which is here about 400 yards broad; the water at this season flows in numberless channels, which cross and recross the road at every half-mile; all these are fordable. The principal stream a quarter of a mile to the left of the road.

At 8 m. beyond, are Imám-Zádeh Hášim,§ and Caravanserai, the former perched on the knoll of a wooded hill to the right of the road, the latter is the work of the Mo'temidu-d-dauleh, late governor of the province. It is as yet unfinished, but workmen are employed upon it, and it promises to be a substantial and useful building.

The road continues along the left bank of the Safid-rúd, and round the slopes of wooded hills on the right. On either side of the stream are hills covered with forest down to the water's edge. On the left, the mountain of Derfek-dágh, distant about seven miles, covered with snow.

At 16 m. Ráhdárf,|| or Custom-house station, in a narrow pass

* Resht contains a population of 50,000, and is the most flourishing place in Persia, says Colonel Monteith, in 1827. Mr. Baillie Fraser states its population from 60,000 to 80,000, in 1834.—Ed.

† Rá=200—Shfn=300—Tá=400=900; but A. H. 900=A.D. 1495.

‡ White River. (P.)

§ Imán's Son Hášim. (P.)

|| Ráh-dár, "road-keeper," "guardian of the road;" whence ráh-dárf, "the office of guarding the roads," the toll levied for their protection, and the place where the toll is collected.

below the ráhdári; to the left, the Safid-rúd runs through a narrow channel with abrupt rocks on either side.

At 20 m. a village surrounded by rice-fields, one of a group consisting of six or seven villages, called Rustam-ábád.*

At 22 m. the road winds round hills; the Safid-rúd flows in an undivided stream to the left at some distance below the road. Forest gradually disappears; the hills on both sides of the stream sprinkled with juniper and willow.

Rúd-bár (stream, P.) at 28 m. is a large village, the houses and bazars scattered amongst a forest of willows. Shortly after a difficult pass occurs, bluff rocks on either side the stream reach down to the water's edge; road stony. At 4 m. cross the river by a bridge of brick and stone, of seven arches, called the bridge of Menjil, built by the Sefevis, partially destroyed in the time of Nádír Sháh, and rebuilt by Suleimán Khán-kájár about forty years ago. The two centre arches have been lately carried away by floods; the piers, which are still standing, are connected by beams and planks. The junction of the Kizil U'zán flowing from the west, and the Sháh-rúd from the S.E., takes place about a mile above the bridge. The united streams take the name of Safid-rúd. The road, after crossing the bridge, turns abruptly to the S.E., and leaves the latter river.

Menjil, P. (for Menzil, *i. e.* Station), is a village of sixty houses, about $1\frac{1}{2}$ m. from the bridge, and $\frac{1}{2}$ m. from the right bank of the Sháh-rúd. Menjil † is the last village of Gílán, being on the boundary-line between that province and 'Irák 'Ajemí.

The road leads over low hills, occasionally descending to the right bank of the Sháh-rúd. Willows and rushes to the water's edge.

Much cultivation. A range of snowy mountains in the S.W., eight or ten miles distant.

At 12 m. from Menjil, cross to the left bank of the Sháh-rúd by a bridge of masonry. Shortly after the road quits the river and ascends for one mile the left bank of a small tributary, called Varalú-cháï, to a caravanserai, called Páï-chinár, or Plane-tree-foot. (P.) Thence cross the Varalú-cháï and ascend the face of hills on the right by a steep ascent.

Kharzán, at 8 m. beyond, is a village and caravanserai, the latter a fine building erected by the Mo'temidu-d-dauleh; gradual ascent; the road in some parts is steep and covered with snow, and for 8 m. farther continues ascending mountains, covered with deep snow.

* Rustam's abode.

† Menzil is about 800 feet above the level of the sea, or 900 feet above the Caspian, and here and in the pass of Rúd-bár are the only places in which the olive is indigenous. Monteith in *Journal*, Vol. iii, p. 14.—Ed.

At Maṣrāh, a village, end of ascent. The plain of Kāzvin visible from the summit of pass. Descent gradual; snow diminishing.

Three miles beyond is a deserted village on right; road leads over low hills; gradual descent for two miles farther, when the road leaves the hills and enters the plain of Kāzvin. Pass the hamlet of Aghá Bába on a small stream flowing from the N.E., and an hour after leave the village of Nizám-ábád half a mile on the right. Six miles farther, by a level road, the latter part through vineyards, we approach a large town surrounded by a wall and ditch, and enter the city of Kāzvin. From Kāzvin to Tehrán the distance is about ninety miles, in an E.S.E. direction, the high road leading through a long valley better cultivated than is usual in Persia, and bounded to the north by the lofty range of El-búrz.

III.—*Extracts from Notes, made during the Campaign to Kōstantīnah, in September, 1837.* By Major Sir GRENVILLE T. TEMPLE, Bart., M.R.G.S., and Member of the Scientific Commission attached to the French Army in Africa. Read February 12th, 1838.

Kōstantīnah, October 20th, 1837.

September 19th, 1837.—I landed at Bónah: on approaching the town and off a point of land lie two rocks called "the Lion," from correctly representing, when seen from a particular spot, a lion couchant. Bónah,* the ancient *Aphrodisium*, is called in Arabic 'Annábah,† "the place of jujubes." The town was destroyed in 1832, but is now rebuilt; the streets have in several instances been widened and carried in straight lines. Many good houses have been constructed, and good shops, reading-rooms, coffee-houses, restaurants, and even a theatre established. The walls by which it is surrounded were erected in 450 of the Hijrah [A.D. 1058.] The ruins of *Hippona*‡ are distant a mile, standing on *mamelons* between the waters of the Sebús§ and the Bejímah. The cisterns are very considerable. I made a plan and took drawings of them. I also observed the site of a theatre, which has never been noticed by other travellers. The bridge over the Bejímah is of Roman construction, and lately repaired.

* Bónah is an ancient Arab name, Idissí (Jaubert) 246, &c.—F. S.

† From 'Aneb; Zizyphus jujuba.—F. S. ‡ The ancient Hippo.

§ The MS. of Sir G. Temple contains many names of places in Arabic, but as the words have been strictly rendered in the Roman character according to the standard adopted by the Society, as given in Vol. VII., p. 243, it has not been thought requisite to print them also in Arabic;—the MS. is preserved for reference in the library of the Society.—Ed.

This river is but four feet deep at Hippona, and a much smaller stream than the Sebús. Two streams called Míyáh-báridah, "cold waters," and Wad-edlis, "the river of the rush" (a particular sort so called in the Berber dialect) and both rising about 36° 36' N., unite soon after, and form a stream, which at first bears the name of the Abú Ufráh, then that of Mab'újah, and finally of Bejímah. The Sebús, which during the time of the Romans was navigable, and on whose banks they had established a dock-yard, might still be rendered so for some distance without difficulty, by removing the bar at its mouth, in which are now only from three to four feet water; inside this, however, it deepens to twelve and thirteen. It runs up S. to 36° 30' N., and then turns to the W. I shall hereafter speak more of this river. To the east of Bónah and Hippona extend the level plains of the Bení Werjín and the Merdás, uncultivated save where exist three or four oases. To the W. are the mountains of Yedúgh, among which we distinguish the Jebel Esh-hebah,* "grey mountain." To the S.W. are the mountains of Belílyetah, "the weathercock," the highest of whose summits is called Abú-fernún. Between these two ranges runs the valley of the Kharesas, extending for ten miles S.W. to the lake of Fezaráh. This lake is said to be ten geographical miles in length, by six miles and a half in breadth: it is very shallow, and abounds with flamingos and wild fowl, and its shores with snipe and wild boar. The French have not commenced the colonization of the environs of Bónah.

September 26th.—I left Bónah and marched with a division of the French army to join the head-quarters at Mejáz 'Amár. Crossed the Bejímah, leaving Hippona on the right: after passing over a few elevations of ground, we entered the great and level plain through which flows the Sebús; this river was on our left. Three block-houses are established between Bónah and the fortified camp of Ed-dere'án; at the second is a Roman bridge of two arches over the Bejímah, or Mab'újah, for I do not exactly know where the stream changes its name: the road which passes over this bridge is the shorter, but we left it for the longer one of Ed-dere'án more to the southward, in order to obtain supplies, as Neshmáyah, the second camp, was too distant to reach in one day with the infantry, artillery, and baggage. At the third block-house, called Sídí Maklúf, from the adjoining sanctuary, is a well; to the right is a large tree, which being seen from a great distance, forms a good land-mark: it is called Shajeratu-s-selám, "tree of peace." The fortified camp of Ed-dere'án, eleven geographical miles S. by W. from Bónah, stands on a low ridge of

* Rising 3189 feet above the sea. Bérard.—*En.*

heights. The country about it is inhabited by the Aulád Abú 'Aziz. The derivation of this name (Ed-dere'án) I could not ascertain correctly; some say, from Edrár, the Berber word for a hill, others, from Dhirá', "the arm," "the cubit measure." My own idea is that it is connected with the name of Adrian, who may here have erected a camp or station, as the French have done at the present period. From the Roman bridge at the second block-house the Romans had two roads, one passing by Ed-dere'án, on its way to the *Aquæ Tibilitana*, another, which crossed the bridge to *Russicada* (near Stora), passing along the level ground on the south of the Fezarah lake. Our horses were watered in the stream of Witsibah, which flows into the Sebús opposite Sidi Denden.

September 27th.—Leaving Ed-dere'án, we soon after passed on our right an isolated hill studded with fantastically grouped rocks: it is called by the Arabs Hajar-u-n-naḥal, "the rock of the bees;" but the French give it the more formidable appellation of *Montagne des Lions*, from the number of those animals they have there met with. On our left and left-front were the hills of El Wust [the middle], and in the latter direction the Marabūt of Sidi 'Omar. Six miles from Ed-dere'án we reached the Miyáh Báridah. The Roman road from hence ascends this stream to Askúr the ancient *Ascurus*. We continued our march more to the westward, ascending a steep hill. On our right was the chain of Dra' el 'Arsh,* and on the left the steep peak of Bír-urlā, and behind it, at the distance of one mile and three quarters, is Askúr, which I was prevented visiting, as an escort could not then be given. Two leagues and three quarters from Miyáh Báridah we reached Neshmáyah; but the elm trees, which gave it its name, no longer exist, at least I did not perceive them. The fortified camp of Neshmáyah is smaller than that of Ed-dere'án: it is placed in a basin or hollow surrounded by heights, from which it might comfortably be cannonaded. Close by the camp flow four small streams, the Wádí Sehúgah, the Wádí Kúrs, and two others, whose names I did not learn: these united form the Wad-edlís, which united with the Miyáh Báridah, constitute eventually the Bejímah. The Bení Fúghál occupy the country on the west, and the Bení Káid on the east.

September 28th.—Immediately on leaving the camp we commenced ascending on the south, and by the pass called El-mulfah, the range of the Fejúj, which notwithstanding the road made last year by the French, occasioned much delay to the artillery. On the summit of this hill are the ruins of a *vigie* erected by the French. From this point the eye embraces a great extent of

* Dhirá'u-l-'arsh i.e. Throne's arm.—F. S.

country, the Kasbah of Bónah, Ed-dere'án, the sea, the lake of Fézaráh, Hammám el Berda'ah,* Kalemah,† the Serj el 'Aúdah, and many mountains, rocky peaks, and winding valleys. The scenery around is fine, bold, and picturesque, but at present, tenantless and treeless. Descending the hill, we find, where we again join the Roman road, the ruins of a small Roman town, perhaps of *Tibilis*, built on a low *mamelon*, and embosomed in olive and other trees. Here we also strike the Wád el hammám, "river of the bath," running south to join the Sebús, and bordered by oleanders. Eight miles from Nesbmáyah we reached the camp called Hammám el Berda'áh, "the bath of the *bát*," which name it derives from the adjoining tepid springs, that part at least of it which relates to baths; respecting the *bát* I could learn nothing. These waters are the *Aquæ Tibilitanæ*, that is, unless we must place the latter at Hammám Meskhútín. At all events, they were known and used by the Romans, for we here see considerable remains of their baths, and some slight ones also of their houses. With the stones of these ruins the present fort has been constructed. The temperature of the water varies in parts of the baths from 29 to 30 centigrade (84° to 86° Fahr.). These baths are now surrounded by a thick and luxuriant grove of vines, olives, figs, and oleanders. The troops fully appreciated the luxury of these waters.

September 29th.—We descended the course of the Wád el Hammám for two miles and a half, when it falls into the Sebús, which here flows from west to east. On our right were the lower ranges of the Jebel Debbágh, "hill of the currier;" and on the left those of the Jebel Awara, the latter covered with a thick wood of olive trees. Through the vista of the valley formed by the heights, we beheld to the south the towers and walls of Kalemah.

The Sebús, where we crossed it, was then only two feet deep, but during the rainy season it sweeps furiously along its course in heavy masses. The French army last year lost many men, horses, and carriages in its passage. It is rendered still more dangerous by its bed being filled with large, loose, and rolling blocks of stone. Ascending its right bank, we reached, after one third of a league, the camp of Kalemah. As I before observed, I shall not touch upon the subject of antiquities; suffice it, therefore, to say, that this camp occupies the site and the remains of *Sutkul*, which also bore the name of *Calama*, one of the principal and richest towns of Numidia. The ruins of the Numidic city stretch over a great surface; what is surrounded by the still existing stone walls and their thirteen towers, is the space occupied by the much

* Packsaddle-bath.—F. S.

† Pronounced Gelmah.

more circumscribed town of the Lower Empire. Kalemah is situated on the northern declivity of a branch of the Jebel Mahónah, one of whose peaks, called Serj-el-'Audah, "the mare's saddle," forms a very striking feature of the landscape. Kalemah is in the territory of the Aulád 'Arid: the country on the left bank of the Sebús, in the direction of Mejáz 'Amár, belongs to the Werz-ed-din. The troops did not pass through Kalemah, but pursued their march from the confluence of the Wád el Hammám with the Sebús, along the left bank of the latter. Kalemah lies nearly south from Hammám el berda'ah, and from it to Mejáz 'Amár, the course is a little S. of W. After riding seven miles from Kalemah, we reached the camp of Mejáz 'Amár, "the occupied passage;" the whole of the valley between which and Kalemah, and through which flows the Sebús, is not only beautiful by comparison with the country we had hitherto traversed, but would also be considered so under all circumstances. This valley is embellished by the rushing waters of the river, by a thick growth of trees and shrubs, and by verdant and elastic turf. It is bordered on the S. by the range of Mahónah, and on the N. by those of Bení 'Addah and Debbágh; the outlines of these hills are bold and picturesque, and their flanks are clothed with trees and shrubs, among which predominate the olive, and several varieties of the lentisk. The camp of Mejáz 'Amár, at which the expeditionary army was assembled previous to its advance upon Kostañtinah, is situated at the confluence of the Wád-es-Shárif and the Wád-es-Sëdam, "river of the irruption;" these two waters united, bear the name of Sebús. The former is much more muddy and slower in its motion than the latter, and its bulk of water is greater; it comes from the S., the latter from the W. Two wooden bridges have been constructed by the French over the latter, one for the passage of the heaviest artillery, the other solely for infantry. The right bank in some parts rises perpendicular to a considerable height. The entrenched camp occupies both banks of the Sëdam. Ahmed Bey, with the *élite* of his forces, bravely and vigorously attacked the part on the right bank, but was repulsed. The beauty of the country, the positions occupied by the combatants, the variety of their costumes, the fineness of the weather, and the animation and spirit of the affair, served to form one of the prettiest pictures it is possible to imagine. Two and a quarter miles to the W., are the famous hot-springs, called Hammám Meskhútín, "the enchanted baths," which I was prevented then visiting, but hope to see on my return, when we shall have more leisure time. Some excavations were made at Mejáz 'Amár, by order of General Damrémont, and the remains of a Roman villa discovered. I cannot, however, say what name this place bore under the Romans.

October 1st.—The army commenced its march, taking the road by Rás el 'Akabah and the course of the Wád Zenátí, which promised us a greater supply of water than the much shorter way by Alígah. We immediately commenced ascending the pass of Rás el 'Akabah, "the summit of the acclivity," situated between the Jebel 'Anúnah on the left, and the Jebel Sadá on the right. The Roman road to 'Anúnah keeps to the left of the present French one. The country about 'Anúnah is extremely picturesque, possessing a happy combination of mountains, rocks, water, and trees. We bivouacked on Rás-el 'Akabah; here rain fell, which continued till late on the following morning. Our horses went to a considerable distance to drink; the artillery found it impossible to reach the summit of the pass this day. The French military road ends at Rás el 'Akabah. The distance from Mejáz 'Amár is $7\frac{1}{2}$ miles.

October 2nd.—As soon as the artillery joined us we resumed our route. The country on that side of the mountains where we were now marching presented a totally different aspect from the other: the hills which now bordered our route had not the bold and picturesque forms of the others; not a tree or a shrub was to be seen—not a man or an animal was visible; all was silent, desolate, and dreary. The land had, however, all been under cultivation, which was not the case on the other side, though the ground appeared to be equally fertile. Judging from the stubble, this year's crop was a plentiful one. During the day I observed many remains of Roman posts and stations. We crossed two small streams flowing from left to right; the last is called 'Ainet-toráb, "the spring of earth;" they both join the Zenátí.* We shortly after crossed this latter river, which here flows a little to the W. of N., and ascending its current, bivouacked round the Marabut of Sídí Tamtám, between the Jebel Insel† on the S. and the Kesen 'Asel, "honey," on the N., distance $6\frac{1}{2}$ miles from Rás el 'Akabah. Although we saw no Arabs during the day, we frequently heard and felt them at night, when they permitted themselves to fire upon us.

October 3rd.—Crossed the dry bed of a stream, and afterwards the Wádí 'Asel, with water, which it discharges into the Zenátí on the left. On the bank of the Wádí 'Asel is a small Roman fort of stone. We continued to ascend the course of the Zenátí along its left bank, and towards the end of the march, crossed it three

* When at Kostantínah I was told by some Arabs that the Wádí Zenátí does not join or form the Sebús; but that from Sídí Tamtám it flows north and joins the other waters which discharge themselves into the gulf of Stora. Researches respecting rivers in Africa are not easily pursued, from the variety of names which the Arabs give to them in different parts of their course, thereby creating much confusion.

† Inzil. Dismount?—F. S.

times near its source, called Rás-ez-Zenátí. This is the spot about which the waters of seven small streams, Seba' 'Ayún, unite to form it. From the heights* beyond the head waters of the Zenátí, we beheld thick and lofty columns of smoke rising from the plain. The Arabs on our approach fired their *dowárs*† and their stacks of straw; this conduct they pursued all the way to Kōstantīnah. Our cavalry threw itself forward to rescue the forage, and in part succeeded, as it also did in discovering some *matamórs* [subterraneous granaries], in which the Arabs conceal their wheat and barley. We bivouacked on the Wád el Bakarah, "river of the cow." The country about the sources of the Zenátí is very much broken and tormented, forming numerous cones or *mamelons*, and has the appearance of being volcanic.

October 4th.—During the night and early in the morning, we experienced considerable cold, the thermometer marking only five centigrades above 0. (41° Fahr.) Soon after leaving the Wád el Bakarah, we passed on our left the ruins of a Roman *statio*, or small town, and beyond it reached the most southern point attained on our march to Kōstantīnah, viz., 36° 12' N. We observed many foot-prints of camels; crossed a stream with no running water, but containing some in the holes or deeper parts of its bed. Crossed the Wádí Muheiris (the pounding mortar), and bivouacked on its right bank; this river flows to the westward, and under the name of Abú Merzúk, joins the Rummel, or Rumlí, "the sandy," close to Kōstantīnah.

October 5th.—We continued our course, descending along the right bank of the Muheiris, leaving the Jebel Abú Ghareb on the right, and crossing a stream of the same name which flows into the Abú-merzúk, and then ascended the heights of Šuma'ah,‡ "the tower, or minaret," so called from a Roman mausoleum which crowns its summit, and which is distinguished from a considerable distance, and bears in fact the appearance of a tower. From this point we enjoyed a magnificent view, rendered extremely interesting to us by embracing in its range the battlements of Kōstantīnah, the absorbing object of our thoughts. We also beheld the Bey's camp on our left front, the Setáh el Mansúrah, "terrace of victory," the red Jebel-esh-shatábah, the perpendicular rocky side of the Jebel Sídí Súleimán, both being portions of the range of Zuwíyah, the Kudyat 'A'tí,§ &c. Crossing a small stream, and halting for the night on the banks of another, called Wad el Akmimín,|| we were employed for an hour, before making our

* The plateau which divides the basins of the Zenátí and Muheiris, and separates their head waters, is 2,824 feet above Bónah.—A.

† Dowár, or rather dwár, is a colloquial abbreviation of adwár, (*pl.* of daur,) 'circles,' because the Arab tents are pitched in a circle.—F. S.

‡ Šuma'ah, vulgo Sma'h, or Súm'ah.—F. S.

§ Coming hill.

|| Distance from Wad el Bakarah sixteen miles and a quarter.

soup, in a very pretty little affair with the Arab cavalry. Our progress from Rás el 'Akabah had been slow, as the engineers were in many places obliged to make a road for the passage of the artillery and waggons.

October 6th.—Crossing the Wadí Gumas,* we had another little affair with the Arabs, and then ascended to the Marábuṭ of Sídí Mabruk, $4\frac{1}{2}$ miles from Wád el Akmímín on the Setáh, el Mansúrah, which is a branch of the Jebb-el-Wahsh.† At this Marábuṭ were established the head-quarters of the army: we galloped on to the edge of the terrace, when suddenly burst upon our sight the whole town of Kōstantinah lying at our feet, and separated from us by the deep, perpendicular, and rocky ravine through which rush the waters of the Rumlí. As soon as we were seen from the town, its batteries opened upon us, and every window and rock became animated by the fire of musketry. The women at the same time raised their voices in the usual sounds of *lú-lú-lú*, and the men shouted curses against us. All these sounds were loudly and often repeatedly reproduced by the prolonged and many-toned echoes of the ravine. The siege lasted till the 13th; batteries had been established at Mansúrah, and on the other side of the Rumlí on the Kudyah 'A'tí, "hill of 'A'tí." The weather during all this period was rainy and cold; there was no shelter, and no fuel to make fires; no forage was to be obtained, so that the horses had only half rations of barley, which we had brought with us; fevers and dysentery raged throughout the camp, to which was subsequently added the cholera; men and horses died rapidly. At last a breach having been made, the town was on the 19th most gallantly carried by assault, and the tri-colour floated from the minaret of the Kaṣbah.

Kōstantinah or Kōsantínah, قسطنطينه, stands on a peninsula formed by the Rumlí, "sandy," or Wáder-rummel; "the river of sand." The part on which the town is built was at one time certainly connected with the heights of Setáh-el-Mansúrah, and of Sídí Meshid, and was separated from them, not, as is always stated, by the hands of men, but by an earthquake or some convulsion of nature, though at what period this took place we cannot ascertain, no tradition whatever of such an event existing. Both sides of the ravine are of calcareous rock, covered with a very shallow coat of vegetable earth. We here discovered four strata: the lower one is black, pure schist; the second is calcareous, black, and, on exposure, separates in laminæ; the third calcareous, dark-grey, compact, and very hard; the upper one calcareous, warm yellow, or pale orange, and filled with fossil remains. These strata are nearly horizontal; the black rocks of

* Kummás, or kammás, diver's or leaper's river?—F. S.

† Wild well.

Kostantinah, and the black stones with which its principal edifices were formerly constructed, are not, as commonly stated, either of lava or basalt; the stones used in construction were taken from the third stratum. In more modern times the upper stratum has been used as being much softer and more easily worked. The Rumlî, which at or near the town turns twenty mills, enters from the S.E. the deep fissure or ravine called El Huwah, existing between the heights of Mansûrah and the town. The entrance is extremely narrow, the breadth there from side to side not being more than four yards. The rocks rise perpendicularly on each flank, but there exist narrow ledges at different elevations, which enable a pedestrian to follow the whole of its course to El Kantarah, from which there exists no difficulty in continuing it to the cascade where the waters debouche from the ravine. A part of the works below the cascade are of marble, and thence called Dâr-er-rukâm. El Kantarah, as its name indicates, is a bridge across this ravine, placed at the angle which it here makes; the entrance bearing from it about S.S.E., the cascade W.S.W. From the summit of this bridge to the water of the river the height is 114 yards. The bridge itself, which rests on a natural one called Gorra,* is fifty-two yards. The open arch of the natural bridge, called Dholmah, "darkness," is of considerable height; but I was unable correctly to ascertain what part of the remaining sixty-two yards it occupied; the extreme length of the bridge on its summit from the Bâb el Kantarah to its commencement on the opposite side, and following its curve, is 113 yards; its breadth eight yards. Higher up the ravine are either the commencement or the remains of two other bridges or aqueducts, also of Roman construction. The modern part of El Kantarah was built by Mahonese, about forty-five years ago, with, it is said, materials prepared at Mahon! From El Kantarah to the cascade are four natural bridges; the arch of the one nearest the cascade so perfectly resembles a Gothic arch, that at first it appears to be the work of man. The cascade is divided into three falls, which together may be from forty-five to fifty yards, but I did not measure them. The rock which overhangs it on the town side, or left bank, is in perpendicular height exactly m. 109·3 yards, to which must be added a slope formed by the fall of stones and earth, which measures thirty-three yards more; total above the summit of the cascade 142·5 yards: from the top of this rock, named Keff Shakarâ, women guilty of adultery are precipitated. Kostantinah, before it received its present name from Constantine its restorer, was called by the Romans *Cirta*; but under the Numidic dominion it must certainly have had another name, for *Cirta* corrupted from *Νῆρκῆς Carta*, the

* Korrah, pupil of the eye?—F. S.

