

CHAPTER II.

TRAVELLING BY LAND AND RIVER.

PREPARATIONS.

In order to make a journey of a few days in the valley of the Upper Nile, one requires something more than the quarter of an hour between resolve and starting that is sufficient for an active German gymnast, who is about to set out on a tour in the provinces of the Fatherland, and at the end of that brief space of time stands ready for the tramp with his travelling wallet by his side, and two or three thalers in his pocket; setting out in such a way one can go as a begging-pilgrim, and knock at the door of every farm-house on the road. Here there are no houses of reception or entertainment where a man can have for his money a furnished room, a bed, food, and drink. Such a thing is quite foreign to the ideas of Islam and its Bedouin hospitality. An Arabic inn in the European sense is not found even in the largest towns. Establishments of this kind present nothing but an empty room, the traveller having to provide his own food and bed. In such circumstances a journey by land must take another form than in the land of the Franks—even the smallest assumes more or less of the character of an *expedition*.

Since the termination of our journey lies in the narrow Nile-valley of Upper Egypt (in the Thebais, in the first place, or district of the city of Thebes of old renown, corresponding to the present mudirich of Keneh), and since this valley is nowhere broader than from 5 to 10 miles, and consequently no part of it far from the river, the most convenient and common mode of travel is by water. We have no hopes of a steamer, as these stop only at the larger towns, and have no certain times for arriving and departing. To hire a vessel for ourselves, since there is not a large company of us, would be very expensive, and we would also like to

take for once a trip in the same way as the native citizen. We proceed accordingly to the landing-place to see if we can secure a passage, and soon find a well-laden craft that is to sail "to-morrow if it please God." We hasten home and hastily collect such things as are absolutely necessary, namely, a carpet, cushions, coverings, bread and biscuit, clarified butter, flesh, cheese, onions, salt, coffee, spirits or wine, pease, rice, dates, and fresh fruits, wood or coals, tobacco, and also cooking, eating, and smoking utensils, with the necessary bags, chests, and boxes.

THE EMBARKATION.

We get our baggage on board by earliest morn, with the assistance of a pack-donkey, but do not find the master of the vessel, who does not turn up by noon even, nor yet till late in the day. At last, however, he does make his appearance, and coolly meets our angry remonstrances with his, "Never mind; to-morrow if God pleases." But as we cannot start next day we determine to look out for another opportunity, and have our baggage again brought ashore. Vessel after vessel sails past in mid-stream, and call as we may they steer proudly onward with swelling sail, taking advantage of the favourable wind. At last we succeed in catching a small bark without a cabin, to which we gladly transfer ourselves and our belongings, and endeavour to make ourselves comfortable and at home by spreading our carpet beneath us, or by digging out an abode in the piled-up cargo of corn or dates, protecting ourselves against the rays of the sun by following the shadow of the huge sail, or by constructing a tent of rugs, wrappers, and spare sails.

The above means of travelling is only a make-shift; the Arabic public that make long voyages use the dahabiyeh, a vessel with a cabin. These vessels are constructed on the model of a floating house; but the house, which is built to rest upon the ship's bottom, does not occupy the middle, as it appears in fancy drawings of Noah's ark, nor as it did in the ships of the ancient Egyptians (which, strangely enough, have

no resemblance to those of the present time, not even in the sail); it occupies the after half of the vessel. As a forty days' or even a single hour's rain is in these regions and in these days an improbability a ridged roof can easily be dispensed with, and accordingly the roof of the house takes the form of an open platform.* The fore-part of the vessel carries the rigging, the simple mast, the slender yard swinging round its top, and the huge trapezoidal sail, which, during a stoppage of any length, is fastened round the yard in undulating folds. The communication with the platform and the beaked stern is effected by a plank that is placed like the scaffold used in rough-casting a house, running externally along the flanks of the cabin, from which a single false step would precipitate a person into the stream. During the voyage the captain of the vessel stations himself aft upon the platform with the long tiller in his hand, so that he can keep his eye on the crew while they are occupied about the rigging in the forepart of the vessel below. The crew are the more ready to obey his commands from the fact that he usually combines the dignity of captain with that of head of the family, those under his direction being generally his brothers, cousins, children, and grand-children. For the smaller class of vessels of this kind a crew of three or four men is considered sufficient, in cases of difficulty the friendly aid of the passengers being called in and immediately given, partly from self-interest, partly because the bargain is so made at starting.