Punic for "a city," was only applied to it by the natives, as we employ the word "town" for London—the city—the town *par excellence*. I entertain not the least doubt of the Numidic city having been of far more considerable extent than the town of Constantina, which was what it still is at present. The Numidic city extended not only over Kudyat 'A'tí, but also on the right of the ravine, and at the base of the Setáh el Mansurah. I will not here bring forward the proofs of my assertions, but for the rest they are numerous and convincing. Kosantínah still retains a great portion of the walls of Constantina, which extended from where the Rumlí or Er-Rumel enters the ravine, across the neck of land, and, when it was necessary, along the summit of the rocky precipice which forms the W. and N.W. boundary of the town. From the Kaşbah, which almost overhangs the cascade, we see no traces of it along the edge of the ravine; nature had here rendered them superfluous. The Mohammedans have, however, erected batteries near El Kantarah to defend it. Kosantínah* (I call it by its Arab name to distinguish when speaking of it under the dominion of the Romans,) has four gates—Báb el Kantarah; Báb el Jabiyah, nearest to the entrance of the Rumlí into the ravine; Báb el Wád, now closed; and Báb Jadíd, nearest to the river, after it has made the circuit of the town. All these are of Arab construction, built, however, in great part with materials of Roman edifices; the superb gates, with columns of red marble, mentioned by several travellers, do not now exist; and I may here observe, that the ancient edifices have of late years suffered much, and in many instances have been entirely destroyed, in order to obtain materials for the fortifications of the town: especially this was the case with Ahmed Bey, when preparing to defend himself against the French forces. The town walls on the land side, five feet thick, and in many parts with casemates behind them, are built of Roman wrought stones. Kosantínah measures nearly 2700 yards, or $1\frac{1}{2}$ mile geographical, in circumference; the accounts which state its population at between 25,000 to 30,000 are probably correct. The period, however, at which I arrived in the town was not a favourable one for ascertaining its correctness, for, with the exception of dead bodies, we scarcely saw more than 200 or 300 of its inhabitants; the rest all fled when they perceived the certainty of our taking their town. Judging from the size and decorations of the houses, and rich furniture and stores we found in them, a considerable portion of the inhabitants appear to have been very wealthy, and to have indulged in much luxury. Neither did I see any indications of extreme poverty in any of the habitations; there appeared to exist a general degree

* Kosantínah, a corruption of Kōstantínah, has long been in use. See Idrisi, *Africa* (Ed. Hartmann), pp. 123, 203, &c.

of comfort which is seldom found in any large towns, even in Europe. The greater part of the houses are built from two to five feet above the ground, on large square-cut blocks of the dark-grey calcareous stones, the remains of ancient buildings. Kōstanṭínah from a distance has not the gay and white appearance of the towns of the East, or even of other parts of Barbary: this is owing to the peculiarity of the houses, not being covered with white-washed terraces, but with tiled roofs, *à dos d'âne*. During wet weather, Kōstanṭínah, as seen from Mansúrah, or any of the other commanding elevations, presents itself, from this circumstance, in a most gloomy and dull aspect. None of the mosques, public buildings, or houses, are remarkable for any beauty or elegance of architectural design. Judging from the size and height of the minarets, or rather towers, (for they resemble not the graceful ones of Turkey,) and not from their fame or sanctity, there are nine principal mosques in the town; but since this, the names of thirteen have been given me, besides several chapels. The Bey's new palace, built about eight years ago, is a large edifice, and in its interior very handsome; white marble courts, galleries, fountains, and columns; bright and gaily painted walls; vivid and glossy *azulejos*, with Arabesque patterns; orange, citron, and pomegranate trees; mirrors, and numerous glass lamps suspended in all directions; with a due mixture of rich carpets, cushions, lion and leopard skins, form on the whole a pleasing *ensemble*.

The inhabitants state that Kōstanṭínah contains 9000 houses and 40,000 persons, but perhaps both these statements exceed the truth; however, from the reasons before given, I can form no decided opinion, and the exact number of houses had not, when I left the town, been correctly ascertained. About 17,000 soldiers might be quartered in the barracks, fonduks, palaces, and the large houses of the wealthier inhabitants, without having recourse to billets on all the houses in general.

Before our arrival provisions were very abundant and cheap; wheat, per sack, 8s. 6d.; barley, per sack, 4s. 3d.; beef, per lb. $\frac{1}{2}$ d.; mutton, per quarter, 1s.; fowls, each, 5d. to 6d.

The inhabitants chiefly bake their bread at home; and the few public ovens which existed before those constructed by the French could only bake about 3000 to 3500 rations daily.

The land round the town belongs for the most part to the community in general, and is let out to a few of the principal families; these let it again to the actual cultivators, who receive one-fifth of the produce. The land is fertile and produces generally 30 per cent.

The principal manufactures in the town are those of saddles, bridles, boots, slippers and gaiters. The leather for these objects is dyed of a dingy red colour, with the bark of the del-

bragh. A few coarse blankets are also made. About twenty-five men were employed by the Bey in the manufacture of gunpowder. All the arms are made in the hilly districts of the Bení Abbás. A considerable trade was carried on with the south, from which, in return for corn, saddlery, and objects of European manufactures, the Kostantinians received gold dust, ostrich feathers, slaves, and the finer sort of háiks, both of wool and silk. From 1200 to 1500 mule-loads of corn, &c., were yearly sent to Tunis, from which European goods were brought in return.

The valley to the N.W. and W., through which flows the Rumlí, after it has disengaged itself from the ravine, is of great beauty; the river winds much in its course, and is bordered by a few villas and numerous gardens, rich in every variety of vegetable and fruit trees, with extensive groves of pomegranate, olive, fig, orange, and citron; the view in this direction is bounded in the distance by a bold range of mountains. North, or little westerly of Kostantinah is the hill of Sídí Meshid and the Jebel el Wahsh [the wild mountain], to the east Mansúrah, to the south Kudyat 'A'tí, and to the west of south, Jebel-esh-Shatábah [mountain of heather], the rocky Sídí Suleimán, and the range of Zawáwiyah. In the Jebel Jebbás (plaister) a part of the last-named range, gypsum is found, and the stones are burnt in the ravine Shabt-er-rúsas. The ancient remains in and around Kostantinah, I shall merely enumerate, without entering into descriptions. Where now stands the Kasbah was the Numidic citadel, some parts of the walls of which are still seen, as well as the remains of a large edifice, with the bases and pedestals of very large columns of the dark-grey stone; these bases measure seven feet square. This must either have been a double temple, or a palace (of Syphax?). It was also the Roman citadel, and called by them, as an inscription informs us, the Capitol; great portions of the Roman walls exist. Here are also large cisterns, divided into twenty-one compartments; and there is also a church, of perhaps the time of Constantine. In the town is a Tetrápylon, or rather was, for one of its gates or arches has been destroyed. Near it, but unconnected, are two other arches. A great part of El Kantarah is Roman; the bas-relief on it, of a woman and two elephants, was incorrectly copied by Shaw. On the east, or right of the ravine, is a circus, of which the arch, called Kaşr Gulah, (now destroyed,) formed the entrance; near it are two sets of cisterns. At the entrance of the river into the ravine are the remains of a large stone dam extending across its breadth. On the right bank of the Rumlí, and close to its junction with the Abú-Merzúk, is a fine aqueduct; six arches of the lower tier only remain, but over the river it must have had three tiers of arches to have carried the water to the elevation at which, on Kudyat

'A'tí, we afterwards find parts of its channel. A short way higher up the stream, are the vestiges of a Roman bridge, and the traces of the road from Cirta to Carthage. On the different heights which, though incorrectly, are generally by Europeans included in the name of Kudyať 'A'tí, are many remains, cisterns, channels of aqueducts, two paved Roman roads, houses, &c. At the foot of the precipice, on the west of the town, are the tepid Roman baths, now called of Sídí Meimún, the waters mark 31 centr. [102° Fahr.], and abound with tortoises. Lower down are the ruins of a Numidian mausoleum, which, like those of Kubrer-rúmiyah [Roman graves] and Medrashem, rose by steps to a point; it is however square, and not round. On the ridge between Báb Jedíd and Kudyať 'A'tí was the theatre, another of which existed not far from the Bardo. Many inscriptions exist in and near Kosantīnah.

Abú 'Obeid el Bekrí* states that Kōstantīnah is bathed and surrounded by three great and navigable rivers, which rise from the sources called Inghál, or black, and then lose themselves in the deep ravine close to the town. We cannot reconcile this passage with what at present exists, as there are only two rivers, the Rumlí and the Abú Merzúk, for we cannot count the salt stream of Wád el Melah, both from its insignificance and its not entering the ravine; the only manner of explaining the passage is by counting Wád el Hammám and the Wádí Sigan, which uniting a few leagues to the south of Kōstantīnah form the Rumlí. But none of these four streams are navigable for even the smallest boats, both from want of water and the rocky and broken nature of the beds. I have before stated that at the entrance of the ravine are the remains of a stone barrier across it; this of course increased the bulk of water above, but was probably constructed more for the sake of irrigation, or defence, than navigation. I may here observe, that if the Rumel did not always flow through the ravine, its former bed was in a valley near that of the Wád el Melah, and that it joined its present bed below the town, at the point where the latter stream now discharges its waters into it: however, these are useless conjectures, for a convulsion which could have formed so great a chasm may well have caused water to spring from a place where it had not before flowed.

My observations on the part of the country I traversed must necessarily, for evident reasons, be extremely few, and those very slight. With regard, for example, to its inhabitants—of their manners, customs, and character, I can form no judgment, as I never met them except in the field of arms, or a few in the town, vanquished, submissive, and at one's feet. In dress and

* Notices et Extraits des MSS, de la Bibliothèque du Roi, xii. p. 516.

personal appearance I have observed no peculiarities to distinguish them from the people of Algiers or Tunis. From Bónah to Kostantínah I did not see above six Arabs, besides those fighting against us. Kostantínah contains many Jews, who appeared to maintain the character which their brethren have gained throughout the world. Many Turks were in the town; and they fought admirably; so also did the Kabáíl,* and the Arabs. Many French persons have accused the latter of not displaying much courage, saying that they never stand to receive a charge, even from an inferior force:—this is generally true—but is solely to be attributed to their peculiar style of warfare, and not to deficiency of courage. They would act unwisely to change this system, for it is good, and well adapted to the country; and so has it, as in former days with their ancestors, proved to their enemies. Independently of the women in the Bey's harem I saw but few, and none of any great beauty.

The country from Bónah to Rás el 'Akabah is little cultivated, scarcely at all, but it supports numerous herds and flocks. There are in parts woods of considerable extent, but they are composed chiefly of large shrubs, and with the exception of the olive, very few trees—none adapted for ship-building. From Rás el 'Akabah to Kostantínah nearly the whole country is cultivated, and produces much corn and barley, but not a tree or even a shrub, with the exception of a few asparagus bushes, and oleanders on the banks of the streams. To the west of Kostantínah fruit trees are reared, among which are found a very few date trees, but their fruit does not ripen; the olives are among the largest, and the finest I have ever seen; the cultivated pomegranates are large and of exquisite flavour: this tree, as well as the fig, grow also in a wild state; the wild lotus, in Ar. Sidrah,† is found in abundance, especially to the north. The melons of Kostantínah are the most delicious that exist—they are called Merhúm,‡ and are not found at Bonáh; they are green, with yellow spots; the flesh is of a beautiful green colour, and may all be eaten close to the skin, which in thickness does not exceed that of a dollar.

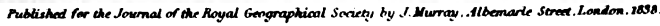
During our advance, the country was parched and burnt up, but after the heavy and continued rains which had so much annoyed us, it almost instantly clothed itself with brilliant verdure, studded with the purple flowers of numberless iris. The Sebús is by far the largest of the rivers we saw; the Sherf, and the Rumel, are the next; then follow the Abú-merzúk, the Zenátí, and the Bejímah; some of these would, however, in Europe, never

* Plural of Kabíleh, a tribe.—F. S.

† Zizyphus Lotus.

‡ 'Blessed.' These melons closely resemble those of Kaşabah, or Turgúd-Íf, 40 m. east of Smyrna, on the road to Ephesus, which are an incomparable fruit.—F. S.

A horizontal scale bar labeled "English Miles" with markings at 5, 10, 20, and 30.



be dignified by the name of rivers, and many others would never be noticed, so very small are they : most of them, in summer, have no flowing water, retaining only in the holes, or deeper parts of their beds, the remains of what had been furnished by the rains. Independently of the domestic animals, I saw but few others, namely, camels, jackals, hares, tortoises, hyænas, and leopards, and only very few of these ; there are, however, many lions and wild boars ; partridges, snipe, and wild-fowl, are found in great numbers, and in still greater numbers did we find vultures and crows ; but the presence of these latter was accounted for by the great number of horses that died during the campaign. Of insects, the most common were scorpions, mosquitos, and a very large and black species of earwig which I had never seen before. The thermometer in my house at Kōstantínah ranged from 10 to 15 centigrades (50° to 60° Fahr.), but seldom rose higher than 12 (53·3 Fahr.)

In returning to Bónah, I followed, with trifling exceptions, the same route. From Rás-el-'Akabah, I visited the ruins of *Annona* ; from Mejáz 'Amár, I went direct to Hammám Berda'ah, thus cutting off a great angle ; and from Neshmáyah, I rode along the course of the Mab'újah, to the Roman bridge near the second blockhouse, thus avoiding Ed-dere'án. Our étapes during the return were as follows :—Wádi Muheiris, Rás-ez-Zenáti, 'Ainet-toráb, Mejáz 'Amar, Neshmáyah, Bónah.

My researches were chiefly directed to the subject of antiquities, and the illustration of ancient history and geography, as well as to the obtaining Arabic MSS. relative to Arab history. I had intended giving the latitudes, longitudes, and elevations of different parts of the Beylik, from the observations made by M. Falbe ; but after due consideration, I do not think I should be justified in doing so, as he may wish to publish them first himself in his own country. On the subject of zoology, I may mention, that while at Kōstantínah, Ferhád ben Sa'id, chief of the powerful tribe of Auléd Sa'id, came from the Great Desert with nearly 1000 cavalry, to offer his allegiance to the French, and on this occasion, I observed that their horses were generally much superior to those we had hitherto met.

The numerous ruins of Roman posts and stations that we saw, though in no way whatever remarkable either for their size, architectural design, or preservation, were extremely interesting, as clearly showing the excellent plan adopted by that nation when colonising a conquered country. These posts were of two sorts, those which secured the roads, and others which guarded the estates at some distance from them ; but I have not leisure at present to enter into the details of their colonization system.

IV.—*Notes on a Journey from Tabriz, through Kurdistan, via Ván, Bitlis, Se'ert and Erbil, to Suleimaniyeh, in July and August, 1836.* By Lieut.-Col. J. SHIEL. Communicated by the Hon. W. Fox Strangways. Read February, 1838.

AT Tabriz two routes were proposed to me for reaching the Turkish camp, which was supposed to be situated to the north-east of Mósul. One was by proceeding to Júlámerik,* an independent Chiefship in the mountains of Kurdistan, bordering on Persia, and from thence through Tiýári, the territory of the Kaldáni (Chaldæan) or Nestorian Christians, whose almost impracticable country joined to their own warlike character, enables them to avoid rendering obedience or tribute to Turk, Kurd, or Persian, and still corresponds with Xenophon's † character of the Chaldæans: "they are said to be a free people and warlike." The objections to this route were the necessity of assuming the character of a Dervish, that is of travelling under the appearance of great poverty, as my informant said that otherwise there could be no security, and of performing a part of the journey on foot, a portion of the road being totally impracticable for cattle. I therefore selected the route by Ván, although more distant.

July 15th.—We left Tabriz and proceeding in a western direction arrived on the evening of the 17th at the town of Dilmán, situated in the large and fertile valley of Selmás, which is bounded by the Lake of Urumiyah, ‡ on the east, and by the mountains of Kurdistan on the west. In this district Armenian Christians are very numerous, and exclusively occupy whole villages; there are also some villages inhabited by Roman Catholics, under the spiritual guidance of a Khalifah or Superintendent, appointed by the Vicar General in Baghdád. Like the Nestorians, these last call themselves Kaldánis, which is probably a national, not a religious designation, while they also style themselves Kátólikis, a name by which they are known all over Kurdistan. A strong mutual antipathy exists between them and the Nestorians. I remember a bishop of the latter church once telling me, that the Armenians were not very good,—the Musselmáns were much worse, but that the vilest of all mankind were the Kátólikis. The contentions of the fifth century are not yet forgotten, and they still retain the doctrine that separated them from the Roman Catholic Church.§ Yet the Nestorians are generally tolerant; they are

* Júlámerk, according to Father Garzoni, who lived eighteen years among the Kúrds. (Gramm. Kurda, p. 18.)

† Anabasis iv. iii. 4. vii. viii. 14.

‡ Urmiyah, according to Hájj Khalífah, and in Armenian, Urmi (Jihán-numá, p. 385); therefore Urumiyah is a corruption.—F. S.

§ See Asseman. Bibl. Orient. Vol. iii. part ii. p. 67 and 199. La Croze, Doucieu, &c. Mosheim, Eccles. Hist. iv. 264, &c.

anxious for instruction, and they have given a welcome reception to some American missionaries who have established themselves in Urumiyah.* The Roman Catholic bishops of Selmás are generally educated at Rome. The present bishop informed me that he had spent fifteen years in the College of the Propaganda, and added to my surprise, knowing the pertinacity with which the Latin language is adhered to in Europe, that the mass and other services were celebrated in the Chaldæan† tongue, which was the only one employed in their books. When I alluded to the contrary practice in Europe, he said that his flock would not submit to any deviation from the customs of their forefathers.

Selmás is also a home for many of the Russian deserters in the service of Persia. Here they marry and settle when they are worn out and unfit for service and form a sort of colony. There are also many Leks‡ established in Selmás. This is a tribe of the ancient Persian race which dwells chiefly in the south of Persia. They were brought here by Nádir Sháh, but they have forgotten their language, and now speak only Turkish.

Dilmán, commonly called "the City," is a new town built by Amír Khán Kájár, a relation of Fath'Alí Sháh. There is an old city of the same name placed one farsakh§ to the west, now almost in ruins; the only reason I could discover for removal to the present site, is its greater distance from the Kurds, and therefore greater security. The new town is of considerable extent, and is said to contain 15,000 inhabitants. Like almost all the villages in the district of Selmás, Dilmán is surrounded by gardens; the streets are clean, but the bázárs are poor and ill supplied. Caravans are sent from Dilmán to Ván, Júlámerik, Tiflis, and Erz-Rúm.

Our quarters were in the Mehmán-Khánch, or Guest-house, a substitute for an inn. This, though in Persia not a very honourable mode of entertainment, is far more convenient, and much less expensive than the usual mode of lodging in the house of a private individual.

July 18th.—We resumed our journey, and were joined on the march by four Kurd horsemen, who were directed to accompany me to Ván by their chief Yehyá || Khán, to whose sister the present King of Persia is married. He is the head of a small tribe called Chehrí, a branch of the powerful tribe of Hekkárí which rules over a large portion of the central part of Kurdistan. The chief of Júlámerik is the head of the Hekkáris, but his authority

* See *Missionary Researches in Armenia, &c. in 1830-31*, by Messrs. Smith and Dwight, with an excellent introductory memoir by Mr. Josiah Conder.—Ed.

† That is the Syriac, called Chaldæan by the natives of Kurdistan.—F. S.

‡ A Kurd tribe. See *Journal*, Vol. VII. p. 232.

§ Or farsang. Four British miles, for this must be the Tabrizi farsakh. (Ouseley's *Travels*, iii, 376.)—F. S.

|| John.

is only nominal, the tribe being divided among a number of Begs,* who pay him no obedience, and they have rendered themselves almost independent of the Turkish Empire, to which they properly are subject.

The escort was well mounted on prancing Kurd horses: this breed is usually small, but strong, active, and hardy, and derived from the Arab stock: the chief of these Kurds was dressed in the usual gay costume of the better class of his countrymen; short yellow boots, large cloth trousers, two or three jackets of striped cotton, a mantle, and an enormous turban of striped red and white silk and cotton, or of handkerchiefs of a variety of colours. Their arms are, a lance carried on the shoulder, and a large pair of pistols in the girdle. The Kurds are said to excel the Persians in courage and in horsemanship, but the fusil of the latter gives a great advantage, for however prodigal a Kurd may be in exposing his own person, his anxiety for the safety of his steed rarely allows him to encounter the Parthian warfare of the natives of Persia with success.

We passed through the old town of Dilmán, a large portion of which is in ruins. From the number of mounds in the neighbourhood it has the appearance of having been once of considerable extent, and it is described by the Orientalist, St. Martin, as being a very ancient Armenian city. Near the town we saw two very high minarets standing alone in the plain, the mosques to which they were probably attached having fallen to decay; they were said to have been built by the 'Osmánlis, who possessed this part of Persia upwards of a century ago.

My inquiries respecting some ancient sculpture on the face of a mountain near the old town of Dilmán were answered with difficulty: after a long search I discovered that it was half a farsakh to the S.E.; our road was west, and my party having preceded me, together with its being near sunset, obliged me to abandon my intention of visiting it. I learnt that, in the range of hills separating Selmás from the district of Urumiyah, there was some sculpture of a similar description, but whether it has been examined by any European I know not.

Our course was westerly, and two miles after leaving the old town of Dilmán, we entered the hills of Kurdistán: they were small, but of curious shape, as crowns, pyramids, &c. We then turned north-north-west, and ascended the banks of a small stream which runs under Dilmán, and at 9 P.M. the Kurds informed us that we were close to a small deserted Kurd hamlet, and that there was no other habitation for five farsakhs; here we halted for three hours.

July 19th.—We set off at 2 A.M., and ascended through a nar-

* Pronounced by the Turks Bey.

row defile twelve miles in length with low hills on both sides. The road was often excessively bad, which in the dark caused great confusion, and the continued ascent rendered the air so cold, that towards morning a cloak was an insufficient covering. We travelled on the banks of the same stream, each side of which was covered with a profusion of herbs and weeds, and abundance of poppies. At the close of the defile there was an abrupt ascent, and we then entered a valley or rather table-land of considerable extent. After travelling two miles we were opposite to Heráwel-dágh,* which lay about the same distance from us to the west. This mountain had been visible twenty-five miles on the other side of Dilmán, and had then the appearance of great height, but on near approach, it lost much of its apparent altitude.

We soon after passed two Kurd villages, in the neighbourhood of which there was much cultivation, but the habitations in them were of the most wretched description.

We continued our journey through the same undulating valley, and at about the twentieth mile, we were in view of the valley of Elbák,† the entrance of which bore west-south-west ten miles distant; it was said to be five miles wide, and twenty miles in length. It was situated on our left-hand, at the very foot of the black, steep, snow-capped range which rose behind Elbák. The soil we travelled over to-day is Persian, but Elbák belongs to the Hekkári tribe, and is nominally subject to Júlámerik.

This valley was once rich and fertile, though now its wealth is much diminished, which is ascribed to the emigration of many of its Armenian inhabitants after the last war between Russia and Persia. The Kurds highly value the Armenians, whose industry is a source of profit; they treat them well too, better, at all events, than the Persians, among whom it is not uncommon to carry off their daughters, and force them to turn Mohammedans. A Kurd, the chief of a village, once boasted to me, that he had just enticed an Armenian priest to settle in his village; "for now," said he, "when I invite Christians to establish themselves here, and they inquire about a priest, I am able to say to them, here you have him."

After a tedious march of nine hours, in a north-north-west direction, and various ascents and descents among hills, we arrived at the district and village of Kótúr, which are attached to the governorship of Khóï in Persia. Overlooking this village of about sixty houses, is a tolerable mud-fort on a mound, yet it was plun-

* Herawel-dágh is probably the Mount Akronal of Colonel Monteith's map, and may be estimated at 9000 feet above the sea.—*En.*

† This must be the valley through which the river Záb flows, in a S.W. direction, as, if our maps are correct, here is the source of that river at about 7500 feet above the sea; the valley is the Ali Baugh of Monteith's map.—*En.*

dered in October, 1835, and held possession of during a month, till all the grain was carried off by a branch of the tribe of Hek-kári, nominally under the Páshálik of Ván, ruled by two brothers named Khán Meh múd and Khán Abdál.

We were well received at the village, which is chiefly inhabited by Armenians; the Kedkhodá,* or chief, was extremely civil, and supplied us with the best house, which belonged to an Armenian. A more unclean place I have seldom seen than his dwelling, which brought strongly to my recollection the habits of my dirty old acquaintances in Tibet. "The dingy denizens are reared in dirt" most conspicuously. Every body was filthy and in rags; but their poverty was more apparent than real, for the house we lodged in was crowded, like the generality of the other houses, with cows, calves, buffaloes, &c. The houses were not much higher than four feet outside, but as there was a considerable descent at the entrance, the height was much greater within. These habitations did not differ materially from those described by Xenophon after his entrance into Armenia, and the practice he mentions of the inhabitants and the cattle being lodged in the same house is still preserved. There was no symptom of the beer in jars, to which he alludes in the same passage.

The landlord complained of the oppressions which Armenians living at a distance from large towns endure. He stated that each family paid the priest of the village 12s. and fifty pounds of bread yearly, and a very trifling sum at marriages and funerals; he considered the pay inadequate.

Though the village was small, the cultivation was extensive; oats were growing wild among the barley, but I do not think they are cultivated in any part of Persia.

The village is situated at the foot of a black, bluff, high range, called Haleb dágh † of which the direction is about east and west: a stream, called here, Kótúr Chái, ‡ passes close to the village, and after flowing to the eastward, under the city of Khói, falls into the Aras. § The distance we travelled to-day was about twenty-eight miles.

July 20th.—We left Kótúr at half-past one, A.M., and crossed to the left bank of the Kótúr Chái, which flows with a very rapid stream. We then entered a wide defile, named Bálánjik, || twelve or fourteen miles in length, with the above stream flowing through it. Our general course was west; at about the tenth mile we ascended to the right from the defile, leaving the stream to the left. At about the fifteenth mile, we entered an immense chemen,

* Pronounced at Constantinople, Kyahýá, and spelt Kya by Sir John Macdonald Kinneir. It signifies properly, 'agent, homme d'affaires.'—F. S.

† Apparently Mount Erian, of Colonel Monteith's map of Armenia.—Ed.

‡ Kótúr, river.