The more fortunate among mortals when travelling in the cradle-country of mankind make use of saloon-vessels built on the same principle; but much more handsomely fitted up. These vessels alone deserve the name of *dahabiyeh*, that is, "little golden ship" (though the name may also be derived from *sahab*, to go or move). In these the dingy cabins are converted into fine saloons, fitted up with everything which the luxurious son of northern civilization has accustomed himself to require; the platform has become a pavilion, on which the consumptive foreigner from a colder clime drinks greedily into his damaged lungs the air warmed by the winter sun

of the south, while in spite of wind and tide a crew of rowers urges the light galley to any point it is desired to reach.

The public has little opportunity for availing itself of the results achieved in this age of steam, since a regular river passenger service is not yet organized. An attempt was indeed made some years ago to set agoing such a scheme by the Viceregal River Steam Navigation Co. of the day. The fare charged was small, *viz.* about four shillings per day, or what was the same thing, per mudiriéh. But even that was too much for the common people, who continued to sail as before in their slow-moving dahabiyeh along with their baggage, which they cannot let out of their sight, so suspicious are they, while they do not know the value of time. Accordingly the company, like the post-office, worked at a loss on account of not being sufficiently patronized by the public, and soon gave up its regular passages. The principles of political economy are unknown in Egypt, and there was no thought of persevering in spite of loss. At present regular trips are made by the Nile steamers only during the winter months for the rich travellers from Europe. Still the river is continually navigated by a great many steamers, which are employed for government purposes, and receive occasional passengers. The crew, including the captain and engine-driver, is entirely composed of natives, who have emancipated themselves from their teachers in a gratifying manner, yet not without a previous mingling of the Anglo-Frankish and the Arabic element. This is seen in the narrow Frankish trousers and bare feet of the sailors, in the European uniform combined with the general unbuttoned state and red slippers of the captain, and in the Anglo-Arabic words of command, such as "stop," "halfy speed," "turn head," &c., which an uninitiated scribe could never unriddle.

All kinds of craft navigate the Nile besides these—larger and smaller cargo boats without cabins, great black tow-boats forming long lines behind the steamers, ferry-boats, fishing-boats, and rafts consisting of clay jars with handles fastened together; at the present day, however, the light and portable papyrus boats, once so célebrated, are no longer seen.

A VOYAGE ON THE NILE.

Thus we glide over the stream of streams. It is the height of summer, the period when the fresh north wind that then prevails drives the little vessel with bellying sail southwards through the flood now swollen with tropic rains. We revel in contemplation of the landscapes that fly past us and rivet our attention less by richness and brilliancy than by their strange solemnity. Bare steep banks of soft clay with beautifully regular strata alternate with gentler slopes, now clothed in a uniform manner with sown plants, now producing in separate clusters a natural growth of herbs which serve as pasture. At one time the steep bank is on the right at another on the left side, or, as the native always expresses himself, on the east or the west side; it is always at the point where the strongest current is, and may change with this in the course of time. The steep bank, with the land next adjoining it, always stands high and dry above the river and the inundated country, even when the river is at its highest, and is picturesquely dotted with palm groves, often also with towns and villages; but where it is not protected by blocks and dams of stone it is always in danger of being undermined and washed away by the summer flood. The valley-bottom is everywhere arable land; it usually exhibits a level surface, though on the outer edge towards the desert it is generally somewhat depressed. From the surface of the stream, however, the eye cannot reach far beyond the bank, the more distant stretches being hidden by herbaceous stems, trees, and bushes. From the evergreen surface of the valley, which is rich in cultivated fields but without meadows, rise on elevated points many small scattered palm groves, and behind these we may usually conjecture human habitations to exist, a farm, a village, or a small town. We make the same conjecture when a great number of vessels have brought to at any place, and the slender daughters and sturdy wives of the peasantry are going up and down the steep pathway on the bank, balancing the heavy earthen jars on their heads. They form along with the bathing buffaloes, and the shadoof

men raising water from the river, the inevitable figures in every Nile landscape.

The river god, periodically causing his waters to overflow, has permitted few of the Egyptian founders of cities to settle immediately beside his bed. The greater number of the eminences that rise above the level of the valley, and stubbornly withdraw themselves from his annual bounties, are generally artificial, and are as a rule only sufficient to serve as sites for farms, villages, and hamlets; the roots of a town of any size, a town that would have occupied a great part of the comparatively small area of cultivable soil, had only the ever dry desert soil wherein to develop. Still the town-dweller, though thus repelled, has dug for the period of inundation a channel which conducts the sweet flood, with all that therein lives and moves, quietly and safely into the very heart of the town, so that for a few months he may draw from it refreshment and new strength, like the poor desert plant from the single shower of winter. For the remainder of the year he must send crowds of porters and beasts of burden in order to avail himself of the boon conveyed by the distant stream.

As we proceed our attention is forcibly attracted to the banks of sand or clay in the stream and at the edge of it, which, now when the summer is at its height, are becoming more and more covered by the water, while in winter and early summer they lie bare in great stretches. They form a rendezvous for innumerable water-fowl, from the pelican, the crane, the heron and the marabout, down to the lapwing and sandpiper. In the midst of these the great vulture, the little vulture, and the raven feed peaceably together on some piece of stranded carrion. Nor is it impossible for us to see there the sacred crocodile sunning himself. The countryman, however, is not deterred by that fact from planting the banks with melons and cucumbers as soon as the water withdraws and leaves them uncovered.

At the edge of the valley on both sides, now at some distance, now abutting perpendicularly on the river, rise the mountains, a term equivalent to desert, whitish-gray, treeless,

without verdure, almost without soil. These mountains, which are calcareous in composition, belong on both sides of the valley to the tertiary formation; at Assouan (Syene), in the southern part of Egypt, they first become formed of primary rocks, especially syenite. High up, the precipitous rocky walls are often penetrated by great numbers of regular quadrangular holes like windows, along with natural clefts and crevices, where now only the creatures of the air fly in and out. But, strange fact! man in the form of mummies has dwelt here for thousands of years, and has selected these inaccessible tombs as eternal resting-places, here at least deeming himself safe from the profane investigations of treasure-digging Epigoni. But in many places at the foot of these desert mountains temple-palaces with splendid pillared halls, gigantic statues, richly painted and sculptured walls extend afar, bearing noble testimony to the mighty minds of the primeval dwellers in the land. Another and intellectually poorer time has built churches and convents on and with their ruins; while above them stand mud heaps hollowed out to serve as the dwellings of the race of modern Troglodytes. Thousands of years are thus piled above each other.

Not less pleasure and delight are experienced, especially in a clear still night with the moon at full, when the stream is high, and the vessel glides downwards assisted by the splashing stroke of the oars, accompanied with the peaceful sound of the monotonous songs of the crew. Among the passengers or the crew an accomplished singer may always be found to lead, beginning either with a popular song or one improvised by himself for the occasion, and being followed after every verse by the chorus of the rowers. The songs are such as the following:—

“I entered your garden, best beloved,
 And wished to pluck dates.
 By the thorn of the ripe, ah, the ripe fruit, dearest child,
 Was my finger wounded.”

Or,

“I enter the garden,
 And the rose shadowed me,

Oh, my mistress, lead me about
 And be gracious to me.
 Oh leave me no longer alone and forsaken."

Less poetic is the song,

"The gardenér has been confined because he has stolen pomegranates,"
 and the invocation of saints, such as

"Oh, God! oh man of Damauhur, &c."

With or without sense, varied or the same for hours, the song soon causes a kind of intoxicated excitement which kindles a sort of demonic energy in the rowers, so that the power of poetry acts like that of steam. Between whiles a disciple of Clio with enviable eloquence, such as is here naturally cultivated among people of all ranks, narrates his adventures or all kinds of drolleries and tales for the common entertainment. Many also, while themselves out of reach in mid-stream, find a lively source of amusement in hurling at the boat-men, the peasants, and especially the water-raisers ashore, a flood of the choicest abuse in which the Arabic language is so rich, while these send back every epithet with cent. per cent. interest—all in mere harmless humour, forming a scene quite similar to those amusing colloquies between the students and the miners of the Black Forest in the Neckarhalde at Tübingen. Similar contests are related to have taken place among the ancient Egyptian women when on the pilgrimage to Bubastis.