§ Araxes.

|| Bálánjik, valley.

or meadow, and at twenty-five miles halted at the ruined village of Múllá Hasan, on the bank of a small stream flowing from the south. The horses were let loose to graze in the meadow, but saddled to be ready at a moment's notice. This is the most unsafe part of the road between Khóî and Ván, from the vicinity of the tribe of Khán Mahmúd, who has taken possession of this meadow. During the day, a Kurd of most villanous and wild aspect rode up to our ground: his countrymen of our escort declared that his object was to examine whether we were merchants or Kháns; the latter is the title with which the Kurds have dubbed me at the villages, probably for the purpose of increasing their importance, but the rank is an inconvenient one for my purse. Another Kurd, a very old man, rode up soon after, and complained bitterly of the loss of his cows, which had been stolen last night, and of which he was now in search. This old Kúrd said the meadow was the boundary between I'rán and Islám, at which the Persians with me laughed, and it put me in mind of the Spanish question—Were the English Christians? Neither Turk, nor Persian regards the other as a Musselmán.

We mounted again at 3 P.M., and crossed a stream which rises at the eastern extremity of the meadow, and is called the Mehmúdjik Chái.* We then entered a defile of the same name, which gradually opened into a valley, and then into a wide plain. The road, as it had been during the entire day's march, was very good. At the thirty-fifth mile from Kotur, we recrossed to the left bank of the Mehmúdjik Chái, which flows into the Erchekjún lake.

We met a small caravan of bullocks carrying wheat from Ván to Khóî. The Kurds are the only people in Persia by whom I have seen bullocks used for carrying burdens.

At about the fortieth mile, the noble mountain of Sípán dág was visible; it bore N.W.†

After travelling forty-four miles, we halted at sunset at the Armenian village of Erchek: it was only after much altercation that we were able to procure a habitation. A swaggering Turk, dressed in plaid trousers, with an enormous pair of pistols in his belt, acted as master of the ceremonies, and a very uncourteous one he proved. The servants, with the usual craft of Persians, called me a messenger, if not an ambassador, from the king of the Inglís; even the obtuse Turk felt surprised at this announcement, but it altered his demeanor. Although we had been the whole day exposed to the sun, we felt no inconvenience from the heat. We

* Little Mahmúd's river.

† Situated to the north of the Lake of Ván, distant more than sixty miles.—Ed.

must, therefore, be considerably elevated above Tabriz,* where mid-day travelling would be now extremely inconvenient.

Erçek contains one hundred houses, which resemble those at Kotúr. The village is about two miles distant from the east side of the Lake Erçekjún. This is a fine sheet of water of an oval shape, its largest diameter being north and south, and perhaps about twelve or fifteen miles in length by eight or nine in width, although the villagers declared the length was at least forty. The water is brackish, and contains small fish of good quality. The lake is bounded by mountains on all sides, excepting the east, where the shores are flat.

July 21st.—We left Erçek at half-past three A.M., and proceeded nearly south along the shore of the lake for nearly three miles, when we were close to its southern extremity. We then passed through some valleys partially cultivated, and over two small passes, the general direction being W.S.W. At about the thirteenth mile after crossing a low pass, we came in view of very fine scenery; the high scraggy naked rock of Warak dâgh was six miles distant to the S.E., while to the south lay the plain of Ván covered with villages, gardens, and cultivation. The black rock of Warak† is a remarkable object; the direction of it is from N.E. to S.W., but the mountain is of no great extent, probably fifteen miles in length; high among the crags there is a solitary Armenian church, held in deep veneration; the reason given for placing it there is, that Moses was in the habit of praying upon that spot; but M. St. Martin‡ says that it owes its sanctity to a cross which was erected on the site of the church by a celebrated female Armenian saint, named Hríp'hsimé, (Rípsimé,) who suffered martyrdom soon after Christianity was introduced into Armenia. A mile farther on, the lake of Ván was visible, and soon after we beheld the rock of Ván and Sípán dâgh, while the snowy mountains of Erdóz, which bound the southern extremity of the lake, closed the view. Sípán dâgh§ is a splendid mountain; inferior to Aghrí dâgh|| or Ararat, it perhaps nearly equals Demávend and Savelán in Persia: in appearance it exceeds them, but this may be owing to the absence of other mountains of great height.¶ In shape it resembles

* Tabriz must be from 4,500 to 5,000 feet above the sea, as the mean height of the barometer there in March, 1818, was 25,100 inches.—Ed.

† Warak tágh. St. Martin, *Mém.* i. 54.—F. S. ‡ Ibid. ii. 427.

§ Seibán of St. Martin (i. 52), but Sípán is, doubtless, right.—F. S.

|| Ibid. i. 42. Jihán-numá, p. 408.

¶ In Colonel Monteith's map of Armenia, Sípán dâgh is marked at 7,000 feet, but it must be nearer 11,000; we know that Demávend is 14,500 feet above the sea, or 10,500 above the plain of Tehrán (see p. 72); now the level of the lake of Ván is certainly not less than that of Tabriz, probably it may be assumed at 5,000 feet; and if Sípán dâgh looks equally lofty with Demávend, to an eye accustomed to look at the latter from Tehrán, we may venture to place it at 11,000 feet without much

a truncated cone: it bore from us about N.N.W., and much snow lay on the summit. Macdonald Kinneir places this mountain at the N.W. angle of the lake, which it almost overhangs; but I feel persuaded that it is much nearer to the N.E. corner. The Kurds say that, before resting on Ararat, the ark touched this mountain, upon which Noah exclaimed, "Şubhān-ıllah!" (Praise be to God!) which expression has been converted into *Sipān*.

We found the villagers ploughing in the plain of Ván. The plough was formed entirely of wood, and, like that used at Urumiyah, had two wheels, which I had not observed in any other part of Persia, one of the wheels being much larger than the other; the object of this arrangement was unknown, excepting that their fathers followed the same practice. The plough was drawn by eight bullocks.

Is-hak Páshá, the governor of Ván, received me with civility, and assigned me a dwelling in a very pleasant garden-house attached to his own residence. The Persians accuse the Turks of luxury, and they certainly have some idea of comfort in their sitting-rooms. Instead of the nakedness of a Persian apartment, where a carpet is the only furniture, the room was well supplied with comfortable sofas and cushions.

The Páshá was so impatient to see me, that he sent a message that if I did not visit him, he would come to my quarters, which I of course would not allow. Before I could reach him, I was obliged to pass through an array of at least forty servants, attired in all sorts of garments, Turkish, Kurd, Persian, and Arab, besides others of a very fantastic description. He received me standing, pretending to read a note. The Sunnis, or, at all events, the 'Osmánlis, dislike rising to a Christian, and when they wish to be civil, they generally contrive not to be seated when he enters the room. Each nation has its prejudices. A Persian rises, but it is an abomination to him to use the same bath as a Christian, while to this a Turk is indifferent.

The Páshá, who is an 'Osmánlí, not a Kurd, was a very gentlemanlike old man, and so like an European in his dress, that, were it not for his Turkish red cap, he might have passed for an Italian or a Spaniard. We drank sherbet, coffee, and tea, while he read the letters of which I was the bearer. He strongly expressed his desire to be of use to any one employed in the business of the King of England, between whom (praise be to God!) and the Ali 'Othmán, the house of 'Osmán, there was now, as there always had been, an intimate alliance. The Páshá then sent for

chance of error. It would be an invaluable service rendered to physical geography if some traveller would carry a good mountain barometer throughout this elevated land of Armenia.—Ed.

his Visier,* to consult him regarding the best road for proceeding to Reshíd Páshá's camp. It appeared that they were in complete ignorance of the present position of Reshíd Páshá, and could not determine whether he was at Dyár-bekir, Jezíreh-ibn-'Omar,† or Mósul. The plan he recommended was to proceed to Jezíreh, and there endeavour to discover Reshíd Páshá's movements. To that city there are three roads,—one by Bitlís‡ and Se'rd,§ and the others directly south through the centre of Kurdistan. The first was the least difficult and safest, though the longest; the other routes were very difficult from mountainous and bad roads; and, in addition to this, the Páshá was apprehensive that the Hek-kári and other Kurd chiefs, through whose territories I must pass, would not, now that they were relieved from alarm by the distance of Reshíd Páshá, allow me to proceed on my journey, which their suspicions would induce them to consider as relating to themselves. The Páshá said that any accident that might occur to me would be a discredit to him, and that, therefore, he would send messengers to those chiefs, whose country was not more than thirty miles south of Ván, so that I should not be detained more than two days.

The Páshá visited me in the evening, accompanied by his son, a handsome boy of ten years of age. So great is the deference towards parents among Oriental nations, that the boy did not sit down in the presence of his father, who ordered him out of the room while he drank tea. During three days I was the guest of the Páshá. Early each morning the Kehveh Altí|| was sent to me; this consisted of bread, cream, honey, curds, and then coffee; hence the name Kehveh Altí (under the coffee). Some fifteen or twenty dishes were brought for my solitary breakfast and dinner. Contrary to the inconvenient custom of the Persians, where the dinner is placed on the ground, and all eat by stooping down to the dishes, here an immense pewter tray five feet in diameter was placed on a low stool, and covered with food; but Turkish cookery is an abomination. Each dish, whether of meat or vegetables, was filled with grease and curds, and the favourite sherbet consisted of milk, sugar, and garlic, several bulbs of the latter being in the bowl.

Is-hak Páshá spoke with great enthusiasm of the improving condition of Turkey, and particularly of the army; he described the redif,¶ or militia, to be established all over European Turkey,

* Vezír.

† Properly Jezíreh Bení 'Omar, i. e. the Island of the Children of 'Omar. 'Omar, being a proper name, cannot take the article. It is more commonly called Jezíreh alone.—F. S.

‡ Bidlís. Jihan, p. 415.

§ Se'ert.

|| 'The sub-coffee,' or substratum of the coffee drinking; an ante-breakfast.—F. S.

¶ Redif, a pursuivant in Arabic.—F. S.

and in some parts of Anatólí, or Asiatic Turkey. His ignorance on certain points was strange: he inquired if England and India were east or west from Constantinople, and where Austria lay.

The scenery at Ván is the most beautiful I have seen in Asia: the town is situated in a large plain, said to be twelve farsakhs* in circuit, studded with villages and gardens. The imposing mountains of Warak, Sípán, and Erdóz, are in full view, bounding the plain on the N.N.W. and S.E., while to the west lies the beautiful lake of Ván, distant one mile and a half. The rock of Ván is a most striking object. It is shaped somewhat like a camel's back, rising in the centre and falling at both ends. The ridge runs east and west, and is about 600 yards long, divided into three parts, each of which is about 200 yards in length. The rock stands alone, without any other hills in the vicinity, and is therefore more remarkable in its appearance. The middle and highest part is separated from the two ends by dikes, which are cut through the solid rock, so that each part is a separate fortification, the capture of either extremity by no means ensuring that of any other portion. The middle division is about 120 feet in height, and perpendicular on the south side; on the north it is formed in part of a very abrupt rock and in part of an earthy slope, but very steep and strong; the height of the two other positions at the lower part is twenty feet, and the whole rock is encompassed with a wall of stones and earth, with bastions, some of which are square, and the others round. On that part of the north face, where earth takes the place of rock, there are no less than five successive tiers of walls and bastions. The town is placed under the southern face of the rock, and is enclosed with a wall of mud and stone, having large round and small square bastions, protected, though not on all sides, by a ditch. The population, including the suburbs, which are placed in the gardens outside the walls, is said to consist of 12,000 people, of whom 2,000 are Armenians, who are very numerous in this Páshálik. The other inhabitants of the town are chiefly Turks, the Kurds being few. As usual in Turkey, the little trade the town possesses is in the hands of Armenians; the town contains two large churches, four large mosques, two baths, and two caravanserais; though the streets are narrow, the town is tolerably clean; the houses are built of mud and bricks, and, contrary to the practice of Persia, where nothing but a gloomy wall meets the eye, every dwelling has latticed windows to the street, and many have wooden rooms at the top, overhanging the street, where the 'Osmánlís sit and smoke. Over every door the words "Allahu Akber" (God

* Forty-three English miles.—F. S.

is great) are inscribed. The bázárs are few, and chiefly inhabited by Armenian weavers and mercers. The manufactures are the coarse cotton chintzes worn by the Kurds and Turks; cotton and corn are imported from Persia, for which money is paid.

The lake is described by Macdonald Kinneir to be twenty-five or thirty miles in length, and from nine to twelve in breadth, yet it has the appearance of being double that extent, and in fact a much greater size is attributed to it by the inhabitants: the water is brackish, but drinkable; a few boats are employed on it in trading between Ván, Akhlát, and Tedván,* on the west side; yet, though we marched several days on the shores of the lake, not one was to be seen. At a village near Ván I saw a boat on the stocks; it was formed of planks six feet in length, six inches in breadth, and fastened with iron nails; the length of the boat was about forty feet, the bottom was flat, and eight feet in breadth, while the top was about twenty.

Ván, from its strength and favourable position near the lake, was probably a place of importance in very remote antiquity, and this is in some degree confirmed by various inscriptions; on the south face of the highest part of the rock, sixty or seventy feet from the ground, there is an inscription about five feet by four in size. Intervening houses prevented a nearer inspection than 150 yards, and even with a good telescope, I was only able to conjecture that it was in the arrow-headed character. I have since learned what I was then ignorant of, that this inscription had been examined and copied by Dr. Schultz, the German traveller, who was murdered near Júlamerik, in 1829,† and who found it to be in the arrow-headed character. This gentleman is reported to have suspended himself from the top by ropes, in which position he copied the inscription. The interior of the fort is said to contain other inscriptions of the same kind, but the Páshá declined giving me permission to view it, alleging that he himself was not allowed to enter the fort without the sanction of the Ser-'asker Páshá of Erz-Rúm, under whose government he is placed.

The climate of Ván is extremely severe; none of the fruit was yet ripe: snow falls about the 20th of November, and sometimes remains six months; a portion of the lake is frozen in very severe winters.

* Táltván, remarkable on account of Khosrev Páshá's caravanserai, chapel, mosque, and baths, built A. H. 980=A.D. 1573. Jihán-numá, p. 415.—F. S.

† Professor Schultz, of the University of Giessen, undertook a journey of literary research in Asiatic Turkey and Persia, under the auspices of Baron Damas, in 1826. For some account of his discoveries at Ván, and its environs, where he copied forty-two inscriptions in the cuneiform character, see his letter to M. St. Martin, in the *Nouveau Journal Asiat.* for 1828, Vol. ii. p. 160—188. This enterprising and much-to-be lamented traveller, on his second journey from Constantinople in 1829, was murdered, it is said, near Júlamerik, or near Dereh, in the valley of the Zab.—E. n.

As the Páshá's servants had seen me use a pocket sextant, he sent me a request in the evening to be allowed to examine the moon with it: soon after he returned it, with the remark, that he was unable to distinguish in the least degree better what was passing either in the moon or in any of the stars.

July 22.—The Páshá's messenger not having returned on the 22nd, I resolved to continue my journey by the road of Bitlis: for this purpose, it was necessary to proceed through the territory of Khán Mehmúd, a Kurd chief, nominally under the control of the Páshá of Ván, but who not only paid him no submission, but had lately seized a district called Khavasúr, which had previously been under the authority of the Páshá. This Khán Mehmúd was evidently considered as a very formidable person, and it was obvious that the Páshá did not feel assured in what light he would regard my visit to Reshíd Páshá. His minister, therefore, invited me to dinner, and I there met an agent of Khán Mehmúd, under whose protection I was formally placed. He assured me that his chief would have much pleasure in seeing me, and recommended me to quit the main road and visit him in his castle of Pasvákh. To this arrangement I feigned to acquiesce, though I must confess, without having the least intention of fulfilling it. This agent was a very pleasant, chatty, ignorant fellow, with that sharp knavish look which distinguishes Kurds from the heavy solemn aspect of the 'Osmánlís. He had never before heard of the Yengí Dunyá,* (America,) and was thunderstruck on learning that some of the inhabitants never used clothes: he inquired if they could speak.

During the time we were at Ván, three deserters from the Russian army made their appearance; one was a German, the others Poles. They had deserted from Eriván, but were unable to explain by what road they had contrived to reach Ván. All they knew was, that they had passed through the country of the Kurds, by whom they had been plundered of their clothes: their wish was to reach Constantinople by accompanying an Armenian caravan.

St. Martin, the historian of Armenia, says, that according to the traditions of the Armenians, Ván is a very ancient city, having been founded by Semiramis, and called by her Shemirangerd: this account appears to be confirmed by the researches of Professor Schultz, who is said to have conceived that he deciphered the word Shemiram in one of the arrow-headed inscriptions which he copied. So late as the fourteenth century there existed buildings which the inhabitants attributed to the ancient sovereigns of Asia, and which were of such ponderous construction, that they resisted the efforts of the soldiers of Tímúr Leng for their destruction. Ruined by the course of time, the city of Semiramis was rebuilt

* New World.

by King Ván, who lived a short time previously to the expedition of Alexander the Great, and bestowed his own name on it; but, having again fallen into decay, it was restored by Vagh-Arshag,* brother to Arsaces, the first king of Armenia of the race of the Arsacidæ, about one hundred and fifty years before Christ. The city fell successively under the domination of the Seljúkis, of Tímúr Leng, of the Turkománs, and finally, it was captured by the 'Osmánlis in 1533, and has remained in their possession ever since that period.

The Greek name given to the Lake of Ván, or at least that ascribed to it by Ptolemy, according to St. Martin, is *Arsissa*, which is supposed to be derived from *Arjish*, a town on the northern side of the lake under *Sípán-dágh*; by the Armenians the lake is called *Akhtamár*,† which is the name of an island west of *Vastán*, and also of a large village on the shores of the lake seven miles south-west of the city: this village is by the 'Osmánlis called *Artemíd*. In some old maps I have seen *Ván* called *Artemita*.‡

The *Páshálik* of *Ván* is nominally of large extent, but the authority of the *Páshá* reaches but little beyond the plain in which the city is placed, excepting to the north, where the towns on the shores of the lake, and those under *Sípán-dágh*, *Akhlát*, *Arjish*, *Eljaras*,§ *Bègerí*,|| and *Albák*, are under his control. Several tribes of *Cháder-Nishín* (tent-dwelling) Kurds live in the northern part of the *Páshálik* of *Ván*, which reaches to the territory of *Báyazid*. These are the *Haideránlus* of 1500 tents, the *Sipki* of 1000 tents, the *Shúlú* of 200 tents, *Hamzeh-begí* 200 tents, who have the reputation of being excellent cavalry. On the west, *Ván* is bounded by the territory of *Bitlis*,¶ but this part of the *Páshálik*, as well as that on the south, is almost entirely in the hands of *Khán Mehmúd*.

Five miles south of *Ván*, is a low range of hills, on the south side of which is the valley of *Khavasúr*, inhabited by Armenians, which has been seized by *Khán Mehmúd*. *Khavasúr* reaches from *Warak-dágh* on the east, to the valley of *Vastán*, which lies between the lake at its southern extremity and the *Erdóz* range. To these mountains *Macdonald Kinneir* gives the names of *Haterash* and *Hertowshee*, but neither of these names is employed by the inhabitants.** South of *Khavasúr*, and bounded on the south by a high range called *Sú-suzán-dágh*,†† is the large

* *Valarsaces*.

† In Turkish and Persian, *Aghtamar* in Armenia, in which *gh* is substituted for *h*, *Boghós* being equivalent to *Paulos*.—F. S.

‡ *Artemita*, a Parthian city, is mentioned by *Tacitus*, vi. 41.

§ *'Adu-l-jerváz*.—J. N. p. 411. || *Bárgíri*.—F. S. ¶ Properly *Bidlís*.—F. S.

** He probably misunderstood his guides who spoke in Turkish-Persian.—F. S.

†† *Waterless Mountains*, the *án* is a Persian termination added to the Turkish phrase *sú suz*, 'waterless'.—F. S.

district of Mehmúdiyah, of which Khúsh-áb* is the capital. It is the hereditary territory of Khán Mehmúd, and reaches from Elbág† on the east, to the western extremity of the Erdóz range, which bounds lake Ván on the south. South of Sú-súsán-dágh lies the mountain of Sháh-dágh,‡ with a town of the same name said to be sixteen hours distant from Ván. The town is the capital of the large district and tribe called Hertausbí, nominally under Ván, but perfectly independent. All these valleys are narrow; south of Hertausbí is 'Amádiyah.

Between Ván and Vastán lies the valley of Kavásh, placed between the lake and Erdóz range. The capital of this district is Pasvakh, a strong fort, now the residence of Khán Mehmud, in one of the crags of Erdóz.

South of Erdóz is the chiefship of Ispert, between which and Buhtán§ lies the district of Mukusú: the Beys of these districts are under no subjection; besides which, almost every hill possesses a fort where the owner resides in independence. Buhtán is a large district stretching on the south to Jezíreh-ibn 'Omer, which until it was taken possession of by Reshíd Páshá, was the capital. Amádiyah seems to bound it on the east and Se'ert on the west.

The above is the information I was able to collect during my stay of two days at Ván, from the few people with whom I was in communication; and must be received with caution. The Páshá had given orders, under the pretence of preventing me from being disturbed, and I am unable to assign the real motive, that no one should have access to me. I may here notice the difficulty of obtaining information in Kurdistan. An 'Osmánlí is generally in profound ignorance of everything not passing before him. A Kurd is more intelligent, but too commonly answers to any question regarding mountains, rivers, or roads—"God knows! how should I know?" Besides this, except in large towns, the Kurds rarely understand any language but their own; but the greatest impediment to information is their extreme suspiciousness. My usual introduction to each village, was the report that there was not a mountain, village, stream, or road which I did not write down; and when making use of a pocket compass, the guides often taxed me with endeavouring to find a road for cannon to conduct the Persians to the aid of Reshíd Páshá to subdue the Kurds. Between Salmás and Ván the road is in general good.

July 23rd.—The messenger whom the Páshá had despatched

* Khúsh-áb—sweet-water.

† Elbák (J. N. p. 420). In Armenian Agpag. St. Martin, i, 177.—F. S.

‡ King's Hill.

§ Bahdínán (the people of good faith).

not having returned, we left Ván in the evening accompanied by a single Kurd, who was to proceed with us to Bitlís. The Vizier explained that it would make no difference if we were accompanied by one or one hundred men, as no one would dare to molest us without the orders of Khán Mehmúd, and if he was averse to our proceeding, the presence of a large or small guard would make no difference in the impediments by which he could oppose our progress.

In return for the civilities of the Páshá, I sent him a watch, with which I heard he was greatly delighted. He soon afterwards sent me a pony which, being perfectly useless to me at the time, I begged he would keep until my return. His attendants, and perhaps he himself, were much offended at my declining his present: they said, that if I did not choose to accept it, I might at least have had the civility to examine the Páshá's horse, praise his points, swear he was of high value and breed, and then request the Páshá's master of the horse to take charge of him until my return. It was impossible not to feel that the 'Osmánli ideas of courtesy were more refined than those of the Feringi.

We skirted the lake for four miles, and having reached the southern extremity, turned to the west and reached Artemid three miles farther on. This is a large Armenian village of about 350 houses, placed on some heights above the shores of the lake, and completely buried in orchards, throughout which the houses are dispersed. It has no appearance of antiquity, nor were there any mounds or traces of ruins in the vicinity. The civilities of the Páshá were still continued; an excellent dinner was in readiness on our arrival, and food was supplied for our horses.

July 24th.—We mounted at half-past three A.M. The road was exceedingly bad in some places, and at times over a perfectly smooth rock, where it would seem impossible for a horse to travel; but a Persian horse will go anywhere. Occasionally the road led us close to the lake, which was clear and blue like the sea.* Three miles after leaving Artemid we were in the territories of Khán Mehmúd. At six miles we crossed the mouth of the Khavasúr valley, and at seven miles the Khúsháb river flowing from the east nearly. Our course was now about west; the lake was close to us on the right, while the black mountains of Erdóz were about two miles distant on the left: these mountains are very high, and at a distance have a particularly rugged aspect. We were now in Vastán, an undulating valley of three miles in breadth. Ten miles from Artemid we reached the fort of Vastán,† a royal residence in the eleventh century, but now without a

* So the lake of Urmíyah, which is thence called Kabudán (blue) by the Armenians, St. Martin, *Mém.* i. 59.

† Or Usdán, in the territory of Rhesh-duni.—St. Martin, i. 141.

trace of greatness. The fort, a small mud building, is placed on a hill overhanging the lake, while the village and gardens are under Erdóz. Our Kurd attendant insisted that we should ascend to the fort to eat the *Keheh-Altí*. The 'Osmánlís appear unable to travel without resting frequently. Subsequently when I had 'Osmánlí guides, we never passed a fort or village without their proposing, "Let us enter and rest ourselves: let us eat: let us take some coffee; and let us have a *Chibúk*." The governor, a very ferocious-looking Kurd, with only half an upper-lip, and his garrison of half-a-dozen men received me very civilly. It had been thought necessary to send a messenger to Khán Mehmúd to inform him of our approach, but I found that he had only just left Vastán. I became a good deal incensed, and expressed my anger in warm terms. The garrison understood very little Turkish, and took high offence at what they imagined to be an invective directed against Khán Mehmúd, but I soon pacified them by a small present in return for the *Keheh-Altí*.

Leaving Vastán, we continued our journey by the side of the lake, and after travelling a few miles we entered the valley of Kavásh, which is a continuation of that of Vastán, and presents the same appearance, Erdóz being upon the left four or five miles distant, and the lake on the right hand. About the seventeenth mile from Artemíd, we were opposite to the rocky island of Akhtamár, which St. Martin supposes to have given its name to the lake. On the island, which, however, seems really to be two islands close together, are a much venerated church and a monastery, both visible from the shore: they were once affluent, but were despoiled of their wealth some years ago, by Khán Mehmúd, the powerful Rob Roy of this part of Kurdistan, or rather Armenia, for such it may more truly be called, almost all the villages being inhabited by that people. A few miles further on, we were opposite to the small island of Limn,* which was said to be five miles distant from us, and to be uninhabited. At about the twenty-fourth mile from Artemíd we were opposite to Pasvákh, the residence of Khán Mehmúd. We could distinguish the castle among the rocks of Erdóz. At about the thirty-fourth mile we reached the Armenian village of Núr Kúh, distant about one mile from the lake, and situated in a plain, much of which is in cultivation. The valley of Kavásh contains many villages.