The Nile voyage is quite different during winter and early summer, when the feeble waters glide languidly along and not a breath of air moves, or what wind there is is contrary and unsteady and idly sports with the flapping sail. Against this state of matters nothing avails but the unspeakable patience of the Mussulman with his trust in Providence. Fired with the thousand-fold repetition of the name of Allah and his prophet (*Ya Muhammed, sala 'alé*, "Oh, Mohammed, pray to him"), the crew drag by a long rope the floating burden, marching along the pathless bank with its endless windings, through the bushes and over the hollow projecting ledges of

the clayey slope that are hurled downwards by the slightest footstep, and stopped by the cuttings made in the bank for irrigation purposes, while still the wished-for point that seemed so near is far from being reached. Contrary winds may compel them to bring to for days, even for weeks, at a desert part of the bank, far from civilization and exposed to the attacks of robbers. And when at last a good strong breeze takes pity on the traveller the pilot steers the vessel right upon a sand-bank, from which it cannot be got afloat again till the boatmen have been heaving at it for hours with their Titan shoulders to the rhythmic accompaniment of their *Eleza, ya eleza*.

The genial winter's sun quickly accomplishes his short course, and already the day's work that has advanced the vessel so little is at an end. Darkness, and even in these latitudes a very sensible degree of cold, drives everybody to some lurking place, in which, cowering under his mantle or rug, he sleeps through the long winter night till roused by the nipping frost of morning. Whoever has hired the after cabin is the most fortunate, for although it is little suited to freedom of movement it yet affords a close shelter; the youngsters, who have crept into the hold under the deck, between the bales of goods, and among rats and mice, are likewise not badly off; but the man that has taken up his quarters upon the narrow wooden bench of the main cabin is indeed to be commiserated. The folded wraps beneath him soon slide gradually outwards, drawing his body with them; and no sooner does he fall asleep than he has to start up again as his centre of gravity reaches the edge of the bench. At the same time the warm covering slips off, and the icy wind blows through the holes and crevices that are never wanting in the half broken window-shutters right upon his naked members. Only the native peasant and the Berberin or Nubian, indifferent alike to the glowing heat or the winter's frost, is able, enveloped in his plush, to fall asleep on the open deck or platform. At the period of early summer, when the south and west winds prevail (*Nau* and *Samum*), a voyage on the Nile is torture by day on account

of the oppressive heat and the contrary winds, by night on account of the vermin and the frightful row that the rats and mice kick up. Whoever, therefore, can manage it takes his trip at the height of summer when the Nile is highest.

EATING AND DRINKING ON BOARD.

Amid such observations, considerations, and recollections, from which a general impression remains to us of the monotonous character of the landscape, the fauna and flora, and the people, time passes on, and hunger begins to make itself felt. One man begins to empty his sack, in which he had stowed away his provisions, and now every one is called by name and urgently invited to join him. It is easy to see that the invitation is a serious matter for him, even though his store were only spread out for the first time. On the other hand, there is a common understanding that those first invited ask their former host to join them at another time, namely, when his provender is all gone; or every one contributes something to the common meal in the manner of a picnic. Thus the whole company eat together or in groups, but never alone, that would be un-Arabic. By this hospitable practice a certain brotherliness is soon developed among those on board; differences of rank cease, and intimacies are formed that last perhaps for years. To have eaten salt and bread together is sufficient ground for avoiding or terminating quarrels. To be sure an excellent field is thus afforded to parasites, who flourish greatly in this country; and, on the other hand, the prudent host prefers to keep costly dainties at home. Any one who wishes to cook sets his sauce-pan on the clay vessel full of earth that serves as the caboose and stands in the fore part of the vessel. But when the vessel is moored to the bank, as is done in the evening, every mess does its cooking ashore, gathering dry reeds, stems of plants, and brushwood, and often plundering the neighbouring fields of their fruits and vegetables to supplement their meal.

Feeling thirsty, we let down a pitcher with a cord into the stream. Before we set it to our lips, however, all kinds of

considerations crowd upon us: the water is turbid and muddy; we have already by means of the microscope detected in it animalcula, small crustacea, and minute worms; we have seen cattle bathing in it, and men washing their bodies and their clothes above our vessel, and emptying various matters into the stream; the carcass of an ox is floating past with a raven standing on it and pecking it; and such ingredients have been received by the stream from the whole of the immense country above. Shall we drink a mixture of the filth of the whole of North Africa! We venture; the Son of the Sun has done so before us, and all his sons continue to do so up to the present day, and are quite healthy notwithstanding. And indeed it is pure nectar; the soft cool water so refreshes us that we quite agree with the natives of the country, especially those from the desert, who consider a draught of Nile-water one of the greatest blessings the world can give.