The dames of Kurdistan are not held in the same restraint as their neighbours in Persia and Turkey. Among the *Kháneh-nishín*, (the dwellers in houses,) only women of high rank conceal their faces; but among the dwellers in tents all exhibit their

* Limn opposite to Amig.—St. Martin, i, 137.

features without reserve. The women, among the latter, acquire great control in their families, and have considerable intercourse with the men of their encampment. It is very common for the young men to run away with the young women of another tribe or encampment, which produces violent quarrels, for a Kurd resents an affront of this nature with almost the same vindictiveness as a blood-feud. The Kurd who accompanied me from Ván, in speaking of his countrymen, said, that the dwellers in houses were a bad race, but that the dwellers in tents were beasts, and not to be included among mankind. It is certain that they are, if possible, greater liars than the inhabitants of Persia.

July 25th.—We left Núr Kúh at half-past two A.M., and soon after entered a wide defile, eight miles in length, which was closed by a steep ascent, a short distance beyond which we passed under the high peak of 'Akad,* which lay between the road and the lake: here Demir-dágh, the Iron Mountain, a branch of Nem-rúd-dágh, was visible. We then travelled ten miles through a mountainous country, ascending and descending alternately. The mountains, which had hitherto been naked rocks or bare earth, now began to assume a more pleasing appearance; they were here tolerably covered with verdure, and occasionally with open woods of stunted oaks. At about the eighteenth mile we descended a steep hill to the valley of Pasvákh, where we were again near the lake which we had quitted after leaving Núr Kúh. Here we halted two hours at the village of Gúleh. After this, we again left the lake, which was hid by intervening hills, and travelled eight or nine miles to the village of Surp. This is a large village pleasantly situated close to a small bay in the lake, with high mountains behind, thickly covered with shrubby oaks. This was the termination of Khán Mehmúd's country. We then travelled along the face of hills, over a very narrow, bad road, overhanging the lake, and passed close to the pretty village of Harzúk, situated in a nook which defends it from the cold in winter. In Kurdistán, near the villages, there is generally a considerable quantity of cultivation, but all the rest is waste. We finished our journey of about twelve hours on horseback, or thirty-five miles, at the large village of Almaliyah, belonging to Bitlis. It is placed near the lake, and is surrounded by orchards. As usual, we underwent the process of being guests. This practice is so habitual in these countries, though not in Persia, that it is usual to count journeys by the same word; thus the distance from Ván to Bitlis would be described by saying, it is four Gonakhs* or guests. The solitude of our march was very striking; no caravans, no travellers, not

* 'Akd-jágh. Knot-Mount?—F. S.

† The author means Kónáks; but that word signifies "resting-places," "sleeping-places," not "guests."

even a Dervish, who is seen almost everywhere, interrupts the silence of these mountains.

The practice of medicine seems to be of a violent description in Kurdistan; suited, perhaps, to the rough, uncouth manners of the inhabitants. The Kurd who was with me, happening to have a fit of the ague, stripped himself stark naked, which is considered highly indecent in all Mohammedan countries; but, according to his own account, being only a tent-dweller, he was a beast, and he then jumped into the lake. His ablution was so little beneficial, that he was soon unable to ride, and found it necessary to mount one of the baggage-ponies.

July 26th.—We mounted at five A.M., and reached Bitlis at ten, about twenty miles. After travelling about three miles through the valley of Almaliyah, we ascended a height and left the lake, having reached its western shore. We proceeded through a plain or valley which was said to extend to Músh: at the eighth mile we were opposite to Demir-dágh and Nemrúd, which were distant about two and five miles respectively, and bore about north. At a distance they both have the appearance of high mountains, which they probably are, but a nearer approach destroys that impression. They rise abruptly from the plain over which we were travelling. We then turned nearly south, having been previously marching about west, and entered a wide defile, with a stream flowing through it, called here Bitlis Süi,* which is said to rise in Demir-dágh. We descended almost imperceptibly for nine or ten miles, and then reached the city of Bitlis.

We were lodged in the Governor's house, a large stone square building inclosing a wide court, and placed on the top of a high hill, where it stood alone, overhanging a part of the city. The Governor, a Kurd Beg, named Sherif Beg, was absent in Reshíd Páshá's camp; but his wife sent his two young sons to congratulate me on my arrival, which they did with the graceful manners one usually finds in Asiatic children of high rank. The Beg's house, in point of furniture, was in a wretched condition; but it possessed strength, which, probably, was the only thing he cared for. A balcony, or verandah,† fifteen feet high, surrounding the court, leads into a number of rooms, few of which had even a ragged carpet to conceal the stone floor. The Anderún or haram‡ is, however, the place to see the comfort of a Mohammedan, for in that sanctuary he can enjoy it unmolested, and without its being made a plea for extortion. We were, of course, the lady's guests,

* River of Bitlis.

† Veranda, a word borrowed by the Portuguese from the Hindús. To it our Anglo-Indians commonly append the letter A, which they as commonly omit in Arabic words, where it ought to be written.—F. S.

‡ Interior.

but her cookery was abominable; the usual curds and garlic were predominant, together with apricots stewed in grease.

The court contained a number of horses ready saddled, in which state they continue the whole day, but at night they are unsaddled: the answer to my inquiries was, that it was prudent to be prepared for every event, for no one could tell what might happen in Kurdistan. I found this to be a general practice.

The city of Bitlis* has a very remarkable appearance: it is placed in a wide ravine, which is open to the east but closed by high mountains to the west; the houses are dispersed over the sides of the steep banks of the stream which runs through it, and on several neighbouring hills. The form of the town is, therefore, most irregular; the houses are built of red stone, which is cut into square blocks, and the generality are of two stories, with grated windows to the street, which produces more resemblance to the towns of Europe than to those of Persia. Like Ván, the streets are paved with round stones. From the irregular manner in which the houses are scattered over the hills, intermingled with gardens, the town covers a considerable extent of ground: it is not inclosed by a wall; but this is scarcely necessary, each house being in fact a fortress, and a strong one too. The town is said to contain 1500 houses, of which 500 are occupied by Armenians.† To this class belong the bakers, butchers, grocers, &c. of the city, they being considered *pure*, in a religious sense, by the Sunnis; while in Persia it has sometimes happened, that they are not even allowed to purchase bread at the same shops as the Mohammedans: on the other hand, a Turk will on no account use the salutation "Selâmun 'Aleikum" to a Christian, which a Persian does not scruple to do.

Bitlis contains four caravanserais, three large and twelve small mosques,‡ three baths, eight Armenian churches, and one Nestorian: the large mosques have each one very tall minaret, which has a pleasing effect, and they are said to be very ancient Mohammedan buildings. Of butchers, bakers, gun-smiths, and silver-smiths, the number is very considerable, there being nearly twenty of each trade. The principal manufacture is coarse striped cotton cloth, and the chief export is tobacco. Pears, apples, plums,

* Bitlis stands in lat. 38° 40' N., long. 41° 57' E., according to Colonel Montei's *Map of Armenia*; and in lat. 38° 34' long. 42° 30' E., according to M. Lapie in the Notes to *M. Joubert's Voyage en Arménie*, p. 475. Macdonald Kinneir in 1814 made its lat. 38° 35', long. 42° 50' E. Astronomical observations are much wanted here as well as at Ván.—Ed.

† Kinneir, in 1814, says, 12,000 persons, one-half of which are Christians, *Journey through Armenia*, &c. p. 394; and 26,000 in *Geographical Survey of Persia*, p. 331, including the neighbouring villages.—Ed.

‡ Kinneir says, about thirty mosques and eight churches, p. 394; but if half the population be Armenian, this number of mosques is probably inaccurate.—Ed.

apricots, grapes, melons, cucumbers, lettuces, cabbages, and other vegetables, come to perfection. The climate is cooler than at Tabriz, though much warmer than in the country we had lately travelled through.

The most remarkable object in Bitlis is the old castle, which is placed in the centre of the town, on a rock thirty feet in height, and built up with stone to the elevation of about one hundred feet; the walls are extremely thick, and a single gate leads through the narrow passage which gives admission to the fort. The extent of the inside may be 120 yards; it is now in ruins and filled with old houses. The wall is strengthened by several square bastions on the outside: at the height of sixty feet there is an inscription in Arabic, cut in stone. An old man informed me that, within his own remembrance, there was an inscription on the wall which stated that the castle was built 300 years before Mohammed.

The women at Bitlis walk about with very little concealment of their faces, and display that very ugly Asiatic ornament, common in India, the nose-ring; this appendage is not worn in Persia.

A very reverend-looking Múllá paid me a visit during breakfast: he drank a tumbler of undiluted rum, talked of Columbus, and Napoleon, and of an Englishman he had seen in Bitlis twenty years ago, Macdonald Kinneir no doubt: he took his departure, praying me to come and drink with him at Músh, where he resided.

The territory of Bitlis extends twelve hours towards Se'rt, twelve towards Músh, four towards Diyárbekir, and four towards Ván. The only notice which St. Martin takes of this city is, that it has been almost always governed by Kurd Begs, whose subjects are the most civilised of their race.

July 27.—Accompanied by two guides on foot, we left Bitlis at eight A.M., and descended to the Bitlis Chái, which is the only name by which the river is here known. We proceeded at first down the left bank, and then passed over to the other side, by one of the numerous neat stone bridges by which it is crossed: the road lay through the narrow defile which is formed by the stream, and was the worst, if not the only really bad one we encountered. The path was high above the river, and sometimes so narrow as scarcely to give room for the horses' hoofs, and at other times so impeded by large stones, that our progress did not exceed one mile an hour. At about the fifth mile the road was crossed by a high ridge of rock which reached to the stream. Instead of carrying the path over it, an opening was cut through the solid rock of fifteen feet in width and height, and twenty feet in length. There was no inscription

on it, and the answer of the guides to my inquiry was the usual one of "God knows." At the tenth mile, fatigued by the heat which our descent down the stream had increased considerably, and by the badness of the road, we halted a short time under some walnut-trees. The Persian muleteer cursed himself, his luck, and avarice, that brought him to such a country; and he subsequently had ample reason for repentance, for long before we finished our journey four of his cattle died, besides two of my own horses. The ravine, particularly on the left bank, was enclosed by very high mountains, which probably were offsets from Erdóz: our guides' ignorance of the Turkish language rendered it impossible to obtain any information from them: the mountains were clothed with woods of oak, and the banks of the stream were covered with walnut-trees, mulberries, raspberries, vines, and abundance of herbs, but all enjoyment was destroyed by the heat and fatigue. During the march we changed our guides for two others. Unlike the guides of Macdonald Kinneir, who complains bitterly of their violence and rudeness, we found them alert, civil, and good-humoured. These men were armed with a rifle-fire-lock, swords, daggers, and a basket-shield studded with brass knobs: their rifles have a piece of iron two inches high, near the lock, with five or six small holes which serve for sights, and excellent shots are said to be made with them. From the mountainous nature of the country, there is very little cavalry in this and the adjacent part of Kurdistán, but every man has a rifle, and therefore the irregular infantry is numerous.

We met a caravan of mules proceeding to Bitlis from Shírwán, said to be eight hours south-east, with salt. They regarded us with astonishment, few Persians ever coming to this part of Kurdistán. My own dress being almost entirely Persian, I was always taken for an inhabitant of that country, and was constantly addressed with the words, "O son of 'Ajem, where goest thou?" At about the twelfth mile from Bitlis we passed close to an old castle, with a ruined caravanserai, on the opposite side of the road: the castle was a square fort with bastions, and was built of large uncut stones and mortar: it looked old, but the only attainable information regarding it was, that it was built by a person named Kai Fendúk, but who he was, or when he existed, was unknown.

At the sixteenth mile we crossed over a stone bridge to the left bank of the stream, which was rapid and deep, though not more than twelve yards in width: at about the twentieth mile we ascended a high mountain in a south direction, and left the river, which flowed to the west. The ascent was most fatiguing to our exhausted cattle: we then descended to the district of Várkhán, and at eight in the evening, completely worn out, reached the large village of the same name. Although we had been ten hours

on horseback I do not think we travelled a greater distance than twenty-six miles, yet so great was the fatigue, that I doubt whether the horses ever recovered from the effect of it.

So great was the change of climate, that we found Indian corn growing here: the night being too hot to sleep in a house, we spread our carpet under some trees. Close to us was Sherif Beg, the Governor of Bitlis, who had just returned from the camp of Reshíd Páshá. He sent me a dinner of curds, grapes, milk, and that most indigestible of dishes, a wheat piláú. Soon afterwards he came to see me, that he might request me to tell Reshíd Páshá that his country was in excellent order, and that I had been well treated. He was a dashing Kurd of twenty-five years of age, and chiefly remarkable for his dress. It consisted of short yellow boots, blue cloth trousers of prodigious dimensions, three jackets of silk and cloth of different colours, and one of them with sleeves two yards in length; a wide silk sash round his waist, and an enormous turban of silk of every colour: a white Arab cloak was thrown round him, and a dagger, long pistols in his belt, and a sword completed his equipment. In Kurdistan, the sword is worn with the edge to the rear, which the Kurds contend is the best method for drawing the weapon. This dress is very fantastic, but very gay, and is imitated by every one, more or less, according to his means. The lower classes wear the coarse woollen manufactures of their villages, made into a short jacket and trousers. The Armenian villagers can scarcely be said to wear any dress at all: it is generally made of shreds and patches, and the marvel is, how the man gets in and out of it, if he ever takes that trouble. Instead of trousers, the Armenian women wear what the Persian women call trousers of one leg, by which expression a petticoat is meant; they wear, as is customary among the Armenians, a large white cotton veil, and the unbecoming slip of white cloth with which they partially conceal the mouth.

July 28.—We left Várkhán at seven A.M., and soon after arrived near a small stream, down the left bank of which we travelled: the only name I could obtain for it was the Se'rt Sú or river. We crossed it several times, and at the eleventh mile it was twenty-five yards wide, but shallow and not rapid, contrary to the appearance of the Bitlis Chái, or river. We passed a caravan travelling to that city with tobacco and wheat. We saw a number of cotton-fields, which, as well as the hot wind which blew the greater part of the day, showed that we had got into a very different climate from that of Ván. We continued to descend, though not abruptly, by a tolerably good road through an open country; the woods became more scanty, and the mountains decreased much in size. At about the twentieth mile we saw a high range straight and steep, running from about north-north-east, to south-south-west, which

was perhaps thirty miles from us to the south-east. Nothing was known of them excepting that they were in Búhtán. After being eleven hours on horseback we arrived at Se'rt,* but I do not think the distance was more than twenty-four miles: the fatigue of yesterday's march had nearly disabled our horses.

Se'rt, or properly Ise'rd,† is placed in the midst of a large undulating plain without a single tree, surrounded at a considerable distance by high mountains. The quantity of cultivation in the vicinity of the city is great, particularly of melons and cucumbers: in the midst of each field there is a small stone house, well loop-holed, for the protection of the property. There are at least twenty of these edifices in the neighbourhood of Se'rt, which give it the appearance of being surrounded by a number of small forts. The town is about two miles and a half in circuit, inclosed by a wall of stone and lime, with round and square bastions, but destroyed in many places, and without any ditch. A great part of the space inside the wall has no buildings, and the city is said not to contain more than 1000‡ houses of Kurds, Armenians, and Nestorians. There are three large mosques, and several small ones, two churches, five baths, and one caravanserai. The Governor's house is a large building sunk in a deep moat, which can be filled with water: this castle has bastions and loop-holes in abundance. The houses are all arched and built of stone, with very thick walls; but this does not diminish the heat of the interior. My title of Elchí§ was of very little service to me at Se'rt; I was put into a house so insufferably offensive and hot, that it was impossible to sleep in it. The Governor's hospitality induced him to send me a solitary bowl of milk for dinner, and the habit of being well entertained in the large towns made me fancy that he had behaved ill; in fact he had done so according to the notions of the country.

The nearest road to Jezíreh-ibn 'Omer was on the left bank of the Bitlís Chaí (?), and through Búhtán, which it was my intention to pursue, if possible. The distance was only sixteen hours, but I was informed that it was utterly impracticable, as the Beg of Búhtán was in rebellion, and had killed some people belonging to Reshíd Páshá. The impracticability of the road was pointed out to me by the fact that three hundred men were about to proceed to join Reshíd Páshá by another road of thirty-eight hours: they were to start at midnight, and I was recommended to accompany them, which I intended to do, notwithstanding that

* Kinneir makes the distance between Bitlís and Se'rt sixty-three miles; he probably travelled by a different road.—Ed.

† Se'rd and Se'rt in the *Jihán-Numá*, pp. 436, 439.

‡ Kinneir says about 3000 persons in 1814.—Ed.

§ Or, I'lchí, i. e. Ambassador.

we had only arrived at sunset: but they departed without me. My horses and cattle being extremely fatigued, I hired mules to relieve them for three marches, but they proved a source of great vexation; their slow pace, and the muleteers' habit of halting every farsakh, led to hourly disputes with them.

The following information was given to me at Se'rt: the city of 'Amádyah is said to be forty-eight hours south-east from Se'rt, but it seems unlikely to be at so great a distance.* From Se'rt to Bitlis there are three roads of sixteen, eighteen, and twenty-two hours respectively: we travelled by the road said to be eighteen hours. Besides this, there is a road of thirty-eight hours to Músh direct, which does not pass through Bitlis: this must be the road which Macdonald Kinneir supposes the ten thousand to have taken after they crossed the river which *he* calls the Khábúr† at Se'rt. Búhtán is a large district, which extends from Jezíreh twenty-four hours to the north. Diyárbekir,‡ to which Se'rt is now attached, is twenty-four hours from the latter city. A little to the north of west of Se'rt, a high peak is visible, said to be distant twenty miles. It lies in Hhazán, a mountainous ridge which has not been subdued by the Turks, and where a number of Kurd Begs live in disorder and violence. North of Hhazán there is another district in the same state, called Motkah.

Macdonald Kinneir, and I believe D'Anville also, says, that Se'rt represents the ancient Tigranocerta, and was founded by Tigranes the Great, a descendant of Arsaces, the conqueror of Armenia. No traces of ruins were seen by me in the very cursory inspection I was able to bestow between sunset and dark, but I was informed that some do exist. St. Martin says that D'Anville's conjecture is founded only on the apparent resemblance of the last part of the word Tigranocerta to Se'rt: he contends that Amida on the east bank of the Tigris, now Diyárbekir on the west bank, occupies the site of Tigranocerta. The Armenians, he says, call the city of Tigranes, Tigranogerd, and all their writers consider it to be the same as Amida. Tigranocerta, St. Martin states to have been thirty-seven hours from Nisibin, which is certainly less than the distance between Se'rt and that city; neither is Se'rt near Mount Masius, which separated the two cities. Tigranes the Second, or the Great, was defeated by Lu-

* In Colonel Monteith's map of Armenia, the town of Amádyah lies 57 geographical miles south-east, and Diyár-bekir 70 geographical miles west-south-west of Se'rt: this does not at all agree with the information obtained here, but the true position of any of these places, and especially of Amádyah, is unknown.—*Ed.*

† Kinneir must be mistaken in calling this river the Khábúr; it is only known here as the Bitlis Chái or Se'rt Sú—and there can be little doubt it flows about south to the Tigris: the Khábúr must rise in Amádyah, as has been already pointed out in Rich's Kurdistan. All our maps are wrong in this point.—*Ed.*

‡ Diyár Bekr, the tents or houses of Bekr. The *i* in Bekir is a Turkish addition.—*F. S.*

cullus near Tigranocerta, about sixty-seven years before Christ. He was the descendant of Arsaces the Great, or Mithridates, who conquered Armenia one hundred years after the Parthian conquest of Persia by Arsaces the First (about two hundred and fifty years B. C.). Tigranes the First lived in the reign of Cyrus : he was a descendant of Haig, who 2200 B. C. left Babylon, and founded the kingdom of Armenia.

July 29.—After much trouble we discovered the barn in which the Kurd muleteers had hid themselves to avoid a night-march. We left Se'rt at four A.M., attended by an 'Osmánlí horse-man belonging to the governor. After travelling two miles, we saw the Bitlís Cháí, two or three miles distant on the right, and at the third mile passed through the flourishing village of Shírván, of about 200 houses, lying on both sides of the road. At about the sixth mile, over a tolerably good road, we reached the Bitlís Cháí, now swelled into a moderately large river. We proceeded three miles down its left bank, and then forded it a short distance above a small fort on a hill called Gardil. The breadth of the river was about fifty yards, the current rapid, and the depth less than knee-deep. If Macdonald Kinneir's opinion that the Ten Thousand crossed the river which he calls the Khábúr in the vicinity of Se'rt be correct, this ought to be the spot, supposing the information that I had received at Se'rt of there being only one ford in that neighbourhood, to be true.

In passing close to the small fort on the hill, the 'Osmánlís proposed that we should "enter and rest, and eat, and smoke, and drink coffee." This, as the stage was distant, we resisted, upon which they all took their departure, and left us to pursue the journey without them, telling us they would rejoin us afterwards. The road lay at a short distance from the river : at the tenth mile the latter ran towards the east, while the road was nearly south ; at the eleventh mile we were again near the river, and at the fifteenth mile we left it altogether, our road being nearly in the same direction : the road was good, and lay, after passing the Bitlís Cháí, through the valley in which the river flows.

The Kurd muleteers had been constantly protesting most bitterly and loudly against the rapid pace at which we travelled. To rest our fatigued horses we were all mounted on mules, and these we never urged beyond a moderate walk. They frequently pressed us to dismount and halt, but we always refused compliance. At last, when we arrived at a most inviting spot for grazing, they lost all patience, and one, who had a gun in his hand, came up and said, in the most positive language his Turkish would admit of, that we must halt. Perceiving that I disregarded him, he took hold of the bridle and endeavoured to turn the mule's head. I hit him a blow on the arm with my stick, on

which he released the mule and put himself into a violent passion and flourished his gun with great energy. As I perceived that he had not removed the piece of cotton cloth which is placed in the pan to preserve the powder, and that he therefore could not fire, I took no notice of his antics, but one of my servants dismounted and collared him: they both began to struggle so violently that it became necessary for myself and the other Kurds to interfere and separate them. Both were armed, but neither for a moment thought of using his weapons; a blood-feud is too serious a thing to be readily incurred even in Kurdistan. Seeing that we were determined not to be forced into compliance, they discontinued their opposition and remained behind, protesting that their wives and children would be ruined, as the mules would surely die. This little altercation produced a very advantageous change in the conduct of these Kurds, who during the two subsequent days that they remained with us were very civil and tractable.

Soon after this we saw a river on the left, and asking the 'Os-mánlí the name of it, he replied that it was the Búhtán Chái: supposing this to mean the Khábúr of Kinnier, the river I have called Bitlis Chái, I inquired no further, as the name of Khábúr is not known here. At about the eighteenth mile we arrived at the village of Til,* belonging to Se'rt, with a small fort on a hill near the Tigris, which the 'Osmánlí guide and several of the Kurds persisted, in spite of my explanations, in calling the Murád. They agreed that it was the river which flowed by Músul and Jezfreh-ibn 'Omar, and I therefore conclude it was the Tigris.

We halted three hours under a tree, where we were joined by the chief of the village and half the inhabitants, who seated themselves about me without the slightest ceremony. An 'Osmánlí or a Kurd considers himself entitled to take a great deal of liberty with every one not a Muselmán, and that he himself, however humble his rank, is superior to every Frank; yet to their superiors of their own religion they show an abjectness resembling that of India, and far exceeding anything practised in Persia. Not a syllable of Turkish was understood by these Kurds, who appeared in complete ignorance of everything beyond their own village.

The chief had ordered breakfast, and when it was ready a long narrow table-cloth of decayed leather, or rather a hide, full of dirt and patches, was spread on the ground: on it were laid four bowls of boiled lamb and broth; the host gave the signal in the name of God, and the havoc began. They washed their hands neither before nor after eating, and seizing the meat with both

* Tell in Arabic, a hill or mound,—F. S.

hands, tore it with their teeth : not a morsel was left undevoured. They then began to discuss what was to be done with me. I was like a bale of goods ; each chief had charge of me when I was in his district, sent me out of it in safety, and got a receipt when there was any one that could write.

While we were at breakfast several shots were fired ; but of these neither I, nor apparently any one else, took the least notice. I afterwards learnt that they proceeded from the people of the village and those of Búhtán, who lived on the other side of the river called Búhtán Chái : they were skirmishing from opposite sides of the river.

We proceeded a mile up the left bank of the Tigris, which we forded ; it was at least 150 yards in breadth, nearly waist deep, and very rapid. We were now in the Páshálik of Diyárbekr. We then proceeded nearly a mile down the right bank, and reached the village of Móyen close to the river : there was an abundance of vineyards about this village : the vines were not planted in ridges as in Persia, nor trained on stakes as in Europe, but were dispersed irregularly over the fields. To each house there was attached a high platform erected on poles and covered with twigs and leaves ; here the people slept on account of the heat.

From this point I saw a river, which since reading Rich's Kurdistán, I believe to be the Bitlis or Se'rt river, falling into the Tigris from the north, at a short distance below the village of Til.

At about the twenty-first mile we proceeded nearly south, leaving the Tigris flowing to the east, and after four miles of very fatiguing ascent and descent the road again approached close to the river, which was now flowing a little to the eastward of south : the Tigris was not above ninety yards in breadth, but very rapid, and said to be very deep : high mountains lay on both sides of the river, and Búhtán was on the left bank.

Late in the evening, at about the thirtieth mile, we reached the large village of Chelek, of four or five hundred houses, inhabited by Kurds and Ya'kúbi* Christians, and defended by a strong handsome castle on a rock, in which the chief resides. We were treated here with much inhospitality ; the chief neglected to furnish us with any food or corn, and the inhabitants refused to sell anything, on the plea that they possessed only a sufficiency for their own wants : this is a frequent inconvenience in Kurdistán, where the people are unwilling to sell anything ; and on the present occasion neither the entreaties nor the remonstrances of the guide were attended with the least effect. He at last contrived to procure our most urgent want, corn, probably by bribing the servants of the chief, but I did not consider any scrupulous inquiry at all necessary.

* 'Jacobite.'—F, S.