A JOURNEY BY LAND.

In taking a trip entirely by land one has the advantage of not being dependent upon the wind and the humour of the crew, and of often being able to take a shorter route to his destination, though a land journey certainly has the disadvantage of being more fatiguing. From the condition of the roads the only means of travel are beasts for riding and for carrying burdens, *i.e.* either camels, asses, horses, or mules. A person can only go short distances on foot from the necessity of always having baggage with him. Broad highways there are none in this region, and of course no carriages, scarcely even a donkey-cart here and there. However suitable the camel may be for riding in the desert, riding on it in the cultivated Nile valley is not pleasant. Sitting aloft on a camel, we move along the narrow path on the bank which scarcely allows two such animals to pass, certainly not if they are carrying loads. One beast tries to get before another in front of it, or we are met by a herd of these or other animals. The camel on which we are riding is pushed close to the edge of the path, where there is a steep slope or

a deep hole. Perhaps we have to take a still narrower field-path which suddenly strikes off right across the fields, down the slope of the embankment, over a clay field dried into great lumps, or over a wet and slippery patch of mire. Here there is a rivulet, at which the beast would fain drink, there a tree, a corn-field, or a bush, towards which it greedily stretches its neck.

The smaller and lighter donkey, with its nimble trot, is much better suited for this district. No path is too narrow for it, no way too steep, and it can be guided by the rein without any driver. A good Nile donkey trots and gallops for miles; it is distinguished from the mountain and pack-donkey as the dromedary or riding camel from the common camel. The ass is by far the most common and agreeable means of communication in the whole of the Egyptian portion of the Nile valley; hardly the poorest peasant cares to go on foot. People of higher rank ride higher, using a white ass of the genuine Arabic race of Nejd, a mule, or a horse. The ox or the buffalo is not yet commonly used for riding, as in the Soudan, though here peasant boys and even peasant women have begun to ride them to the field or to the watering-place.

When travelling by land it is customary to take a siesta during the day under some shady tree or grove where there is water; at night the practice is as described below. It is seldom that any one ventures to make a lonely night march, or to camp out by night in the fields, as is the custom in the desert, where there is no danger; this would give robbers and murderers too good a chance, and even would not be free from danger on account of the dogs roaming about everywhere and guarding the fields and farms.

AN INN.

At last we reach, if we have travelled by water, the haven of our destination; we disembark, while the vessel we have chanced to catch sails farther on. We load our baggage on the back of a donkey or a porter, such as may be found at

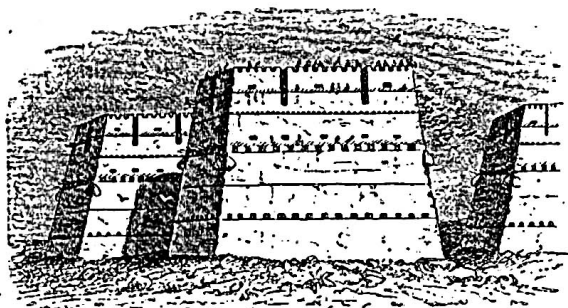
all the more important landing-places, and ride to the nearest chief place. There we take up our quarters in the public lodging-house (caravanserai, Arabic *Wekâleh*) if there is one. It is merely a place of shelter, where one can get a roof to cover him and protect him from the terrors of night. All thought of finding in it comfort even approximating to what may be found in a regular Frankish inn we have long ago discarded. The furniture sufficient for a night's lodging according to Arabic notions we have ourselves brought with us, namely, a carpet, a cushion, a rug or mantle. The caravanserai has a spacious court round which, on the ground floor and the upper-story, are a number of rooms; these are small and entirely without windows, having only a door which opens on the court, or in the upper story on the gallery which runs round the court. Before the large main door, and with an out-look on the street, sits the doorkeeper, or the goodman of the house here serves out coffee for his guests or any one who may come, coffee, in addition to water, being the only refreshment to be expected in this establishment. For our table we have ourselves to cater, and either try the productions of the dirty cook in the market, or make our servant prepare a simple meal with the materials contained in our travelling-bag, our fire-place being formed with two or three stones in a sheltered spot in the court-yard, or in the gallery. At nightfall we seek our rest on a carpet spread out in the open gallery, or if it is winter, withdraw into our little room.