Opposite to the village, on the other side of the river, in Búhtán, there was much cultivation, with the owners of which, the villagers told me they skirmish daily. The heat is so great here, that the greater part of the inhabitants had spread their bedding close to the river on the damp sand; they said that it would be otherwise impossible to obtain any sleep. We had latterly experienced considerable inconvenience from the necessity of travelling all day in the sun, but we in general found abundance of fountains in the hills near the road: this water is extremely cold, yet we drank it with impunity in the greatest heat; a hot wind blew during the entire day and night.

July 30.—We left Chelek at 4 A.M., accompanied by a guard of four Kurds on foot, besides the 'Osmánlí. It was a pity they had no language, as the Persians say of a man who cannot talk Persian, for more civil, attentive fellows, I never met. They were employed the entire march in helping me over streams, removing bushes, branches, and stones, which lay on the road, and in stealing cucumbers from the fields we passed through; the latter vegetable is so good and wholesome, that people eat a dozen of them without suffering any injury.

We travelled two miles near the bank of the river, and then left it flowing about S.E. while we proceeded to the south, nor did we see it again until we reached Jezíreh-ibn Omar. On leaving the Tigris, we ascended some hills, and soon after crossed a wide torrent flowing from nearly north, called the Só-úk Şú.* We then ascended a hill, near the top of which we passed through a tunnel of rock twenty yards in length and about twenty feet in height and breadth: the Kurds could give no account of this excavation, excepting that they believed it to be the work of men: it had the appearance of being artificial, but the object for which it was made was not very apparent, as it was near the top of the hill; the road through it was incumbered with rocks, which had either fallen from the sides, or been left there when the work was discontinued. Below the hill lay the village of Hesáv, in a narrow valley, encompassed by wheat and barley fields, still green, and by extensive vineyards.

About the ninth mile, we passed over a rocky mountain, in part of which steps had been cut, together with holes for horses' feet; beneath, on our right, lay the village and long valley of Derije,† where rice, cotton, melon, cucumber, and pumpkin grounds were cultivated to a large extent. The road, though in general tolerably good, was sometimes exceedingly bad; the mountains had lost much of the magnificence of those in the neighbourhood of Se'rt, and on the left bank of the Tigris; but they were still high and

* Cold water.—F. S.
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† Dershi?—F. S.
G

well covered with wood ; these chiefly consist of stunted oak, oak bushes, fir, holly, and a few elms, together with raspberries, blackberries, barberries, and a profusion of smaller plants. After passing near two other villages, and through a great deal more cultivated ground than usual, we arrived at the Ya'kúbí [Jacobite], village of Kermó. We had been eight hours on horseback, but the road being very bad, and there being besides much ascent and descent, the distance did not probably exceed twenty miles.

At Kermó, the inhabitants were most civil and hospitable ; they lodged me in a hut made of leaves and branches of trees, which in summer is a far more agreeable residence than a house : the women are dressed in a red cotton petticoat, red jacket, and a red veil or sheet, which reaches to the ground. On their heads they wear a string of silver coins. Kermó contains about a hundred houses.

A large concourse of the villagers assembled round me ; they kissed my hand and said, that like all Franks, I was their brother : they called themselves Ya'kúbís, or Suryánís,* enemies, as they express it, of the Nestorians, but friends with the Kátóliká, the Armenians, and Kupts † of Egypt : their language, they said, was Syrian, but that they also spoke Arabic ; and they added, that throughout the Pásháliká of Diyárbekr and Músul, their church was the most powerful. Their belief seems to be, that Jesus Christ possessed two natures, divine and human, and one will, while the Nestorian creed ascribes only one nature to him.‡

July 31.—We mounted at midnight, and travelled for eight miles by a continued, but almost imperceptible descent : we then descended a hill, and arrived in an immense rocky plain, with low hills dispersed over it, of which none of the bounds were visible, excepting towards the north : the plain is called by the same name as the small town we were marching to, Mediyád. It is crowded with villages, and in spite of the stones which filled every field, covered with unirrigated cultivation, but of poor and scanty crops. In some of the fields the stones were piled up to the height of fifteen feet. The only water procurable in this plain is from wells of great depth, covered at the top with a large stone perforated to admit a bucket. The inhabitants are Ya'kúbís and Kurds, with a few Yezidís ; the Christians do not, like other Kurds, in general carry arms, excepting on a journey, but all possess rifles : in their bearing and appearance, they resemble the manly and independent Nestorians of Azerbaiján, without any of

* Syrian.—F. S.

† Kupts.

‡ This is not quite correct ; the Jacobites are not strictly monophysites ; i. e., they acknowledge only one nature in Christ, the two being amalgamated into one. (Moeheim, iv. 269.) These Jacobites were probably converts to the Church of Rome.

the meanness which a long course of servitude has imprinted on the countenance and character of the Armenians.

We arrived at Mediyád after ten hours' travelling, or twenty-eight miles : both our baggage and riding horses were so exhausted that a slow walk is the utmost they could be urged to do ; the village is large, and inhabited chiefly by Ya'kúbís, and here the governor of the district, an 'Osmánlí, resides. We proceeded to his dwelling to obtain quarters, but he was absent : this house was a long narrow building twenty-five yards in length, the rooms being in an upper story with a wide gallery in front. This was filled with a crowd of 'Osmánlí servants, who scarcely condescended to answer our questions ; it was declared impossible to obtain a house, but we were offered the use of the guest's room. I found this to be an extremely comfortable apartment, well supplied with couches, cushions and carpets ; but being already occupied by several 'Osmánlís, I preferred an uncarpeted room which was offered in its place. No breakfast was forthcoming after our long march, which was a very unusual piece of inhospitality. I visited the Jacobite church, where I met one of the priests of the village ; the burial-ground surrounded the church, and from it issued the abominable smell of bodies in a state of corruption. The church was as bare as the most earnest lover of simplicity could desire, but this probably arose more from poverty than from any other cause. The priest showed me two books in Syriac characters, which he said were the Bible and Prayer-book : he declined selling them, on the ground that they would be replaced with difficulty. Besides the church which I saw, there is a large new one at a short distance, of the magnificence of which the people boasted highly : the priest deplored their poverty ; he said that a man possessing two bullocks was rich, and that if he displayed a greater number the Kurds, or Yezidís would certainly steal them ; the latter were represented as being much worse than the other Kurds.

Mediyád is placed on the direct road between Jezíreh-ibn 'Omar, and Diyárbekr.

In several of the villages in the plain of Mediyád almost every house was surmounted by a loop-holed turret, reminding one of what Xenophon says, after crossing the river Centrites, on entering Armenia, " upon most of the houses there were turrets."

When we were about to depart from Mediyád, the whole of the 'Osmánlí servants, forgetting their previous neglect, assembled round me, demanding " bakhshísh," i. e. a present. The Turks have the reputation of being insatiable on this point : it never occurred during this journey ; but it is said, that whenever a visit

is paid to a man of high rank, his servants* insist that the honour shall not be enjoyed gratis, and demand payment forthwith: this disagreeable custom has no existence in Persia.

August 1.—We left Mediyád at 9 p.m. yesterday. The road was bad and stony, and soon led us through the defiles formed by low hills. At about the twentieth mile we reached the Jacobite village of Ehbáb, where we halted for an hour; the general direction of the road had been south and south-east-by-south. After leaving Ehbáb we ascended some steep hills by an exceedingly bad road, so obstructed by large stones that our tired horses could scarcely make any progress. We then proceeded through a defile three miles in length, called the Pass of Ehbáb, after which we descended full 1500 feet into an immense plain, which, for want of another name, I shall call the Plain of Jezireh, although it reaches, at least on the right bank of the Tigris, as far as Músul, and perhaps Baghdád. After the fatigue and vexation of travelling so long among mountains, it was now delightful to behold the prospect of performing a part of our journey on level ground.

After travelling three miles over the plain, in a south direction, we arrived at a mud fort on a mound, with a ruined village beneath, called Ernúz. I entered the fort, and was introduced into the chief's apartment, an almost naked room, covered in part with a tattered carpet. He was a wild-looking, dissipated little 'Osmánlí, who had been placed there by Reshíd Páshá, in his recent progress from Diyárbekr to Jezireh. After the Khúshgeldiniz, "you are welcome," and coffee, he proceeded to display his qualifications as a judge, in a case which my appearance had interrupted. A Jew and a Christian accused a Muselmán of theft: before the complaint had been concluded, and without the presence of the accused, this lover of good order swore, by all the prophets he could muster, that he would fine him 200 krúsh,† or 2*l.*, and he kept his promise. The thief and a witness were brought in; the judge enjoined the latter to tell the truth,— "Pesawink, kúpek oghlí"—"Sir Pandarus, you son of a dog, if you tell a lie I will cut your throat;" and he looked as if he would do it. After hearing the evidence, he ordered the fine to be paid. "Listen to my witnesses," said the accused; "You son of a dog's dog, pay the money, or I will rip open your belly," shouted this mad 'Osmánlí. He kept half the fine, and gave the other to the complainants. He then proposed to me to drink arrack with him, but fatigued with the long ride of twelve hours, although the distance was only thirty miles, and with the clamour in his room, I left his house, and passed the day under a tree,

* It is not usual in Turkey to visit a great man without making a present to him and his servants; but this is not absolutely demanded.—F. S.

† Or Ghurúsh, i. e. Piastres.

exposed to a strong hot wind. He was extremely civil in supplying us with food and corn, which was fortunate, as none would have been procurable in the village. He visited me in the evening, and brought with him a bottle of arrack, which he protested was excellent, and insisted on my tasting it. He informed me that the villages in his neighbourhood were inhabited by Kurds, Jezidís, Ya'kúbís, and a few Jews; and that the languages they used were Kurd, Arabic, and Syriac. A vast number of mounds were scattered over this plain; some were bare, others had forts on their summits, and villages below.

August 2.—We mounted last night at ten P.M., the extreme heat rendering it difficult to travel during the day. We were accompanied by an 'Osmánlí courier, and four Kurds on foot, whom the chief of Ernúz considered it necessary to send with us, from apprehension of the Yezidís, from whose incursions, he said, the road was not perfectly safe. These Kurds were themselves Yezidís, but nothing could persuade the 'Osmánlí courier to question them regarding their religion. He declared that any allusion to it would give them deep offence; and besides, they knew nothing whatever about it. Our general course was east and east-by-north. The road for fifteen miles was level, and extremely good, after which it again became covered with large stones. We passed through two villages, called Seseván and Khánek. At the latter place we were detained two hours in changing the Kurds, without whose protection the 'Osmánlí refused to move. At ten A.M. we arrived at the almost ruined village of 'Aín-ser, where we fortunately found a few trees to pass the day under, but where no food of any description was to be got at any price.

The plain abounded in villages, but many had been destroyed by Reshíd Páshá three months before, in his passage from Diyárbekr to Jezíreh, in consequence of opposition to his troops by the Amír, or Chief of Búhtán, who had crossed the Tigris, and taken possession of this plain. We are approaching a lofty range of mountains, which seem to run north and south, and which, we are informed, are the mountains of Búhtán,* close to Jezíreh, on the left bank of the Tigris. The mountains called Zákhu Bing tághlar, "the thousand mountains of Zákhu," are also visible, bearing east, and extending east and west. In the evening we travelled five miles south, to the village of Tiláberí. The Múllá, or priest of the village, said that if it had not been for the recent presence of the army of Reshíd Páshá here, it would be impossible for me to travel accompanied by only five or six servants. A large quantity of tobacco was growing at this

* Baḥdínán?

village. We were alarmed here by tidings that the plague was raging at Jezíreh, whither we were cautioned not to proceed: this news happily proved false, the disease being only an intermittent fever and ague, which probably always exists during summer in this hot climate. The plain we are in is an enormous meadow, covered with thick high grass.

August 3.—We left Tiláberí at midnight, accompanied only by the 'Oímánlí courier. We travelled by a good road through the same grassy, undulating plain, and reached Jezíreh-ibn 'Omar in six hours. About daylight, in passing through a village where there was some difficulty in finding the road, the courier seized a villager as a guide; but we had not proceeded above two hundred yards when twenty or thirty of the villagers sallied out to rescue their companion: the ground was unfortunately covered with large stones, with which they gave us a most unmerciful pelting, and bruised the courier, and one or two of the horses: he tried to explain that we were not what they probably mistook us for, a party of plunderers; but his Kurdish appeared not to be understood: the servants unslung their arms, with the apparent intention of making use of them, but I loudly urged them to retire and refrain from firing, knowing well that the destruction of our entire party would be the consequence of the death of any of the Kurds. One carbine was fired, but luckily without effect. The guide made his escape in the row, and we, having certainly the worst of the conflict, withdrew and were not pursued.

Two miles from Jezíreh we crossed a stream (running from the Tigris, I think, and rejoining it a few miles below), near the ruins of a bridge, of which no part of the arches is left. It was very massive, built of mortar and large stones, and faced with black stones one foot and a half square. We then descended about 300 feet the low hills which form the bank of the river, and crossed the small arm of the Tigris, which forms the island [Jezíreh], on which the town of Jezíreh is built.* It was only a few yards in breadth, and ankle deep at this season: near the part that we crossed, there was another bridge similar to the former, of which five arches are still remaining. The town occupies nearly the entire island, which is about two miles and a half in circumference: the town is of an oval shape, and is surrounded by a low wall, in ruins in many places, and without a ditch; the wall is faced like the bridge, with the same black square stones. From the low situation of the

* The town of Jezíreh, we learn from Mr. Ainsworth, who carried a mountain-barometer there in the spring of 1837, is about 900 feet above the level of the sea, and the extensive plain over which Colonel Shiel travelled to the south-west of the Tigris is at least 1500 feet in height. Mósúl is about 350, Mardin about 3000, and and Nisibin 1300 feet above the sea.—*Ed.*

town in the bed of the river, and from the height of the banks, the heat is extreme, and not a single tree is to be seen on the island or its vicinity. The most complete desolation existed in the town; it was almost in ruins, and it was only after a long search that we were able to find a wretched hovel to pass the day in: no inhabitants were to be seen; it absolutely contained none, excepting a few hundred sickly miserable soldiers. Plague, cholera, and war had ruined this city; neither barley, nor straw, nor grass, could be got for our horses; no bread, no firewood, nor anything else whatever for ourselves, either from the governor or the bázár; the former was busy in preparing some soldiers for a marauding party across the river into Búhtán. Jezíreh had been the capital of Búhtán; for several years the Amír had refused to pay tribute or acknowledge subjection to the Sultan; Reshíd Páshá had seized his capital, and he was now in rebellion in his own mountains, and had become so formidable that they were not free from apprehension at Jezíreh. It was, therefore, no matter of regret that I resolved while at Ván not to travel through his territories. When we were approaching the town, we heard three cannon shot, and thought they were actually engaged: the firing, however, was in celebration of the capture of Erbil, by 'Alí Páshá of Baghdád. It was at Jezíreh ibn 'Omar that Macdonald Kinneir was imprisoned and heavily fined by the Kurd Beg. The large palace described by him is now completely in ruins: it is close to the eastern and larger branch of the Tigris; and opposite to it, on the other side of the river, are two pretty white forts, which completely overlook the town. St. Martin says, that Jezíreh ibn 'Omar, the island of the sons of 'Omar, is called in Syriac, *Zuzartá Zabelítá*, and *Bazebda*, and that it was situated in a country called *Zabdicēné*, conquered by Diocletian and Galerianus from Nársí, and restored to the Persians after the death of Julian. The Tigris appears to flow from the N.E., before it reaches the island, it then takes a bend and flows from the north: the mountains of Búhtán* are close to the left bank; they look very dark and magnificent, and are so high as to have, even now, some snow on the peaks: they come from N.N.E., but at a short distance above Jezíreh they turn to about east, and slightly south, having an opening of two or three miles at the angle: the river follows the course of this range only a few miles below the town, when the mountains stretch towards the east and the river towards the south: where the river leaves the mountains there is a plain of fifteen miles, bounded on the south by the thousand mountains of Zákhná: the Búhtán range, as well as the Zákhná, which is visible, looks very rugged and formidable; in the former there are said to be nu-

* Júdí Tággh?

merous villages of Nestorians and Yezidís. It appearing hopeless to expect any food at Jezíreh, we left it two hours before sunset, in company with a *kevvás*, or courier, which was the only escort the governor had it in his power to grant. Our course for five miles was south, among low hills and near the bank of the river; at the second mile we crossed the stream, over which the first bridge we saw before our arrival at Jezíreh was built. The Tigris was about 100 yards wide, not rapid, but apparently deep. After the fifth mile, our direction changed to S.E. by S., the river being a mile off, and the road lay through the same immense meadow through which we had been travelling, but it was totally without villages or inhabitants, notwithstanding that it was watered by many small streams. Many of the Kurd P's,* it is said, who in summer live in Búhtán, pitch their tents here in winter. At about the twelfth mile, when our unfortunate baggage-horses were almost incapable of moving, we arrived some time after dark at a Kurd O'bá, or encampment, about a mile and a half from the Tigris: it consisted of some fifty tents of the tribe of Hesenánlí: the camp was pitched in a circle, near the centre of which the chief's tent was placed: the tents were made of coarse black woollen cloths for the walls, with neat roofs of wicker work, and round each tent the sheep, lambs, bullocks, and horses, which were all, excepting the latter, very numerous, and made a terrible din, were assembled. The *kevvás* took us, as a matter of course, and without any introduction, to the chief's, or guest's tent; this was twenty yards in length, divided into two parts by a slight wicker-work, in one of which lived the Amír and the guests, in the other, the women of the chief: by mistake I entered the latter, and advanced to seat myself near four persons whom I supposed to be young men, the sons of the chief: they looked at me with surprise, but did not utter a word, or answer my "*selámun 'aleikum*;" at length a Kurd approached and requested me, though without any signs of displeasure, to withdraw. In the men's apartment there were fifteen or twenty people smoking their pipes, who took not the least notice of me; one of them, however, shouted the word, guest, I suppose to the cook, for soon afterwards a dinner of bread, cold cabbage, curds, and honey, was brought in, upon which I made a most hearty meal. From the O'bá, the Zákhu range (western end of it), lay S.E.

August 4.—We left the O'bá accompanied only by the *kevvás*, nor had we a larger escort till we reached the encampment of 'Alí Páshá; but it is probable that the present security can only be ascribed to the vicinity of Reshíd Páshá's camp, and that on other occasions greater precautions in travelling would be

* Hordes, or clans.—F. S.

necessary. We travelled along the banks of the Tigris through well-watered meadows nearly south, and at the fourth mile passed a stream from the north-west, which we were told was the river of Diyárbekr (?); at the fifth mile we reached the ferry of the Tigris; it was the same spot at which Reshíd Páshá crossed the river with his guns and troops: the ferryman told us that he had used floats of inflated sheep-skins for transporting the former. We were delayed two hours from the want of boats: there were but two, and one was so large that the boatmen could not manage it; besides which, there was a body of Kurd horsemen who were crossing from the opposite side. It was very amusing to observe the mode of crossing the horses: they were all collected together and urged by loud shouts into the water, while some twenty naked Kurds seized the manes of the leaders and swam over with them. These horses seemed to understand the affair completely; but not so our Persian steeds, whose sires had never seen a river: they could only be induced to enter the water by pelting them with stones, and when they had swam half way across, they all suddenly wheeled round and returned: this manœuvre they repeated two or three times, but so tractable is the Persian horse, that some days afterwards, when we crossed the Záb, they swam over without the least hesitation. The stream which I was here told was the Diyárbekr river, enters the Tigris a few yards above the ferry, with a rapid current twenty-five yards in breadth. The Tigris is about 220 yards in breadth, with a rapid stream; it comes from the N.W., and above the ferry bends and flows from the N.E.; the west extremity of the Zákhu range bore from this E.S.E.; the town of Zákhu is said to be E. by N. six hours, and placed in an island of the Khábúr, a little to the north of the Zákhu range: the city of 'Amadíyah is said to be N.E. We were informed that boats do not go up and down the river at this part. Keleks, or floats of inflated sheep-skins, descend from Diyárbekr to Músul, where the skins are sold. Having crossed to the left bank of the Tigris, we were in the meadow plain about six miles wide, which separates the Búhtán from the Zákhu range; the former of these rises at least 3000, and the latter about 2000 feet above the plain. We marched to the south-east, while the Tigris took a bend to the south-west, and after two miles we reached the right bank of the Khábúr, flowing from the east and falling into the Tigris two miles to the right: we forded it knee deep, the stream being extremely rapid and fifty yards wide, but from the width of the banks it would appear that after spring it must be 300 or 400 yards in breadth. We then proceeded through well-watered uncultivated meadows, while immense plains of the same description stretched to the west and south on the right bank of

the Tigris; at about the twelfth mile a road branched off to Músul, said to be two days' journey distant. We then ascended a low ridge, the tail of the western extremity of the Zákhu range, which lay east from us three miles, and which was probably also the distance of the Tigris from the same spot: the ground between us and the Tigris was undulating. At about the fifteenth mile, the heat becoming extreme, we halted at an uninhabited fort on a hill, and were now a short distance to the south of the thousand mountains of Zákhu, the direction of which was as nearly as possible east and west. Reshíd Páshá had carried his guns from the ferry to the town of Zákhu, which was in the possession of the Amír of Ráwanduz. After capturing that place it was requisite to carry his artillery across the Zákhu range; but the badness of the road obliged him to send it down the banks of the Khábúr, and he transported it over the ridge we had just passed, by a road nearer to the Tigris.

While we were in this fort we were joined by a party of twenty horsemen from Akháltzikkeh,* in the province of Kárs, who were proceeding to join Reshíd Páshá; their chief, a young man, called himself a Georgian, although a native of Akháltzikkeh. The inside of the fort not being very clean, he asked permission to sit on my carpet, which was spread in the only shady place under the wall; neither of us had anything to eat, but he drank five cups of tea, and was inclined to continue his libations had I not requested him to desist. He spoke very little Turkish, but he described himself to be an adventurer proceeding to Reshíd Páshá's camp in search of service. He seemed to have succeeded in his pursuit, for I afterwards saw him in the camp in attendance on the Páshá. The Zákhu range is that which Macdonald Kinneir considers as having opposed the progress of the Greeks before they reached the Carduchi. Xenophon describes it to be a place where on one side of the Greek army there were exceedingly high hills, and on the other a deep river; and again, it is noticed as a spot "where the Tigris is, from its breadth and depth, absolutely impassable, no road appearing, and the craggy mountains of the Carduchi hanging over the river." The Zákhu range does not, as Macdonald Kinneir asserts, extend to the bank of the Tigris; on the contrary, it is six miles from it, and the intermediate country is far from being impassable: the Zákhu range is sufficiently rugged, but it does not appear to be impassable to infantry: the range seems to be extremely narrow, and to consist of a single ridge; yet after all, there are no other mountains that appear to represent, so well as those, the spot where the Greeks met with this impediment; for though the Búhtán range

* Or Akhiskah.

represents far more accurately the locality described by Xenophon, yet as in reaching it he must have crossed the Khábúr, it is difficult to suppose he would omit allusion to it; and it is strange that on crossing the Zákhhú range he makes no reference to that river, as he must certainly have been close to it. If the Búhtán range were to take the place of the Zákhhú range it would be necessary to convert the Erzen branch of the Tigris into the Centrites, which perhaps would place geographers in some difficulty. From the Zákhhú range to Se'rt, through 'Amadíyah, is a long distance to march in seven days, as conjectured by Macdonald Kinnaird. In the evening we continued our march, and after three hours, or nine miles, reached the village of Kherbenuz. The high road to Músul from the uninhabited fort was in the direction of S.S.E., but we proceeded nearly due east, close under the Zákhhú range: the road occasionally was rather hilly, but more to the right it seemed very level; we still travelled through the same meadow. At night the grass is set on fire, and immense fires are to be seen in every direction: the black patches thus formed look like woods during the day, but not a single tree is to be seen. About the fourth mile from the fort we passed through a large grove without any village near it, dedicated to a saint; at the fifth we passed through the village of Merjsúr. From Kherbenuz Zákhhú city is said to be three hours E.N.E., and the pass leading to it is called Pavishmú; a large portion of the inhabitants is stated to be composed of Jews. We found excellent grapes at this village, but it was only by repeated remonstrances that we were able to induce the inhabitants to sell to us either food or forage: a furious hot wind blew the whole night.

August 5.—We left Kherbenuz at three A.M., and travelled about fourteen miles in five hours to a tree, near a stream, where we halted: for six miles we travelled E.S.E., and then turned into the Músul road from Zákhhú at S.S.E., which of course separated us from the Zákhhú range; the Kevvás was most anxious to proceed under the range where the villages are numerous, and where he probably expected good fare: he alleged that by approaching the Tigris, there was danger from the Arabs, who were in the habit of swimming over on their horses; but having heard that the lower was a better and nearer road, I forced him to proceed by it. The Zákhhú range had diminished in height, but it had become steeper; its distance from the place where we halted might be about six miles. 'Amadíyah is said to be sixteen hours E. by N. The road was extremely good, and lay through an uncultivated, though sufficiently watered country. At two A.M. we mounted, and travelled four miles S.S.E., three miles S.E., and five miles S.E. by E. to the village of Dúlóm: the heat and glare were excessive, and were accompanied by a strong hot wind.

We were warned against the Bádi Shám, "the wind from Damascus,"* which comes suddenly with a very bad odour, and kills those on whom it takes effect. Garlic roots are said to be a sovereign defence against these gales, but it seems to be a love for the vegetable that has converted it into a medicine. On a very hot day a person brought me what seemed to be a bowl of milk; on tasting it, I found it was full of garlic: I protested against such a compound. "There is no God but the Great God," said he; "what can be better on a day as hot as hell than milk and garlic?"

This part of the eastern bank of the Tigris had been in the possession of the Amír of Ráwanduz, whose followers had destroyed this village on the approach of Reshíd Páshá. The inhabitants praised the discipline of the army of the latter. Músul is said to be twelve hours E.S.E. from this; the Zákhu range appears to be about twenty-five miles in length; the whole of it is not exactly E. and W.; six miles before it reaches its eastern extremity, it runs from W.N.W. to E.S.E. and sinks into low hills; it then rises again into steep, bare mountains, under the name of the Sótí range, which stretch east to the Záb (and perhaps further), under the name of the Amádiyah and Zebárí Mountains.

August 6.—Having heard that Reshíd Páshá had crossed the Záb, I determined to endeavour to overtake him, and left Dúlóm at midnight, with one pony lightly laden: the course for eighteen miles was about S.E. by E., and then two miles E.N.E. close under the Sótí range; the road was good, and lay among low stony hills. At the third mile we passed close to the village of Gapán, at the ninth that of Dákah, and at the sixteenth that of Búndanah. Under the Sótí range there were many villages, which seemed to be placed in that position for the purpose of security. Our distance from those hills varied from a half mile to two miles: they are still low though steep, but further east they rise into high mountains: their direction is nearly E. and W.; at the twentieth mile we reached the town of Elkósh. Elkósh is a large Kasabah,† very strong, and built on the side of a low rocky hill; it is surrounded by a strong stone wall, and the houses are built in the most substantial manner of the same materials; all are arched at the lower story, and being built on a declivity, they rise above each other, which, together with all the houses being loop-holed and very strong, make it a place of great strength. Four years ago the Amír of Ráwanduz cut off the heads of three hundred people for resisting him in this town. The inhabitants are said to amount to two or three thousand people,

* Or from Syria?—F. S.

† Market-town.—F. S.

who are all Roman Catholics, and speak nothing but Arabic. The men dress like Kurds of the poorer class; the women wear blue trousers, and over them a large blue shift: they wear no veils; the hair hangs down behind in two plaits or tails; round the head a garland of silver coins is placed. I often examined these coins, which the women allowed me to do without reluctance, in the expectation of finding ancient ones, but they generally consisted of old European coins.

Reshíd Páshá's agent here was most civil: he got ready what I considered an excellent breakfast, but two hours afterwards another made its appearance of a most substantial description; the first was only the Kéhwah-Afti the host declared, and he refused to partake until I pressed; which in an 'Osmánlí was an extraordinary piece of delicacy. After breakfast, in spite of fatigue and the intense heat, I visited one of the churches; it was a very extensive building, with walls of immense thickness, and was said to have been built by the Jews, to whom the town belonged; but at what time no one knew. The inhabitants themselves looked like Jews or Arabs, but with coarser features; their manner and air were perfectly independent, without the least approach to the servility of the oppressed Armenians. The altar resembled those used in Catholic churches in Ireland; candlesticks were placed on it and a covered chalice; nothing could exceed the simplicity of the whole church, apparently arising more from choice than poverty: there was nothing to disturb this effect except a small frame of woodcuts of French saints, of horrible execution, and among whom St. Louis took the lead. The priest of the church presented himself; he said they were Kátóliks, and obedient to the great Pápás in Italy; that they abstain from flesh on Wednesdays and Fridays; that the mass was in Kaldaní* (not Syriac), in which language the Scriptures were written; and that the priests marry once: there was an immense Bible in the church, written in large Chaldee† characters. I then proceeded to view the synagogue. No Jews now reside in Elkösh, but it is much frequented by them as a place of pilgrimage. The synagogue is a large building, quite as substantial as the church, and, like all synagogues which I have seen, perfectly plain. No Jews are now attached to it; but at certain seasons they assemble from the neighbouring districts to visit the tomb of Náhúm Peïghember, "the prophet Nahum," whose tomb is in the synagogue. The walls are covered with small Hebrew inscriptions on paper: there was a large Bible on two rolls of parchment, inclosed in a

* This is probably a mistake, as the Chaldee has been long extinct; perhaps there may be some difference of dialect between these Mesopotamians and the Western Syrians.

† Syriac; the Chaldaic character is the same as the common Hebrew.—F. S.

wooden cylindrical case, which opened in the middle; the writing was beautiful, or the printing, for I could not distinguish which it was;* there was an abundance of books in the synagogue in beautiful Hebrew characters. Two miles east of Elkósh, placed high among the crags of Sótí, there is a large and extraordinary-looking church, which heat, fatigue, and the lateness of the hour prevented me from visiting; the Catholic guide attached the highest importance to the edifice, though he did not seem to know exactly why, or perhaps we did not understand him, as he spoke nothing but Arabic. We quitted Elkósh at one o'clock, and travelled nearly east in a blazing sun, with an intolerable glare, the road being close to the Sótí range, which was low, perhaps 1000 feet above the plain, but rugged and steep; at the twenty-second mile we passed the village of Borjá; at the twenty-fourth mile the Yezídí villages of Hespédún and Taítah; and at the twenty-eighth mile the Yezídí village of Bádú. All these were on the left, close under the Sótí range; while on the right were the villages of Bóbán Teseher, and several whose names I could not learn. All these villages have forts attached to them; there was one very remarkable-looking fort and village perched on a high mountain, with a rampart at the top. At the thirty-second mile, when we were passing through the Yezídí village of 'Ali Aghà, close to the Sótí range, and about a mile from the village where we intended to make our halt, several of the attendants of the chief rushed down from an eminence they were standing on, and seizing my horse's bridle, insisted upon my becoming their master's guest that night. Hoping that this would give me an opportunity of inquiring into their religion, I willingly complied. They conducted us to the roof of a house, where the chief, accompanied by a number of his relations, paid me a visit. Not one of them could speak anything but Kurdish. Coffee was brought, and soon after a large substantial dinner, with wheat instead of rice for piláú; every one ate in the strictest silence, and every one of the twenty who formed the party despatched his dinner before we had time to begin. This was the third good meal we had had that day, and formed a strong contrast with our previous abstinence, for after the first march from Se'rt, I had eaten little but bread, which we had brought from Persia, and tea; this sometimes arose from there being nothing procurable, and more frequently from the feeling of fatigue being greater than that of hunger. The whole party quitted me at the same moment, and gave me no opportunity of making inquiries; I urged the kevvás to attempt it, but he declined to have anything to say

* Manuscript, no doubt, as rolls are never printed, and such would be an abomination to the Jews, whose synagogue rolls are written according to prescribed rules with great care.—F. 8.

about it. We thus found these far-famed Yezídís the most civil people in Kurdistan; they are reported to be the greatest robbers among their countrymen, and their civility may perhaps be ascribed to the vicinity of Reshíd Páshá. The common reason assigned for their being called Yezídís is their approval of the murder of Huséin, grandson of Mohammed, by Yezíd: they are said to worship, or at least to deprecate the Devil, calling him God: this would appear to suggest the opinion that the old religion of Persia is not eradicated from among those people, and that the Devil is the Principle of Evil, which, under the name of Ahrimán, the Gebrs worshipped as the equal of Hormúzd, the Author of Good. 'Amadíyah is said to be eight hours from 'Alí Aghá, and Músul to lie S.S.W.

August 7.—We left 'Alí Aghá at three A.M., and reached the village of Házirjút at ten, about twenty miles distant, having travelled over an excellent road and through a flat country: for eight miles we went E. then E.S.E. to Házirjút; at the ninth mile passed near the village of Jewán, and soon after near the Yezídí village of Memvesh at the twelfth mile the high single mountain of Meklúb, rising abruptly from the plain about 1200 feet, was on our right, two miles distant. At the third or fourth mile the Sótí range disappeared, but it was soon succeeded by another remarkable, black, rugged, and bleak high range, perhaps 3000 feet in height, running in nearly the same direction E. and W.; the name of this ridge is El Kháir, or the Mountains of 'Amadíyah, which lies on the other side of it: further east, this ridge bends a little to the south; at the foot of it numbers of Yezídís dwell. Fourteen miles from 'Alí Aghá, we crossed a stream flowing from the N.E. called the Gómel. Most probably the battle of Arbēla took place somewhere in this neighbourhood. The ground is level as described by the historian, yet it is strange how he could avoid allusion to the remarkable range of El Kháir. From Házirjút nearly in the direction of east, a very high mountain was visible, which we were told was the mountain of Ráwanduz, distant twenty-six hours: this district is called Kalkúsh: it is level, and contains many villages, and a considerable quantity of cultivated ground. We left Házirjút at four P.M., and travelled in an east and east-by-north direction eight miles to Kelí, having passed near the villages of Ashtín and Khenáb Kendig. The El Kháir range here bends slightly towards the south: from Kelí another excessively bad pass into 'Amadíyah lay north-north-east, distant three miles. From Kelí 'Amadíyah is said to be twelve hours; Tiyárí, the district of the Nestorians, fourteen hours, to reach which are passes through 'Amadíyah. Ráwanduz is twenty-four hours east by south, and Músul eleven hours west-south-west. At eight P.M. we left Kelí, and

travelled eight hours on a very bad and hilly road, but not impracticable for cannon, Reshíd Páshá having conveyed his guns hither. After having travelled that day not less than thirty-five miles, we halted at a short distance from a village. The heat both night and day was very great.

August 8.—We marched at daybreak, and after two miles to the east and two miles to the north, over hilly ground, we arrived near the town, or rather large village, of Akereh, of about five hundred houses, surrounded by fine gardens. We learned that Reshíd Páshá had left Akereh the day before, and had proceeded farther eastward: he had besieged, or rather surrounded the fort for twenty-two days. It is a very strong castle, placed on a rock projecting from El Kháir, the town being at the foot of the rock. He contrived to bring a couple of guns to bear on the masonry of the wall above the rock, upon which the garrison surrendered, though without the least necessity; for even if he had succeeded in breaching it, he had no troops that would storm such a breach. None of the gardens about Akereh were destroyed or plundered, which shows the progress the Turks have made in this important point of discipline; the same remark is applicable wherever they marched. After leaving Akereh, we went twelve miles in an easterly direction, and then three miles to Reshíd Páshá's camp: we travelled at the foot of the El Kháir range, crossing the hills at its base, from which many torrents gushed: several villages were placed high in the inmost recesses of the mountain, and being in general surrounded by trees and some cultivation, presented a delightful contrast to the adjacent sterility. The peasants who passed us spoke no language but Arabic, so that, having no interpreter, we could not make any inquiries: we were even deprived of our very useless kevvás, who vanished most unaccountably in the morning; nor did he ever appear to claim his fee. At the tenth mile we passed through the large village of Zin-jí, inhabited by Arabs: close to it there is a violent torrent with a stone bridge over it, and a path leading to Ad-desht,* which appears to be a level tract lying between 'Amádíyah and Zebári. The torrent seems to have cut down the rock three or four hundred feet, and the pass is only practicable to men on foot. It is certainly a strange and gloomy defile: rice, cotton, pomegranates, figs, &c. grow here in abundance. The El Kháir range soon afterwards loses its steepness and sterility, and becomes lower and more verdant; the mountains extend as nearly as possible from east to west; the Záb is said to flow on the other or northern side. At the fifteenth mile we reached the camp, which was pitched on a mountain at some distance from any village.

* The plain.

August 9th.—On the 9th the extreme heat and burning wind rendered me exceedingly ill; I was attacked by a violent pain in the side, and complete loss of strength and energy, but no fever; it appeared to be a sort of stroke of the sun: my arm and shoulder became red and painful; I was covered with blisters. In consequence of this, I removed on the 10th to a deserted village, one mile and a half from the camp; in the afternoon, having learned that the Páshá was about to march, I prepared to follow him. We marched north into the district of Zebárá, crossing the range, which is a continuation of the Mountains of 'Amadíyah, but, though very high, not having the same rugged, barren aspect: the ascent was extremely fatiguing, and the descent in the dark nearly as much so. We travelled about ten miles to the camp, which was placed in a fine valley with several villages in it, but uninhabited; grapes, figs, and walnuts grew wild: no one knew the name of this valley, but the Záb was said to be three hours to the N.E. There were no Kurds in this camp, which was a small one of 2000 men, the greater part of the army, 7000 regular infantry, being in advance some miles. One Kurd whom I met told me we were in the district of Zebárá, which had been attached to 'Amadíyah before the Amír of Rawandúz seized the latter Páshálik. Tiyári, he said, lay to the N.W., 'Amadíyah W.N.W., and Rawandúz E.S.E. He described the district of Zebárá as being one day's journey and a half in length, from north to south, and one in breadth, and as consisting entirely of mountains. That of 'Amadíyah, he stated to be eight days journey in length and four in breadth, which I cannot avoid thinking is an exaggeration.

August 13.—On the 13th I paid my farewell visit to the Páshá.

On descending the Zebárá range, we could see the Záb flowing from the E.N.E. Several strings of camels passed us laden with grain for Reshíd Páshá's camp. This animal seems able to travel in all situations; mountains and plains, blazing sun, frost and snow, seem alike to him. These were beautiful animals of their kind, unlike the awkward heavy camels of Persia and India; they were slender, active creatures, and nearly white; they were Arab camels, and came from the plains on the west side of the Tigris; but every animal thrives in Arabia; man, (in form at least,) the horse, camel, ass, goat, are all excellent.

We left the village in the afternoon of the 13th, in company with a kevvás, who was ignorant of the road: we went five miles S.E. by S. over low hills, and then S.S.W. four miles, through a woody ravine filled with vines and blackberries, to the small village of Jelam, which formerly belonged to the Amír of Rawandúz. The people fearing, no doubt, that there would be no payment, were most anxious to induce us to proceed to another

village, which they pretended was close; but when they found that we resolved to stay, they were extremely civil: the old chief of the village complained that his son was forcibly detained at Rawandúz as a soldier; it seemed to be the Amír's plan to retain his subjects in good order by taking a male from each family into his service.

August 14.—We left Jelam at day-break, and travelling in the general direction of S.E. by S. for ten miles, over low grassy hills, we reached Dáb, a small village on the right bank of the Záb, which flowed from nearly north; after great detention in procuring skins to make a kelek, or float, we crossed to the left bank: the stream is rapid and about 100 yards in breadth, and said to be deep. The kelek is formed by tying a number of inflated skins under an open frame and covering the whole with branches of trees; it makes a very commodious conveyance. This was guided by two men, each of whom had a large hollow calabash under his arm: one of these watermen took a string in his hand and swam across, dragging the kelek with him, and putting one in mind of the horses applied to a similar purpose on the Oxus; the other pushed it from behind. The Záb is supposed to be the Zabatus of Xenophon and the Lycus of Arrian; the latter mentions, that immediately after the battle of Arbēla, Alexander crossed the Lycus with his troops, and proceeded to Arbēla by midnight. After crossing the Záb, we travelled among hills in almost every direction, though the general course was S.S.E. for four hours, or twelve miles. We passed at a distance several villages, which were almost all deserted, the inhabitants having built upon some neighbouring cool spot a new village of huts formed of leaves and branches. On the approach of winter, they return to their far less agreeable, permanent residences. We then travelled eastward for two hours, and came in sight of 'Alí Páshá's camp. It was now dark, and after scrambling for another hour through a very bad road among hills, we were at length unable to proceed, and halted near a stream, where we passed the night without any food for ourselves or our horses.

August 15.—We marched three miles eastwards to an eminence, on which a portion of the army of 'Alí Páshá of Baghdád was encamped, under Mustafá Páshá; at the summit of the eminence was the small fort of Darvín, which had been taken two days before.

August 16.—We left the camp at day-break, and proceeded in the direction of S.S.W. over low hills for eighteen miles, and then travelled for four miles to the village of Beherkah, across the plain of the Tigris. In the evening we travelled ten miles S.S.W. to Arbēla.* the road was excellent and level, and far to the left

* Arbēl in Arabic.

lay the mountains of Kurdistán: the town is placed on a large mound sixty or seventy feet in height, and 300 yards in length by 200 in breadth; it is inclosed at the summit, with a brick wall having bastions, with a few small guns in them: at the foot of the mound there is another town, inclosed by a mud wall, a great part of it being in ruins, in which respect it resembles both the upper and lower town; the latter especially is almost desolate. There are no ruins or remarkable buildings. A short distance to the west of the town, there is an immense brick pillar standing by itself in the plain; it looks old, but seems to be a Mohammedan building; nothing is known of it excepting that it once was the minaret of a mosque. I saw no river near Erbil, and the people declared that there is none. The troops of the Amír of Rawandúz made a short resistance at this place, but a small and ineffectual mine having been exploded in the mound, they were alarmed, and surrendered. Erbil contains 6,000 people, three large mosques, and two baths. The next march being a long one, and the heat being very great, we halted at Erbil until the evening of the 17th; we then marched in a S.S.E. direction across a flat plain, and passed two villages at a short distance. After a fatiguing march of about forty miles, we reached Altún Kúprí at sunrise. This town is placed on an island in the Altún Sú,* (which I suppose is the little Záb,) which we crossed into the town by a bridge, whence the town is said to have been named on account of the lucrative toll formerly levied, Altún Kúprí meaning 'gold bridge.' The river was shallow, but is deep at other seasons, and about fifty yards wide before it divides: it was flowing from the N.E., and rises in U'shneh, a district of Persia, near the Urumiyah lake. The chief of this town was extremely civil; he gave me a room overhanging the river, and thirty feet above it, commanding a fine view of the country. This town is said to have formed the boundary of the acquisitions of the Amír of Rawandúz to the south. Altún Kúprí, according to the statement of the chief, once contained 8000 people, but plague and famine had greatly thinned it.

August 18.—We left Altún Kúprí in the evening, and travelled S.S.E., and after halting four hours during the night, reached Kerkúk in the morning. The distance was said to be twenty-five miles; we were still accompanied by our very useless guard of Arabs, who, however, amused us by singing songs. Arabs, Kurds, and Persians, seem to think the chief excellence of music is loudness: these fellows sang, or rather roared, with wonderful vigour, but not unpleasingly: their favourite song was that of their tribe, in praise of the nobility, courage, generosity, and hospitality

* Gold River.

of their Sheikh. Each line seemed to consist of three or four words, and then a chorus of the word Sheikhá: the music was very monotonous, but without any of the disgusting thrilling used in Persian singing, which I believe is in imitation of the nightingale. Three miles before reaching Kerkúk we passed several naphtha pits, which diffused a disagreeable odour to a considerable distance. In Kerkúk, naphtha is used for lights and fire. Kerkúk is a large open town in a plain, and, like all the towns in this part of the world, is in great part in ruins: plague, famine, and, I believe, cholera have almost destroyed it. Near to it is a fort built on a mound, not very high but steep. It is said to have no manufactures except a coarse calico, but there is a considerable trade in gall-nuts, which are brought from the Kurdistán mountains. The river of Kerkúk, called the Kháseh Chái, was now dry: here we saw, for the first time, date trees, which would have reminded us, if it were necessary, that we were now in a very hot climate. The inhabitants are Arabs and 'Osmánlis, with some Christians and Jews, but no Kurds. The women wear immense turbans, which has a very strange effect to a person not accustomed to see females in the East with that head-dress.

August 19.—We left Kerkúk after sun-set in the evening of the nineteenth, and travelling in the general direction of east, arrived before daylight at an O'bá or summer encampment of Kúrd, whose village was behind one of the neighbouring hills. The distance was about twenty miles, of which half was among hills, with a good deal of ascent.

August 20.—We left the O'bá on the evening of the 20th of August, and, travelling still in the same direction, arrived in the morning at a large village, which belongs to Suleimániyeh, distant about twenty-eight miles. The road was exceedingly bad, winding among defiles, with a great deal of ascent and descent: about the twentieth mile we crossed a wide torrent called the Wai Sú, which probably afterwards becomes the Diyálah, flowing to the south-west. All the people in this village were encamped in huts at a short distance from the village: we were lodged in a most comfortable hut, close to the tomb of a holy man, a descendant of the famous 'Abdúl-kádir Gilání, who is interred at Baghdád. Almost all our party had been for some days unwell, but here there was a great increase of the sickness. The extreme heat was sufficient to account for this. We mounted at midnight, and travelled over an extremely bad road, intersected by ravines and hollows: at the fifth mile we entered a long and exceedingly strong defile with high mountains on both sides, and a road through it, not exceeded in difficulty by any we had travelled over. At the twentieth mile, after having crossed a very fatiguing ascent, the extreme heat obliged us to halt under a

few trees, with very imperfect shade. In the evening we marched eight miles to Suleimaniyeh, by a good road, through a tolerably level, well-cultivated country. Suleimaniyeh is a small town, of about 1000 houses, the capital of a district of the same name, in the centre of which it is placed, and which extends forty miles in every direction. It is possessed by the Kurd tribe of Bebah, who are esteemed excellent cavalry, and have many horses. I saw a mare for which the owner wanted 500 tomans; and I have no doubt, that if even so large a price were offered him, he would be very reluctant to take it. The town is situated at the end of a plain under some hills: it contains few good houses, many of which are in ruins; and has a large and well supplied bazar of fruit, meat, and vegetables.

From Suleimaniyeh I travelled in a N.N.E. direction about 200 miles, by a well-known road, to Sardasht, Lahijan, So-uk Búlak, and by Maraghah to Tabriz.

Tehran, Feb. 12, 1837.

V.—*Memoranda to accompany a Sketch of part of Mázonderán, &c., in April, 1836.* By E. D'ARCY TODD, Major, serving in Persia. Communicated by JOHN BACKHOUSE, Esq.

THIS sketch of Mázonderán on the scale of $\frac{1}{386180}$, or of six British miles to an inch, was made in the month of April, 1836, from observations taken with a Schmalcalder's compass, the distances being calculated from the pace of a horse walking on an average three and three-quarters statute miles an hour.

The lines of road here followed were corrected by frequent magnetic bearings* of the peak of Demávend, which is visible from Tehran, and from most of the principal points in the routes from that city, through Mázonderán, to the southern shore of the Caspian.

Wheeled carriages are not used in any part of the road here laid down.

On quitting Tehran in an E.N.E. direction, at fifteen miles the Jáj-rúd river is crossed by a ford; but from the month of April to the middle of June, when the mountain snows are melting, it is often so much swollen that laden mules make a circuit of several miles to cross the river by a bridge, said to be about three miles above the caravanserai at the ford.

From Jáj-rúd to Demávend, a distance of twenty-five miles, the road is crossed by several small streams, upon each of which

* The variation of the compass at Tehran in 1837 was 2° westerly.—Ed.

is situated a village surrounded by cultivation. A range of hills sprinkled with snow bounds the view to the south, at the distance of about ten miles. Demávend is a large village pleasantly situated in a high, rich, and well-watered valley, the streams flowing to the southward.* From Demávend to Serbendán† fifteen miles: the road passes through several well-supplied villages; but from that place to Fírúz-kúh‡ no supplies are to be had, except in small quantities at the wretched huts which are called the caravanserais of Arú, Dalí-chái,§ and Amin-ábád|| At Arú the road gradually inclines towards the range of hills to the south. The Dalí-chái river is a rapid mountain-stream flowing from the north-west, in a deep ravine, through a mountainous, broken country. To the east of the ford is a steep and rocky ascent over hills sprinkled with juniper. From Amin-ábád to Gházán-chái, also called the Arjamand (from a village of that name up the stream, the residence of the Governor of Fírúz-kúh), the road is good, except at the descent to the river, which is abrupt and rocky. The Gházán-chái flows from the north; it is a considerable stream, but fordable at all seasons. The range of mountains, along the southern skirt of which the road runs from Demávend, here terminates; and a few miles beyond the river the peak of Demávend is seen bearing N. 66° W.

The village of Fírúz-kúh is situated at the base of a rock, along its northern and eastern sides. The rock of Fírúz-kúh is about 750 feet in height above the plain, being the termination of a range of hills running from the south along the western bank of the Hablah-rúd¶ river. The rock was formerly crowned by a fortress, the remains of which are yet visible. Tradition reports it to have been considered to be impregnable in former days, but it is commanded from several points. There are some fine pasture-lands in the vicinity of Fírúz-kúh, and the valley of the Hablah-rúd is richly cultivated.

The road from Fírúz-kúh into Mázanderán leads over a pass, about ten miles to the N.E. of that place. Near the summit of the pass is a large and well-built, though now ruined caravanserai. On the 9th April the snow was deep on the summit of the ridge for about half a mile, and the road had only recently been opened. Immediately below the snow on the northern side is a forest of stunted oak, and the path runs in the bed of a small stream, the source of the Tálár river. This bed descending becomes a narrow ravine, and in the course of a few miles the oak gives place to

* Demávend village is found by late observations to be 6,000 feet above the sea.
—Ed.

† Head of the dams or embankments.—F. S.

‡ Mount Victorious, or Blue Mountain.—F. S.

§ Mad-stream.—F. S.

|| Ruler's Town, or Peaceful Abode.—F. S.

¶ Rope-river.—F. S.

the juniper, elm, chestnut, beech, box, and rhododendron, springing from every crevice of the rocks. At thirty-two miles below the remains of a hill fortress, called by the people of the country the Castle of the Div Sefid,* the ravine contracts to a narrow gorge which was formerly defended by a stone wall, the remains of which and of a gateway are still visible. In the vicinity of this place are a few patches of barley. One mile beyond Surkh-rabát† (a wooden hovel said to have been erected for the accommodation of the late Sháh) rice is cultivated. The road here runs through a dense thicket, and before we reached the Puli Sefid,‡ which is a well-built stone bridge over the Tálár, we came upon the commencement of this branch of Sháh 'Abbás's causeway. At Puli Sefid the road turns N.N.W., and continues along the eastern bank of the river, and as far as Shírgáh§ is execrable. The causeway of Sháh 'Abbás has been a magnificent work, formed by a trench twenty feet deep and fourteen wide, cut in the side of the mountain, and then filled with large stones. In consequence of the incessant rains which fall in this part of the country, and of the want of all repair, this causeway has been nearly destroyed. In many parts the stones have been washed away, and their place having been supplied by logs and branches of trees, it is difficult even for mules to pass. Zír-áb|| and Shírgáh are two groups of wretched, wattled huts, which are only inhabited during the season of rice-planting. At other times one or two villagers only remain to watch the fields, and sell provisions to passing muleteers. The bulk of the inhabitants reside higher up in the mountains.

Four miles beyond Shírgáh the road leaves the hills, and enters upon a fine level tract of country, covered with cultivation, pasturage, and wood. The road here diverges to the N.N.E. from the Tálár river. Between 'Alí-ábád¶ and Sári, fifteen miles in a N.E. direction, the causeway for a mile or two is in good repair, and leads through a natural avenue of magnificent trees. All traces of it are then lost until within three miles of Sári. Travellers are obliged to pick out a pathway for themselves through swamps, brushwood, and rice-fields, at some distance from the original line of road. Here and throughout *Mázanderán*, as in *Gílán*, we find the houses scattered in little groups, concealed among the woods, so that it is almost impossible to form any correct idea of the amount of the population.