Such lodging-houses exist only in the towns and larger market villages. If we find none such we must have recourse to the friendship of some acquaintance, or to some one to whom we are recommended, or we encamp, under the protection of the village guardians, on an open place in front of the houses. If we do not wish to do that, especially when it is winter, we knock boldly at the door of the village magistrate. Without being exactly an innkeeper, he is bound to receive strangers, he has almost every day to entertain various kinds of officials, providing food for them and their beasts, and he is not allowed to ask anything for

so doing. However, he takes care afterwards to repay himself with the moneys that his servants often receive from the guests (the officials as a rule give nothing), and takes what meat, fowls, eggs, &c., he requires now from one member of his village flock now from another, and thus prudently shares the burden of quartering strangers.

A VILLAGE.

After dismounting somewhere and drinking some coffee, either as a ceremony of our reception or for refreshment, we take a tour through the village. While even in the town the lines of direction of the streets are not very correct, in the village there is in this matter perfect freedom. The better houses of the country people differ little from the buildings that the provincial town offers; they are clay-built blocks, one-story high, without windows, and pierced with



Pigeon Houses.

only a few holes for light, often narrowing towards the top in the ancient style; upon them, or beside them, frequently rise small quadrangular battlemented towers serving as pigeon houses. The house of the common Fellah degenerates gradually to the most wretched mud-hole, compared with which a nest of termites is a work of art. The Fellah does not use shaped bricks of dried clay, which give to a structure a neat regular appearance and sufficient stability for this

rainless district, but he kneads for himself a hovel out of the clay left by the Nile in every hollow, mixed with some cut straw. A room is thus formed, which may be entered by creeping through a hole. It is covered over with reeds, straw mats, and rags. Round it he then builds a wall of clay about as high as a man, which incloses a yard. Cylindrical hollow spaces (*sūmaa*) are let into the wall at intervals and serve for keeping grain, which is poured into them from above; these were also in use among the ancient Egyptians. Other similar cavities serve as a pigeon house, a fowl house, an oven, and a cupboard, or the same purposes, are served by certain columnar structures with dome-shaped tops, which stand detached in the middle of the court-yard. In particular there is seldom wanting a thick pillar about 5 feet high, having on the top a large round platter-shaped disk of clay with a high border round the outer edge, similar to a pillar with its capital.

That is the fundamental plan; when carried farther the walled-in farm-building is divided into several portions, such as stables, sheds, places for the poultry, especially the pigeons and a comparatively small portion added for the people. Commonly only a small part of the house is covered; the roofed portion being for winter, while in summer nothing but the blue vault of heaven is over people, cattle, and grain. On the roof and the crenellations of the walls promenade the dogs, which in the village have become domestic animals, though only in like degree with the cats; the relationship between man and the village dog is still very cold. The village dog is not quite wild and masterless like the town dog, but the master of the house throws him some scraps, for the sake of which the dog remains beside the house, watches the field, barks at the stranger, and guards the house from sudden attacks. Besides the common red-haired dog the Erment dog, a fine long-woolled race, with a thick head and similar to our sheep-dog, is not uncommon in our district. It was formerly introduced by the French conquerors, and is one of the few institutions that have kept their ground since their time. In walking through the fields

a person has to be on his guard against these dogs, which often gather in a pack to attack a strange intruder.

The village is inhabited by the *Fellah*, that is, countryman, and here in Upper Egypt by a variety almost as dark as an Ethiopian, which has remained, comparatively speaking, very little affected by the international race-crossings through which the people of the Pharaohs has gradually passed. The dress of the peasant of Upper Egypt is no longer the blue cotton shirt of the inhabitant of the lower country, which at most serves him for an under garment; but a wide robe of brown unbleached woollen stuff, the sleeves of which, wide enough to admit his whole body, hang down almost to his ankles. This race is very well formed, almost always spare and at the same time muscular and full of endurance. The youth of both sexes have as a rule agreeable and even elegant forms. To be sure old age comes on early, and a maiden is not to be blamed if she prefers a beardless young fellow as a husband, or a man if he courts, when he can, a mere girl. The women of many places are celebrated far and wide for their good looks; those of Balas for instance, where the well-known large earthen pitchers for carrying water—the *balâseh*—are made. Indeed a slim, brown Fellah girl, twelve to fifteen years of age, and just arrived at puberty, dozens of whom stroll every evening from the village to the river for water, is really a charming sight, as she balances upon her head with rare dexterity and grace the above-mentioned *balâs*, with its convex bottom and eccentric centre of gravity, carrying herself along lightly on her naked feet, unhampered by anything in the shape of a shoe. To be sure the figure is seen to less advantage under the brown woollen dress, the *hulalich*, than under the thin light-blue cotton shift of the Fellah women of the lower country; the veil too that floats down over the back, or the kerchief, is apt to be drawn over the face at the sight of a man, or at least a corner of it is taken into the mouth. But still a finely rounded arm adorned with bracelets is often visible up to the shoulder, supporting from time to time the pichel on the head, and the greater number do not think of aping the