Sári, the capital of *Mázanderán*, is surrounded by a ditch and a mud wall, flanked by pentagonal brick towers. The gateways

* The White Demon. Ouseley, iii. 231.—F. S.

† Red Resting-place. Ouseley, iii. 232.—F. S.

‡ White Bridge.—F. S.

§ Lion-place.—F. S.

¶ 'Alí's Abode.—F. S.

|| Under river,

have fallen down, and roads have been broken through the wall in every direction. The state of the defences proves that the Sárians have for many years enjoyed security from without. The appearance of the town differs essentially from that of any other in Persia south of Elburz. The houses are built of burnt brick, and neatly tiled; some of the streets are well paved, and although marks of ruin and neglect are everywhere visible, Sári has something the appearance of an English village, or a small market-town. The place was nearly depopulated about four years ago by the plague.* The peak of Demávend bears S. 50° W. from Sári. The river Tejin† flowing from the S.E. passes about a mile to the eastward of Sári, and falls into the Caspian at Farah-ābād,‡ about twenty miles north of that town. The Tejin probably takes its rise in the same mountains as the Tálár. From Sári to Bálfurúsh the road returns S.W. to 'Alí-ābād, and thence strikes to the N.W. and N.N.W. The Tálár river is forded at the third mile from 'Alí-ābād. The causeway has there fallen to decay, and is described as being impassable. Travellers are obliged to make a circuit through a forest of magnificent oak, beech, and elm, interspersed with villages and rice-fields. The country becomes again open within two miles of the town.

Bálfurúsh, or more correctly Bárfurúsh (the mart of burdens), is an open town of considerable extent, built in the midst of a forest; the houses are scattered over a vast surface of ground, surrounded by gardens and cultivation. The population of Bálfurúsh is described as being considerably greater than that of Sári, but from the straggling condition of the town it is difficult to form an estimate of the number of houses.§ Bálfurúsh is slowly recovering from the devastations of plague and cholera, by which it has been of late nearly depopulated. It has a considerable trade, its bázár is good, and well supplied; its port, Mesh-hedi Ser,|| on the Caspian, being the place at which all Russian goods destined for Mázanderán are landed.

To the south of the town, at the distance of 500 yards, is the Bahru-l-Irem (or sea of Paradise),¶ a palace built by the late Governor of Mázanderán, Mohammed Kulí Mirzá,** on an island of about half a mile in circumference, formed by a stream brought from the river Bábul, | † by means of kanáts, or subterranean canals.

* Sári contained from thirty to forty thousand inhabitants in 1822.—See Fraser's *Travels on the Shores of the Caspian*, p. 14.—Ed.

† Or Tejin. Ouseley, iii. 269.

‡ Abode of Pleasure, built by Sháh 'Abbás.

§ Mr. B. Fraser, in 1822, states it at 200,000, and considers it rather underrated. *Travels*, &c. p. 84.—Ed.

|| Place of Martyrdom of Ser, or evidence-place of the head.—F. S.

¶ The Garden of Irem, a sort of Paradise.—F. S.

** Prince Mohammed's Slave.—F. S.

†† Bahbul, Ouseley, iii. 291.

The island was formed by Sháh 'Abbás; but of the palace which he built upon it there are no remains, and the present building, although a modern one, is now a ruin. The surrounding water, at the broadest part about 300 yards, is now a stagnant pool, covered with reeds and rushes, the abode of numberless wild fowl. A wooden bridge, the perilous planks of which have parted company, connects the island with the main-land, and a square building, the gateway of the place, forms a kind of *tête de pont* to the position. A hard, level, excellent road, passable for wheeled carriages at all seasons, leads, in a north-by-west direction fifteen miles, from Bálfurúsh to Mesh-hedi Ser, on the Caspian. About four miles from the town the road comes upon the right bank of the river Bahbul, which it thence follows to the village of Mesh-hedi Ser, situated at the mouth of the river.

The Bahbul is about fifty yards broad in the vicinity of Bálfurúsh, and flows at this season with a current of not more than two miles an hour. It is said to be navigable for boats to within three or four miles of the town. Several small villages are scattered along each of its banks. Flax and cotton are here cultivated in large quantities. Goods are not conveyed by the river, which may be accounted for either by the excellence of the road, or by the ignorance of the people in the arts of boat-building, or by the trouble and delay of re-embarking and again disembarking the goods after they have once passed the custom-house. Iron and naphtha are the chief imports from Russia. Mesh-hedi Ser is a small village, at which the customs are collected; its houses are scattered on both sides of the river. Vessels of about 200 tons lie in an open roadstead, about three miles from the shore.

Retracing our steps to Bálfurúsh, the road, which is good and passable at all seasons, leads thence over a level, well-cultivated country, to A'mol, the general direction being south-west. Richly-wooded hills, backed by a lofty range of snowy mountains to the south, gradually close in to the distance of five to six miles towards the road. At about a mile from Bálfurúsh, the Bahbul is crossed by a bridge of masonry, of eight arches, in excellent repair, built by Mohámmad Hasan Khán, grandfather of Fat-h-'Alí Sháh. The banks of the river at this spot are precipitous, the level of the country being thirty or forty feet above the stream.

The town of A'mol is without walls or defences of any kind. The river *Herhaz*,* a mountain stream, which at some seasons is said to be of considerable volume, runs through it, flowing from an opening in the hills immediately to the south of the town. It is crossed by a narrow but substantial bridge of masonry. A'mol is of less extent than Bálfurúsh, being considered, in point of

* Ouseley, iii, 295.

size and importance, the third town* in Mázanarán. It is easily approached from the sea.

On quitting A'mol for Párus the road leads in a south direction for eighteen miles along the western bank of the Herhaz, and at the sixth mile enters a valley 400 yards broad, through which the stream flows to the plain. A low range of wooded hills slopes to the water's edge on either side of the river. The road then runs along the bed of the stream, and at the eleventh mile, the valley closing in on both sides, the road ascends the left bank of the river by a narrow causeway, in some places not more than three or four feet broad, cut in steps on the side of the hill, and formed of layers of wood and stone placed on deep clay, the natural soil of the hill. This causeway, although lately repaired at considerable expense by one Hájí Sáleh, a merchant of A'mol, is almost impassable to horsemen and laden mules, and is fast falling into utter decay, numberless mountain streams and the incessant rains of the country having washed away in many places the materials of which it is made. The remains of an ancient and more substantial road, built up against the solid rock on the other side of the stream, are visible, and are probably the work of Sháh 'Abbás; but earthquakes and torrents have nearly destroyed it, and travellers prefer the modern causeway, although the distance by it is greater. At the thirteenth mile the road again descends to the bed of the stream, but occasionally runs over causeways similar to the one above described, but shorter in extent. The hills cease to be wooded within about two miles of Párus, a ruined and deserted building, which may once have been a caravanserai. Supplies, in small quantities, are procurable here, but with great difficulty.

Beyond Párus, still pursuing a southerly course, the road improves from the hardness of the rock over which it passes and from the dryness of the climate. It is, however, in some places only a narrow pathway, built upon or scooped out of the face of a perpendicular rock overhanging the torrent. Frequent accidents are said to occur from land-slips and fragments loosened by sudden thaws in the mountains. Between Párus and Karú† the stream is crossed in two places by wooden bridges, near the remains of stone ones, which have been swept away by the torrent. At Karú some caves, cut in the side of the hill, afford shelter to the traveller, but supplies are not to be procured.

Four miles beyond the caves of Karú the mountains close in on both sides of the Herhaz, which here runs in a deep and narrow channel between walls of perpendicular rock. The pathway, in

* In 1822 said to contain from thirty-five to forty thousand persons.—Fraser's *Travels*, p. 104.

† Kharoe, in J. Arrowsmith's map, *vol.* F, 8.

some places not more than three feet broad, is scooped out of the face of the rock about 200 feet above the torrent. This strong natural defile, about a mile in length, is said to be the only entrance on the northern side into the district of Láriján. Beyond the defile the road improves, and after the twelfth mile, at Waneh, it turns S.W., and passes through several fine villages at the immediate south-eastern foot of Mount Demávend, forming the district of Amírí.* Before it reaches Ask,† eight miles farther, the stream is crossed in six places by wooden bridges. The village or town of Ask is said to contain a thousand or fifteen hundred houses, and is the principal of seventy-two villages, which form the district of Láriján. Its position is remarkable. The Herhaz river runs below the town through a deep and narrow channel of rock, which is crossed by a wooden bridge, the stone one having been swept away. From the water's edge the town is built on natural steps, rising to the height of several hundred feet, upon the south-eastern side of the mountain of Demávend, which forms one of the natural impassable barriers of the place. A chain of lofty mountains shuts in the valley on every side; the only ingress and egress to which is at the points where the river enters, and leaves the narrow basin, on the southern side of which is situated the town of Ask.‡

At a short distance from Ask the road leaves the river, and ascends the southern shoulder of Demávend. The ascent is steep and rocky. The point at which the road turns the shoulder of the mountain is about 1300 feet above the stream. This road is impassable in winter, when horsemen cannot approach Láriján in this direction, but foot passengers contrive to scramble over the rocks immediately above the bed of the river. The descent is comparatively easy, and much shorter than the ascent; but the road is execrable, being almost blocked up with masses of rock and half-frozen snow. Near the foot of the mountain the river is joined by a rapid stream called the Lár, flowing from the north-west. This is crossed by a stone bridge. The road thence ascends the bed of the Herhaz, which is here a mountain torrent; and for the last two or three miles before we arrive at Imám-Zádeh Háshim,§ which marks the summit of the pass,|| the steep and rocky pathway is scarcely practicable to a laden mule. The snow

* Commander's District.—F. S.

† Ask (J. Arrowmith). Onseley, iii. 329.—F. S.

‡ Ask is situated about 5900 feet above the level of the sea.—Ed.

§ The Imám's son Háshim.

|| This is the line of separation of waters flowing north to the Caspian, and south towards the plain of Persia, and may probably be estimated at 7000 feet above the sea, or 3000 nearly above Tehrán.—Ed.

was deep on the northern face of these mountains on the 21st of April.

From Imám-Zádeh Hášim the descent is gradual, the road takes a westerly direction, and after four miles turns to the south into a rich valley, with a fine stream running from the north, on which is situated the village of A'lí, also called Tákí-zumurrud,* from a garden-palace, now in ruins, erected near the spot by Fat-h-'Alí Sháh. Near the village of Rúdehán, about six miles beyond 'Alí, the road joins that which leads from Jáj-rúd to the village of Demávend.

From the above description of the two most practicable routes, north and south, through the province of Mázanderán, the natural strength of the country may be estimated. The lofty chain of Elburz † is at present an impassable barrier on the south. Roads might, of course, be constructed with enormous labour and expense over the passes; but even the great causeway of Sháh 'Abbás, in its best days, could have been hardly practicable for heavy-wheeled carriages. The climate and soil of the wooded belt of hills which fringes the northern skirt of Elburz render the construction of roads difficult, and their permanence, without constant and expensive repair, almost impossible.

The route between Fírúzkúh and Keláteh, ‡ in a general N.E. direction about one hundred miles, was followed in August, 1836. The road ascends the stream of Hablah-rúd for about eight miles in an easterly direction; the river then enters a defile and turns to the south. Quitting the Hablah-rúd the road passes over some fine pastures. Fourteen miles beyond Gúri Sefíd § a road leads by a more northerly direction to Fúlád-Mahallah. ¶ From this point the general direction is eastward, over a steep pass into the valley of Sháh-mírzád, ¶ a large village with abundance of water. The road then turns to the N.E., and passes among low hills with pastures, and occasionally strips of cultivated ground, in the valleys. The villages of Fúlád-Mahallah, Surkh-deh, ** Cheshmeh 'Alí, †† and Keláteh, contain but twenty or thirty houses each. The road is in most places good, and practicable for wheeled carriages. Keláteh is about thirty miles west of Bastám, †† and the same distance S. by W. of Astarábád.

* The Emerald; Portico or Cupola.—F. S.

† Properly El-burj, the watch-tower.—F. S.

‡ Hill-top. *Kudátek* signifies a hamlet.—F. S.

§ White Ass (Onager).—F. S.

•• Red Village.

¶ Steel District.

†† 'Alí's Spring.

¶ Prince Royal.

†† Ouseley, iii. 226.

VI.—*An Account of the Ascent of Mount Demávend, near Tehrán, in Sept., 1837.* By W. TAYLOR THOMSON, Esq., serving in Persia; with Notes by W. AINSWORTH, Esq., M.R.G.S., &c. Read, Jan. 8, 1838.

Sept. 4.—Having received the sanction of His Excellency the Ambassador, I started from Gúlúhek, about seven miles north of Tehrán, with the intention of attempting the ascent of the peak of Demávend. My object in doing so, was to endeavour to fix by astronomical observations, the position of the mountain, which from its superior height and peaked summit, forms an excellent point for correcting the bearings taken while surveying the adjacent country. I also intended taking a correct series of bearings and angular distances, to assist in laying down a plan of the country of Mázanderán, and by barometric observations to determine the altitude of the Peak; and lastly, to make any general observations as to the geological structure and mineral productions of the mountain, which might occur to one who does not possess more than an ordinary knowledge of that subject.

In any European country, the ascent of a mountain of equal altitude with this, would be attended with no greater difficulty than a little exertion of physical force, but here it is very different; the great obstacle to be overcome is the suspicion and jealousy of the natives, who suppose that a European can have no other object in making such an exertion of strength, than by his superior knowledge to discover some hidden stores of metals and wealth. On this account no European had hitherto succeeded in making the ascent; but through the foresight and prudent arrangements of the ambassador, in my case that difficulty was overcome.

On my arrival at Ask, a village about 42 geographical miles east-north-east of Tehrán, situated on the left bank of the river Herház, and at the foot of the mountain, I delivered the letter and presents with which the ambassador had provided me, to the mother of 'Abbás Kulí Khán, the chief of Láriján (who was absent), and arrangements were immediately made to furnish me with guides and whatever was necessary for the ascent. From Ask I proceeded to Germah about an hour distant, and the highest village on the south side of the mountain, where I was provided with four guides, only one of whom, I afterwards found, had previously made the ascent. On the morning of the 8th, I ascended two hours beyond Germah; but the weather, which had all along been lowering and sultry, broke into heavy rain accompanied with thunder, which forced us to take a partial shelter under a ledge of rock, where we remained during the rest of the day and succeeding night. In the morning, the snow line which had been the night before a long way above us, now reached to

within a few feet of the place where we had bivouacked. During the night the storm had expended itself, and notwithstanding the cold and wetting we had got, we started with daylight in high spirits and with strong expectations of reaching the summit about noon.

I had been informed that there was a cave at the top of the mountain, where, if pressed for time, I might remain during the night. I therefore provided myself with a change of clothes, and four days' provision of bread for the whole party, and determined on remaining on the top for that time, in case the weather should prove cloudy. I had not ascended however above an hour, when two of the men refused to go any farther, and in consequence, the provisions and additional articles of dress had to be left with them. With the remaining two I continued the ascent, and although one of them made great complaints of pain in his head, and palpitation of the heart, he was too necessary to allow him to return. By dint of promises of reward, and threats of representing his conduct to the Khán, I succeeded in getting him to the top. It was evening, however, before we reached it, and as the cold was excessive, as soon as we had done so, we repaired to the sulphur cave, which is on the east side, and within a few feet of the summit. The cone, for about 100 feet from the top, is entirely composed of a soft rock, from which the pure sulphur is dug, with the assistance of a piece of stick, and afterwards carried down in bags on the shoulders of the men who gather it. Long before our arrival at the top, the whole mountain was wrapped in clouds, which rendered it impossible to make any observation, except barometrical, even had I been willing to risk the danger of exposing the body, while in a heated state, to the piercing cold wind which blew from the Caspian sea, distant 50 miles north. The cave is of small dimensions, having two divisions; the inner one, which is the largest, will not contain more than five or six men, and in it the temperature is very high, so much so, that in one corner I could not bear to expose my hand to the hot current of air which flowed from the rock. The whole of the bottom of this part of the cave is highly heated. On entering, we scraped together a quantity of the dust, and stripping off our goats'-hide shoes, and goats'-hair stockings, which were wet with passing through the snow, we covered our feet with the ashes, which kept them sufficiently comfortable during the night. In the outer division, where I made observations of the altitude with the barometer, the temperature was at 56° of Fahrenheit, but this was at least 20° below that of the place where we slept.

The mouth of the cave is so low, as to oblige one to enter on all-fours, but as it opened to the east, and the wind blew the fine

particles of snow into the interior of the cave, they were immediately melted, and fell upon us like a heavy dew. In the morning, my caoutchouc cloak and clothes, with the exception of the side which came in contact with the bottom of the cave, were completely drenched—had we ventured to close the entrance, we must have soon been suffocated from breathing a heated atmosphere highly impregnated with sulphureous particles—even as it was, we all awoke with severe headache and sickness.

The sun in the morning shone clear into the mouth of the cave, and when I supposed that it had reached a sufficient altitude to make the cold endurable, I went out with the intention of proceeding with the observations, but before I had gone a few yards from the mouth of the cave, my cloak and clothes being full of moisture, were frozen stiff, and the wind felt so piercingly cold, that a few minutes' rest would have benumbed us; so that, however much I regretted it, and however anxious I was not to leave the place without finishing what I intended, yet I was obliged to run at full speed down the side of the mountain to prevent being frozen. Had the four guides who started with us from Germah accompanied us to the top, the additional clothing which they carried might have enabled us to stand the cold at the summit; but I would recommend to any one making the same trip, to do it two months earlier in the season. By leaving the cave at the foot of the mountain, about twelve o'clock on a moonlight night, he would be enabled to pass nearly the whole day on the summit, without exposing himself to the noxious and heated vapour of the cave, on leaving which, at any season, there is so sudden a transition from a high to a low temperature, as to endanger very much the health of the person doing so.

As to the volcanic nature of the mountain* there can be no doubt. The sulphureous cone with its crater-shaped summit, the heated air and steam issuing from its crevices, the hot springs at its base, the scorïæ and pumice found upon its side—all show, that it not only was, in former times, the mouth of an extensive volcanic district, but that its fires are not yet extinguished—again they may be lit up, and its action, whether by earthquake or eruption, may cause most extensive changes on the surface of this part of the country. The volcanic action through the whole of this part of the country has at one time been very great; strata of rocks are contorted and twisted about in all directions. In the neighbourhood of Germah are the hot springs of Germsîr, the

* We learn from Mr. Baillie Fraser that on approaching the mountain from the west, after leaving the limestone mountains that surround it, he found a large inclined plain below the cone, covered with pumice-stone and scorïæ, and having dark basaltic rock starting up through them to the surface; the cone seemed to consist of pumice and scorïæ, with debris of basalt, and the ridges and peaks of the latter stared through the surface all the way to the summit.—Ed.

hottest of which shows a temperature of 148° of Fahrenheit. The springs, however, are not confined to this place alone; at Ask they are very numerous, both in the village and its neighbourhood, although they are of a temperature much inferior to those of Germsir.

On my return from the top of the mountain to Gúlúhek, I passed through Rayrah, Ask, village of Demávend, Abú-mehán, and Jájrúd, making a sketch survey of the country as I passed along. I annex a table of barometric observations made at different stations, and a section of the rocks from the base at Germah to the top of Demávend [see Map].

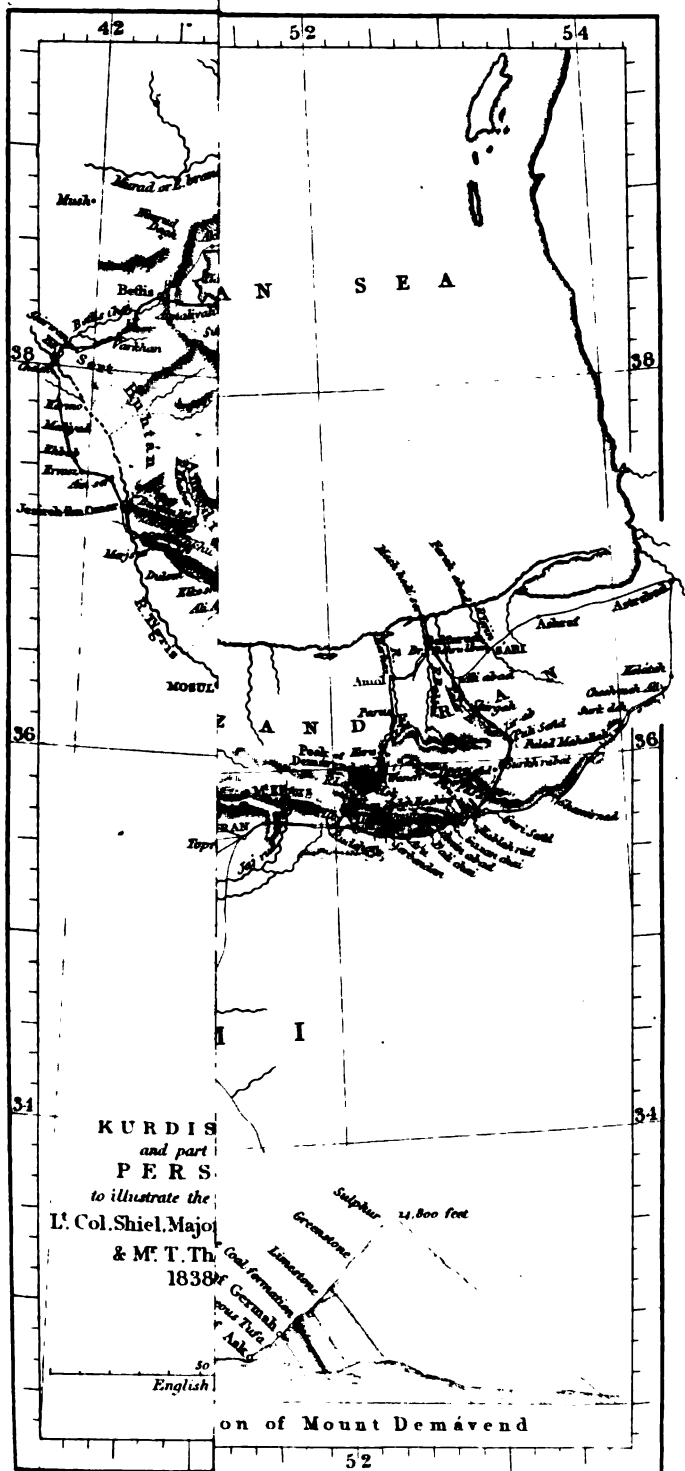
	Barom. Eng. inches.	Therm. Fahr.
Lavassán	23. 1	75°
Ask	24.11	71
Germah	23. 2	68
Demávend Peak (sulphur cave)	15.05	56
Demávend village . . .	23.45	66
Jájrúd	25.03	81
Tehrán	25.97	80

The geological formation of Demávend immediately about Germah would seem to be a deposit of calcareous tufa—above this occur beds of sandstone of the coal formation, with one seam of coal of inferior quality, for about 1000 feet—then limestone for a thickness of nearly 1200 feet; above this again, greenstone coloured with iron, to within 100 feet of the summit, which is a deposit of pure sulphur.

At the request of Mr. Thomson, Mr. Ainsworth adds the following remarks:

The mean height of the barometer at the level of the Persian Gulf, in the month of September is, from my own observations, as much as 30.600 inches, which compared with the observations made by Mr. Thompson, would give a rough amount of 4,300 feet elevation to Tehrán, and 15,000 to the cave near the summit of the Demávend; but there can be no doubt that this mean is much too high for the latitudes of the Persian Taurus, and probably the best approximate mean would be obtained by taking the difference between the mean of the level of the sea in our own latitudes, or 29.600, and that of the Persian Gulf, which would give 30.100; and hence the elevation of Tehrán would be 4,000 feet; of Jájrúd, 4,900; of Lavassán, 6,800; of Ask, 5,800; of Germah, 6,700; of Demávend village, 6,000; and of the cave near the summit of the peak, 14,700.

It is to be observed here, that there are no corrections except for temperature, and hence, if these elevations approximate to



within 100 feet of the truth, it is the most that can be expected of them. They serve to give a good idea of the height of what may probably be considered as the culminating point of the Persian Taurus; and it is to be hoped that the Society will, before long, be in possession of more accurate observations.

The geological observations made by Mr. Thomson possess great interest by establishing the existence of a pseudo-volcano in these central districts of Western Asia, and ally themselves to the observations which the Baron von Humboldt has made upon the evidences of volcanic action, whether in ignivomous mouths, (extinct or active,) or canals of communication between the surface and the interior of the earth, and of the same action as evidenced in lines or circles of elevation, and which he has traced throughout the great continent of Asia. The geological relations of the Caspian sea are connected with the same phenomena, belonging, as they undoubtedly do, to the latest changes which have taken place on the surface of the earth.

It is a remarkable fact, that throughout those districts of Taurus, Amanus, Kurdistán, and the Persian Apennines, (Bakhtiyári-Luristán mountains,) which I have travelled, I have never as yet met with rocks of the secondary series. The absence of every member between the chalk and the primary formations is one of the most remarkable features in the geology of Western Asia, and from this phenomenon obtaining so very generally over such extensive districts, it is most probable that the sandstones which occur at the base of Demávend belong to the supracretaceous or tertiary series, and are either sandstones with lignite coal belonging to the plastic clay, (the ostracite sandstone of Kupffer,) or what is equally probable, belong to the *Terrain marno-charboneux* of Brogniart. As there are no fossils transmitted, it is impossible to determine the age of the superimposed limestones. The sulphur deposits of Músúl in Mesopotamia, and of Sú Khúmatú in Kurdistán, are both of them in the Cerithia limestone, corresponding to the London clay; but the sulphur formation of the Demávend appears to be of even a more recent date.

Mr. Thomson found thermal springs in the neighbourhood of Germah, in one of which the thermometer of Fahrenheit indicated a temperature of 148°. I observed a curious phenomenon in some of the thermal springs in Syria, not far from Antioch, which, according to a well-authenticated tradition, had made their appearance at different times, and with different shocks of earthquakes, so frequent in those countries, viz., that the temperatures of the most recent springs exceeded by several degrees those of the most ancient ones. I shall call the attention of my friend, Mr. Thomson, to this fact, in order that he may observe if any law of a decreasing temperature in thermal springs can be esta-

blished by observations made in different sources, in different countries, and during a prolonged period of time.