“forbidden ones,” as those of the towns must, by concealing their faces. Golden ear-rings, silver nose-rings, a string of beads of small value or of gold coins, a silver band on the upper arm, tattooing of a blue colour on the face, arms, and hands are the ornaments that even the poorer peasant women would not like to deny herself. In later life those Graces usually became frightfully ugly; the nose-ring, the painting, the now unsparing exhibition of the naked skin, heighten the shocking sight. The full beard of the man, which early becomes grizzled, covers and conceals the wrinkled features of age and gives him the venerable appearance of the sheikh.

The Fellah, at least of the poorer class, is almost exclusively a vegetarian, and pastures his tongue mostly on coarse, heavy, and raw substances.¹ To his black millet-bread or his cakes of unleavened flour he eats salt, caraway, garlic, onions, and other vegetables, raw and uncooked, by preference, and in addition the many kinds of fruits he possesses, especially dates and melons. With his sharp teeth he eats into the rind of the doom-nut and the stems of the sugar-cane, which lacerate the gums of a person unaccustomed to them and make them bleed, and he chews grain and legumes slightly roasted, maize, beans, chick-peas, and half ripe wheat. He does not allow himself many dainties; any of this sort that he has, such as milk, eggs, fowls, pigeons, or cattle, he sells, though on a few days of the year, at family or religious feasts, when impelled by religion, he does allow himself the indulgence of a good piece of mutton. Spirituous liquors he never tastes. It is only with tobacco that he is not niggardly. A wife and family too are quite indispensable to him, he would rather starve, and allow those dependent on him to starve also, than remain unmarried. From the political pressure weighing him down, he cannot easily raise himself from his condition of poverty, and from indolence he has no great

¹ The people are fond of telling the story of a Fellah whom Napoleon I. is said to have taken with him, and who became a celebrated general. Becoming sick he tried all the doctors in Europe in vain. At last he returned to Egypt, and meeting one of the friends of his youth told him of his sufferings. This friend advised him to fall back upon his old Fellah diet, and lo and behold, after a short time he completely recovered!

desire to do so (most of the Fellahs are mere day labourers or tenants, not land-owners); yet from his contentment and domesticity he is always merry, he chats, jokes, and sings, is healthy, and incredibly efficient and assiduous in working.

The Fellah people are everywhere held in the lowest estimation as a degenerate race; indeed they apply to themselves the degrading names of "brood of the Pharaohs" and "Fellah." Poverty of course breeds dirt; in an earthen burrow which has to shelter a numerous family, which has a roof consisting of rags, which stands in a court-yard where all kinds of domestic animals and children mingle pell-mell, and which at the same time serves as sitting-room and bed-room, as kitchen, dining-room, and stable, it is not to be expected that wall and floor should shine, the dishes glance, and every utensil be in its proper place. The curious visitor will probably find the external walls thickly plastered with cow-dung, which serves as fuel for baking and cooking; pot-bellied, blear-eyed, naked children, with flies and mosquitos swarming upon them, are creeping about; the women in scanty clothing are catching the vermin on themselves, while the men and boys of the house are stretched on the ground clothed in the single woollen garment that serves them for both a summer and a winter dress.

A general view of the village shows us sights of the same kind. In spite of all the oft-repeated sanitary ordinances carrion of many kinds still lies about the village or floats in pools and canals; the Nile is still regarded as the most suitable burying-place for cattle; refuse and rubbish, with intermingled animal remains, have accumulated till they form veritable mountains round the village, and the hollows between have been selected as cess-pools for the commune, the houses never possessing such conveniences.

However, let us recall to mind the filthy yards and rooms, the dung-heaps and puddles, the streets only passable with tall boots, the glazed coat sleeves and leather hose innocent of washing, the natural timidity at water of the inhabitant of an out-of-the way village in our own country; let us reflect that animal refuse in the land of Egypt is quickly consumed

by hungry dogs, vultures, and insects, and then completely and quickly dried up in the dry hot atmosphere; that, farther, the Fellah, as a Moslem, washes himself five times a day, and in addition has from time to time to take a bath, and the comparison may prove to be entirely in favour of the poor decried Fellah.