With regard to the rocks designated as green-stone in the above account, their position is very various in Western Asia. I have, however, never observed rocks of augite and feldspar, or other rocks which are more modern than the hornblend series, intercalated in, or tilting up very recent sedimentary formations, as is the case with the diallagic formations; but it is very evident that the connexions are no longer the same where these rocks are associated with pumice-stone and scorix, as in the Demávend, just as the same rocks are, near 'Osmánjik in Taurus from my own observations, associated with argillaceous rocks containing mica and vitreous feldspar.

VII.—*Abstract of the Historical Evidence for the Discovery of America by the Scandinavians in the Tenth Century.* Extracted from the "*ANTIQUITATES AMERICANÆ.*"

[THE labours of the Royal Society of Northern Antiquaries at Copenhagen have long since obtained for them an honourable station in the republic of letters, but the recent publication of the work named "*ANTIQUITATES AMERICANÆ*" entitles them to the gratitude of the whole civilized world. Rumours of the fact that the Scandinavian Northmen were the original discoverers of America have long been prevalent, and several Icelandic authors of great intelligence and respectability have investigated the subject of western discovery by their adventurous countrymen; but it has been well observed by Baron Humboldt, that the information which the public as yet possesses of that remarkable epoch in the middle ages is extremely scanty, and he has expressed a wish that the northern literati would collect and publish all the accounts relating to the subject. To that wish the Royal Society of Northern Antiquaries has fully responded, and the result is this collection of documents compiled from the numerous and valuable MSS. now extant, and accompanied by a Danish and also a complete Latin translation—by prefatory remarks and archæological and geographical disquisitions—and further, by an abstract of the historical evidence in English.

As such a subject must deeply interest all those who occupy themselves with ancient discoveries in geography and history; and as from the nature of the work its circulation will be extremely limited, it has been considered that an abstract of the historical evidence would appropriately find its place in the London Geographical Journal, with the two-fold object of more widely diffus-

ing the knowledge of the facts, and of inducing the reader to refer to the original work for the complete evidence that has been brought to light on the subject.—Ed.]

Biarne Heriulfson's Voyage in the Year 986.

Eric the Red, in the spring of 986, emigrated from Iceland to Greenland, formed a settlement there, and fixed his residence at Brattalid in Ericsfiord. Among others who accompanied him was Heriulf Bardson, who established himself at Heriulfnes. Biarne, the son of the latter, was at that time absent on a trading voyage to Norway; but in the course of the summer returning to Eyra, in Iceland, and finding that his father had taken his departure, this bold navigator resolved "still to spend the following winter, like all the preceding ones, with his father," although neither he nor any of his people had ever navigated the Greenland sea. They set sail, but met with northerly winds and fogs, and after many days' sailing they knew not whither they had been carried. When the weather again cleared up, they at last saw a land which was without mountains, overgrown with wood, and having many gentle elevations. As this land did not correspond to the descriptions of Greenland, they left it to larboard, and continued sailing two days, when they saw another land which was flat, and overgrown with wood. From thence they stood out to sea, and sailed three days with a S.W. wind, when they saw a third land, which was high and mountainous and covered with icebergs (glaciers); they coasted along the shore, and saw that it was an island. They did not go on shore, as Biarne did not find the country to be inviting. Bearing away from this island, they stood out to sea with the same wind, and after four days' sailing with fresh gales, they reached Heriulfnes in Greenland.

Discoveries of Leif Ericson, and First Settlement of Vineland.

Some time after this, probably in the year 994, Biarne paid a visit to Eric Earl of Norway, and told him of his voyage, and of the unknown lands he had discovered. He was blamed by many for not having examined these countries more accurately. On his return to Greenland there was much talk about undertaking a voyage of discovery. Leif, a son of Eric the Red, bought Biarne's ship, and equipped it with a crew of thirty-five men, among whom was a German of the name of Tyrker, who had long resided with his father, and who had been very fond of Leif in his childhood. In the year 1000 they commenced the projected voyage, and came first to the land which Biarne had seen last. They cast anchor, and went on shore. No grass was seen; but everywhere in this country were vast ice mountains (glaciers), and the intermediate space between these and the shore was, as it were, one uniform plain of slate (*hella*): the country appearing to them destitute of good qualities, they called it Helluland. They put out to sea, and came to another land, where they also went on shore. The country was level (*slætt*), and covered with woods, and wheresoever they went, there were cliffs of white sand (*sandar hvítir*), and a low coast (*bsæbratt*); they called the country Markland (Woodland). From thence they again stood out to

sea, with a N.E. wind, and continued sailing for two days, before they made land again. They came to an island which lay to the eastward of the mainland, and entered a channel between this island and a promontory projecting in an easterly (and northerly) direction from the mainland. They sailed westward. There was much ground left dry at ebb tide. Afterwards they went on shore at a place where a river, issuing from a lake, fell into the sea. They brought their ship into the river, and from thence into the lake, where they cast anchor. Here they constructed some temporary log huts, but afterwards, when they had made up their mind to winter there, they built large houses, that were afterwards called *Leifsbúdir* (*Leifsbooths*). After they had finished the building of their houses, Leif divided his people into two companies, who were to be employed by turns in keeping watch at the houses, and in making small excursions for the purpose of exploring the country in the vicinity: his instructions to them were that they should not go to a greater distance than that they might return in the course of the same evening, and that they should not separate from one another. Leif took his turn also, joining the exploring party on the one day, and remaining at the houses on the other. It so happened that one day the above-named German Tyrker was missing. Leif accordingly went out with twelve men in search of him, but they had not gone far from their houses when they met him coming towards them. When Leif inquired the reason why he had been so long absent, he at first answered in German, but they did not understand what he said. He then said to them in the Norse tongue, "I did not go much farther, still I have a discovery to acquaint you with; I have found vines and grapes." He added by way of confirmation that he had been born in a country where there was plenty of vines. They had now two occupations to employ themselves, viz., to hew timber for loading the ship, and to collect grapes; with these last they filled the ship's long-boat. Leif gave a name to the country, and called it *Vínland* (*Vineland*). In the spring they sailed again from thence, and returned to Greenland.

Thorwald Ericson's Expedition to more Southern Regions.

Leif's Vineland voyage was now a subject of frequent conversation in Greenland, and his brother Thorwald was of opinion that the country had been far too little explored. He therefore borrowed Leif's ship, and aided by his brother's counsel and directions, he commenced the voyage in the year 1002. They arrived in Vineland at Leifsbooths, where they spent the winter and employed themselves in fishing. In the spring of 1003 Thorwald sent a party in the ship's long-boat on a voyage of discovery southwards. They found the country beautiful and well wooded, there being but little space between the woods and the sea, and extensive ranges of white sand: there were many islands and shallows. They found no traces of men having been there before them, excepting on an island lying to the westward, where they found a wooden shed. They did not return to Leifsbooths until the fall. In the following summer, 1004, Thorwald sailed eastward with the large ship, and then northward past a remarkable headland enclosing a bay, and which was opposite to another headland. They called it *Kialarnes* (Keel-

Cape). From thence they sailed along the eastern coast of the land, into the nearest firths, to a promontory which there projected, and which was everywhere overgrown with wood. There Thorwald went ashore with all his companions. He was so pleased with this place that he exclaimed, "Here it is beautiful, and here I should like well to fix my dwelling." Afterwards, when they were preparing to go on board, they observed on the sandy beach within the promontory three hillocks. They repaired thither, and found three canoes, and under each three Skrellings (Esquimaux); they came to blows with them, and killed eight of them, but the ninth escaped with his canoe. Afterwards, a countless number came out from the interior of the bay against them. They endeavoured to protect themselves by raising battle screens on the ship's side. The Skrellings continued shooting at them for a while, and then retired. Thorwald had been wounded by an arrow under the arm: when he found that the wound was mortal, he said, "I now advise you to prepare for your departure as soon as possible, but me ye shall bring to the promontory, where I thought it good to dwell; it may be that it was a prophetic word that fell from my mouth about my abiding there for a season; there shall ye bury me, and plant a cross at my head and also at my feet, and call the place Krossanes (Crossness) in all time coming." He died, and they did as he had ordered. Afterwards they returned to their companions at Leifsbooths, and spent the winter there; but in the spring of 1005 they sailed again to Greenland, having important intelligence to communicate to Leif.

Unsuccessful Attempt of Thorstein Ericson.

Thorstein, Eric's third son, now resolved to proceed to Vineland to fetch his brother's body: he fitted out the same ship, and selected twenty-five strong and able-bodied men for its crew; his wife Gudrida also went along with him. They were tossed about the ocean during the whole summer, and knew not whither they were driven: at the close of the first week of winter they landed at Lysufjord, in the Western Settlement of Greenland. There Thorstein died during the winter, and in the spring Gudrida returned again to Eric'sfjord.

Settlement effected in Vineland by Thorfinn.

In the following summer, 1006, there arrived in Greenland two ships from Iceland: the one was commanded by Thorfinn, having the very significant surname of Karlsefne (*i. e.* who promises or is destined to be an able or great man), a wealthy and powerful man, of illustrious lineage, and sprung from Danish, Norwegian, Swedish, Irish, and Scottish ancestors, some of whom were kings or of royal descent. He was accompanied by Snorre Thorbrandson, who was also a man of distinguished lineage. The other ship was commanded by Biarne Grimolfson of Breidefjord, and Thorhall Gamlason of Austfjord. They kept the festival of Yule at Brattalid. Thorfinn became enamoured of Gudrida, and obtained the consent of her brother-in-law Leif; and their marriage was celebrated during the winter. On this, as on former occasions, the voyage to Vineland formed a favorite theme of conversation, and Thorfinn was urged both by his wife and others to undertake such a voyage.

It was accordingly resolved on. In the spring of 1007 Karlsefne and Snorre fitted out their ship, and Bjarne and Thorhall likewise fitted out theirs. A third ship (being that in which Gudrida's father Thorbiörn had formerly come to Greenland) was commanded by Thorward who was married to Freydisa, a natural daughter of Eric the Red; and on board this ship was also a man of the name of Thorhall, who had long served Eric as huntsman in summer and as house-steward in winter, and who had much acquaintance with the uncolonized parts of Greenland. They had in all one hundred and sixty men. They took with them all kinds of live stock, it being their intention to establish a colony, if possible. They sailed first to the Westerbygd, and afterwards to Biarney (Disco). From thence they sailed in a southerly direction to Helluland, where they found many foxes. From thence they sailed again two days in a southerly direction to Markland, a country overgrown with wood, and plentifully stocked with animals. Leaving this, they continued sailing in a S.W. direction for a long time, having the land to starboard, until they at length came to Kialarnes, where there were trackless deserts and long beaches and sands, called by them Furdustrandir. When they had past these, the land began to be indented by inlets. They had two Scots with them, Hake and Hekia, whom Leif had formerly received from the Norwegian King Olaf Tryggvason, and who were very swift of foot. They put them on shore, recommending them to proceed in a S.W. direction, and explore the country. After the lapse of three days they returned bringing with them some grapes and some ears of wheat, which grew wild in that region. They continued their course until they came to a place where a firth penetrated far into the country. Off the mouth of it was an island past which there ran strong currents, which was also the case farther up the firth. On the island there were an immense number of eyderducks, so that it was scarcely possible to walk without treading on their eggs. They called the island Straumey (Stream-Isle), and the firth Straumfjördr (Stream-Firth). They landed on the shore of this firth, and made preparations for their winter residence. The country was extremely beautiful. They confined their operations to exploring the country. Thorhall afterwards wished to proceed in a N. direction in quest of Vineland. Karlsefne chose rather to go to the S.W. Thorhall, and along with him eight men, quitted them, and sailed past Furdustrandir and Kialarnes, but they were driven by westerly gales to the coast of Ireland, where, according to the accounts of some traders, they were beaten and made slaves. Karlsefne, together with Snorre and Bjarne, and the rest of the ships' companies, in all 151 (CXXXI.) men, sailed southwards, and arrived at the place, where a river falls into the sea from a lake. Opposite to the mouth of the river were large islands. They steered into the lake, and called the place Hóp (*i Hópe*). On the low grounds they found fields of wheat growing wild, and on the rising grounds vines. While looking about one morning they observed a great number of canoes. On exhibiting friendly signals the canoes approached nearer to them, and the natives in them looked with astonishment at those they met there. These people were sallow-coloured or ill-looking, had ugly heads of hair, large eyes, and broad cheeks. After they had gazed at

them for a while, they rowed away again to the S.W. past the cape. Karlsefne and his company had erected their dwelling-houses a little above the bay; and there they spent the winter. No snow fell, and the cattle found their food in the open field. One morning early, in the beginning of 1008, they descried a number of canoes coming from the S.W. past the cape. Karlsefne having held up a white shield as a friendly signal, they drew nigh and immediately commenced bartering. These people chose in preference red cloth, and gave furs and squirrel skins in exchange. They would fain also have bought swords and spears, but these Karlsefne and Snorre prohibited their people from selling them. In exchange for a skin entirely gray the Skrellings took a piece of cloth of a span in breadth, and bound it round their heads. Their barter was carried on this way for some time. The Northmen then found that their cloth was beginning to grow scarce, whereupon they cut it up in smaller pieces, not broader than a finger's breadth; yet the Skrellings gave as much for these smaller pieces as they had formerly given for the larger ones, or even more. Karlsefne also caused the women to bear out milk soup, and the Skrellings relishing the taste of it, they desired to buy it in preference to everything else, so they wound up their traffic by carrying away their bargains in their bellies. Whilst this traffic was going on, it happened that a bull, which Karlsefne had brought along with him, came out of the wood and bellowed loudly. At this the Skrellings got terrified and rushed to their canoes, and rowed away southwards. About this time Gudrida, Karlsefne's wife, gave birth to a son, who received the name of Snorre. In the beginning of the following winter the Skrellings came again in much greater numbers; they showed symptoms of hostility, setting up loud yells. Karlsefne caused the red shield to be borne against them, whereupon they advanced against each other, and a battle commenced. There was a galling discharge of missiles. The Skrellings had a sort of war slings. They elevated on a pole a tremendously large ball, almost the size of a sheep's stomach, and of a bluish colour; this they swung from the pole upon land over Karlsefne's people, and it descended with a fearful crash. This struck terror into the Northmen, and they fled along the river. Freydisa came out and saw them flying; she thereupon exclaimed, "How can stout men like you fly from these miserable caitifs, whom I thought you could knock down like cattle? If I had only a weapon, I woen I could fight better than any of you." They heeded not her words. She tried to keep pace with them, but the advanced state of her pregnancy retarded her. She however followed them into the wood. There she encountered a dead body. It was Thorbrand Snorrason; a flat stone was sticking fast in his head. His naked sword laid by his side. This she took up, and prepared to defend herself. She uncovered her breasts, and dashed them against the naked sword. At this sight the Skrellings became terrified, and ran off to their canoes. Karlsefne and the rest now came up to her and praised her courage. Karlsefne and his people were now become aware that, although the country held out many advantages, still the life that they would have to lead here would be one of constant alarm from the hostile attacks of the natives. They therefore made preparations for departure,

with the resolution of returning to their own country. They sailed eastward, and came to Streamfirth. Karlsefne then took one of the ships, and sailed in quest of Thorhall, while the rest remained behind. They proceeded northwards round Kialarnes, and after that were carried to the north-west. The land lay to larboard of them. There were thick forests in all directions, as far as they could see, with scarcely any open space. They considered the hills at Hope and those which they now saw as forming part of one continuous range. They spent the third winter at Streamfirth. Karlsefne's son Snorre was now three years of age. When they sailed from Vineland they had a southerly wind, and came to Markland, where they met with five Skrellings. They caught two of them (two boys), whom they carried away along with them, and taught them the Norse language, and baptised them; these children said that their mother was called Vethilldi and their father Uvæge; they said that the Skrellings were ruled by chieftains (kings), one of whom was called Avalldamon, and the other Valdidida; that there were no houses in the country, but that the people dwelled in holes and caverns. Biarne Grimolfson was driven into the Irish Ocean, and came into waters that were so infested by worms, that their ship was in consequence reduced to a sinking state. Some of the crew, however, were saved in the boat, as it had been smeared with seal-oil tar, which is a preventive against the attack of worms. Karlsefne continued his voyage to Greenland, and arrived at Ericsfiord.

Voyage of Freydisa, Helge, and Finnboge: Thorfinn settles in Iceland.

During the same summer, 1011, there arrived in Greenland a ship from Norway commanded by two brothers from Austfiord in Iceland, Helge and Finnboge, who passed the following winter in Greenland. Freydisa went to them, and proposed a voyage to Vineland, on the condition that they should share equally with her in all the profits which the voyage might yield. This they assented to. Freydisa and these brothers entered into a mutual agreement that each party should have thirty able-bodied men on board their ship, besides women; but Freydisa immediately deviated from the agreement, and took with her five additional men whom she concealed. In 1012 they arrived at Leifsooths, where they spent the following winter. The conduct of Freydisa occasioned a coolness and distance between the parties; and by her subtle arts she ultimately prevailed on her husband to massacre the brothers and their followers. After the perpetration of this base deed, they in the spring of 1013 returned to Greenland, where Thorfinn lay ready to sail for Norway, and was waiting for a fair wind: the ship he commanded was so richly laden, that it was generally admitted, that a more valuable cargo had never left Greenland. As soon as the wind became favorable he sailed to Norway, where he spent the following winter, and sold his goods. Next year, when he was ready to sail for Iceland, there came a German from Bremen, who wanted to buy a piece of wood from him. He gave for it half a marc of gold; it was the wood of the Mazertree from Vineland. Karlsefne went to Iceland, and in the following year, 1015, he bought the Glaumbœ estate in

Skagefiord, in the Northland quarter, where he resided during the remainder of his life, as did also Snorre, his American-born son, after him. On the marriage of the latter, his mother made a pilgrimage to Rome, and afterwards returned to her son's house at Glaumbœ, where he had in the mean time caused a church to be built. The mother lived long as a religious recluse. A numerous and illustrious race descended from Karlsefne, among whom may be mentioned the learned Bishop Thorlak Runolfson, born in 1085, of Snorre's daughter Halfrida, to whom we are principally indebted for the oldest ecclesiastical Code of Iceland published in the year 1123; it is also probable that the accounts of the voyages were originally compiled by him.

A Survey of the Preceding Evidence.

1. *Geography and Hydrography.*—It is a fortunate circumstance that these ancient accounts have preserved not only *geographical* but also *nautical* and *astronomical facts*, that may serve in fixing the position of the lands and places named. The *nautical facts* are of special importance, although hitherto they have not been sufficiently attended to, viz., statements of the course steered and the distance sailed in a day. From data in the Landnama and several other ancient Icelandic geographical works, we may gather that the distance of a day's sailing was estimated at from twenty-seven to thirty geographical miles (German or Danish, of which fifteen are equal to a degree; each of these accordingly equal to *four* English sea miles). From the island of Helluland, afterwards called Little Helluland, Bjarne sailed to Heriulfanes (Ikigeit) in Greenland, with strong south-westerly gales, in four days. The distance between that cape and *Newfoundland* is about 150 miles, which will correspond, when we take into consideration the strong gales. In modern descriptions it is stated that this land partly consists of naked rocky flats, where no tree, not even a shrub, can grow, and which are therefore usually called *Barrens*; thus answering completely to the *hellur* of the ancient Northmen, from which they named the country.

Markland was situate to the south-west of Helluland, distant about three days' sail, or about from eighty to ninety miles. It is therefore *Nova Scotia*, of which the descriptions given by later writers answer to that given by the ancient Northmen of Markland: "the land is low in general;" "the coast to the seaward being level and low, and the shores marked with white rocks;" "the land is low with white sandy cliffs, particularly visible at sea;" "on the shore are some cliffs of exceedingly white sand." Here "*level*" corresponds completely to the Icelandic "*slétt*," "*low to the seaward*" to the short expression "*ðsæbratt*," and "white sandy cliffs" to the "*hvítir sandar*" of the Northmen. Nova Scotia, as also New Brunswick and Lower Canada situate more inland, which probably may be considered as all belonging to the Markland of the Northmen, are almost everywhere covered with immense forests.

Vinland was situate at the distance of two days' sail, consequently about from fifty-four to sixty miles, in a south-westerly direction from Markland. The distance from Cape Sable to Cape Cod is stated in nautical works as being W. by S. about seventy leagues, that is, about

fifty-two miles. Biarne's description of the coasts is very accurate, and in the island situate to the eastward (between which and the promontory that stretches to eastward and northward Leif sailed) we recognise Nantucket. The ancient Northmen found there many shallows (*grunnæfui mikil*); modern navigators make mention at the same place "of numerous riffs and other shoals," and say "that the whole presents an aspect of drowned land."

Kialarnes (from *kiðlr*, a keel, and *nes*, a cape, most likely so named on account of its striking resemblance to the keel of a ship, particularly of one of the long ships of the ancient Northmen) must consequently be *Cape Cod*, the Nauset of the Indians, which modern geographers have sometimes likened to a horn, and sometimes to a sickle or scythe. The ancient Northmen found here trackless deserts (*ðræfi*), and long narrow beaches and sandhills or sands (*strandir lángr ok sandar*) of a very peculiar appearance, on which account they called them Furdustrandir (Wonder-Strands, from *furða*, res miranda, and *strönd*, strand, beach). Compare the description given of this Cape by a modern author, Hitchcock: "The *Dunes* or *sandhills*, which are often nearly or quite barren of vegetation, and of snowy whiteness, *forcibly attract the attention on account of their peculiarity*. As we approach the extremity of the Cape, the sand and barrenness increase; and in not a few places it would need only a party of Bedouin Arabs to cross the traveller's path, to make him feel that he was in the depths of an *Arabian or Libyan desert*." A remarkable, natural phenomenon, which is observed there, has also most probably had a share in giving rise to that peculiar name. It is thus described by the same author: "In crossing the *sands* of the Cape, I noticed a *singular mirage* or deception. In Orleans, for instance, we seemed to be ascending at an angle of three or four degrees; nor was I convinced that such was not the case, until turning about I perceived that a similar ascent appeared in the road just passed over. I shall not attempt to explain this optical deception; but merely remark, that it is probably of the same kind as that observed by Humboldt on the Pampas of Venezuela: 'all around us,' says he, 'the plains seemed to ascend towards the sky.' " Thus we observe that the appellation given by the ancient Northmen to the three strands or tracts of coast, *Nauset Beach*, *Chatham Beach*, and *Monomoy Beach*, is remarkably appropriate.

The great *Gulf Stream*, as it is called, which issues from the Gulf of Mexico, and runs between Florida, Cuba, and the Bahama Isles, and so northwards in a direction parallel to the eastern coast of North America, and of which the channel in ancient times is said to have approached still nearer to the coast, occasions great currents precisely at this place, inasmuch as the peninsula of Barnstable offers opposition to the stream, as it comes from the southward. The *Straumfjörðr* of the ancient Northmen is supposed to be *Buzzard's Bay*; and *Straumey*, *Martha's Vineyard*; although the account of the many eggs found there would seem more precisely to correspond to the island which lies off the entrance of Vineyard Sound, and which at this day is for the same reason called *Egg Island*.

Krossanes is probably *Gurnet Point*. It must have been somewhat to the northward of this that Karlsefne landed, when he saw the moun-

tain range (*the Blue Hills*) which he considered as forming part of the same range that extends to the region where we recognise the place named Hóp (1 Hópe).

The word Hóp, in Icelandic, may either denote a small recess or bay formed by a river from the interior, falling into an inlet from the sea, or the land bordering on such a bay. To this Mount Hope's Bay, or Mont Haup's Bay, as the Indians term it, corresponds, through which the Taunton River flows, and, by means of the very narrow yet navigable Pocasset River, meets the approaching water of the ocean at its exit at Seaconnet. It was at this Hópe that Leifsbooths were situate; it was above it, and therefore most probably on the beautifully situate elevation called afterwards by the Indians Mont Haup, that Thorfinn Karlsefne erected his dwelling-houses.

2. *Climate and Soil*.—Concerning the climate of the country and the quality of the soil, and also concerning some of its productions, the ancient writings contain sundry illustrative remarks. The climate was so mild that it appeared that cattle did not require winter fodder, for there came no snow, and the grass was but slightly withered. Warden uses similar expressions respecting this region: "*La température est si douce que la végétation souffre rarement du froid ou de la sécheresse. On l'appelle le paradis de l'Amérique* parcequ'elle l'emporte sur les autres lieux par sa situation, son sol et son climat." "An excursion from Taunton to Newport, Rhode Island, down Taunton River and Mount Hope Bay, conducts the traveller among scenery of great beauty and loveliness," says Hitchcock; and when he adds that the beautiful appearance of the country "and the interesting historical associations connected with that region, conspire to keep the attention alive, and to gratify the taste," he will find that this last remark is applicable to times much more remote than he thought of, when he gave expression to the above sentiment.

A country of such a nature might well deserve the appellation of "THE GOOD," which was the epithet the ancient Northmen bestowed on it; especially as it yielded productions whereon they set a high value, and of which their colder native land was for the most part destitute.

3. *Produce and Natural History*.—*Vines* grew there spontaneously, a circumstance which Adam of Bremen, a foreign writer of the same (that is, of the eleventh) century, mentions that he had learned, not from conjecture, but from authentic accounts furnished by Danes. As his authority on this occasion he cites the Danish King Sveyn Estrithson, a nephew of Canute the Great. It is well known that vines still grow in that region in great abundance.

Spontaneously growing wheat (*sjálfsánir hveitiakrar*).—On the subsequent arrival of the Europeans, maize was found growing here, or Indian corn as it is called, which the natives reaped without having sowed, and preserved in holes in the earth, and which constituted one of their most valuable articles of food. Honeydew was found on the island which lies off it, as is also still the case.

Mazer (*mausur*), a species of wood of remarkable beauty, probably a species of the *Acer rubrum* or *Acer saccharinum*, which grows here, and which is called "bird's eye," or "curled maple." Wood for building was also obtained here.