In many respects we must give the Fellah even a high place. Though belonging to the very lowest rank, he knows how to conduct himself with propriety, almost with polish, in society; he may be often rough, but he is never rude and boorish, a main reason for this being that he never gets drunk. Compliments flow from his eloquent tongue till they verge on flattery and falsehood. He is entertaining, witty, full of fancy, good-humoured in ordinary intercourse, and if at all well treated; but he is mendacious, deceitful, avaricious, fond of begging, and even thievish, when there is any question of *meum* and *tuum*. Patiently, like the camel, he bears the burden laid upon him; but if it seems too heavy he becomes stubborn and self-willed, until he has received a due number of official blows upon the soles of his feet, whereupon he immediately becomes obedient again and bends slavishly before his Turkish master, his superior in energy. Such endurance and stubbornness are also said to have been qualities of his ancestors at least in later times.

THE COUNTRY IN THE CIRCLE OF THE YEAR.

The appearance of the country, like that of its inhabitants, is for a visitor from the North new and strange, quite different indeed from that of any other on the face of the earth, and varying radically according to the season of the year. The seasons, spring, summer, autumn, winter, are here almost entirely astronomical conceptions; this division and succession is not known to agriculture, scarcely to language, or at least in another sense. Let us follow the year in its course.

THE OVERFLOW OF THE NILE.

According to the most ancient Egyptian mode of reckoning—and Islam, with its lunar months, quite impracticable for

agriculture, has not been able to effect anything against this arrangement—the year begins on the 1st of the Coptic month Tut, corresponding to the 11th of September, when the Nile is at its highest. The land of Egypt is now a fresh-water archipelago, and the waters cover the ground like the winter snow in the North, spreading their blessing over the greater portion of the fields. The swollen stream has flowed over them, but not destructively, man having tamed the wild element for thousands of years. The great main artery, full of overflowing, pours its nourishing fluid into large, deep, lateral canals constructed by the hand of man, which reach to near the edge of the desert, and sometimes return with a bend to the main channel, taking advantage of the fall of the valley. At intervals the canals are crossed by dams, behind which the water collects and flows through sluices down upon the adjacent land. When the land lying behind the first dam has been sufficiently covered by the overflow from the river, an opening is made in this dam, the water then runs along the canal to the next dam, overflows the district belonging to it, and so on and on. If the river does not rise sufficiently high, as is the case in many years, the water scarcely reaches the remotest parts of the valley, which accordingly remain for this year dry and fallow. The water is not allowed to touch those fields upon which a crop is still standing till after harvest. When the river falls the fertilizing water is still retained for some time on the field by damming it up.

Scattered over the inundated country there are a number of elevated points, which experience has proved to be above the reach of the water; these remain like islands rising above the great lake, and are used as sites for human habitations, and for growing such productions as cannot endure an inundation. In order that they may be still more secure, they are surrounded with an earthen dyke, especially the gardens, which the owners would be sorry to see overflowed. Such elevated points may either be alluvial formations dating from the original formation of the Nile valley, or are partly formed artificially by piling up rubbish.

At these times communication is often possible only by

boats and rafts; the principal places, however, are connected by earthen causeways, which, directing their course according to the configuration of the ground, have usually extensive windings, and cause the traveller upon *terra firma* to take very roundabout roads. It sometimes happens, too, that the flood advances rapidly with great force and in extraordinary volume; the dyke, which is nowhere strengthened by stonework, is broken through at some point of least resistance, the land beyond, which was intended to be kept dry, is overflowed, and the communication is interrupted. This happens almost every year at individual points, and in many years, as in 1863, 1869, and 1874, much mischief is thereby occasioned.

The period of high water is the crisis for the country. The people are in a state of excitement, and, "How much has the Nile risen to-day?" is the daily question of every one who thinks about the future. For, if the overflow is too scanty, a multitude of fields remain uncultivable and fallow, as so much added to the neighbouring desert, and the consequence is scarcity, if not actual famine. If, on the other hand, it is too abundant, then it is almost impossible to keep the element within bounds, and great damage is everywhere caused by the bursting of dykes, the devastation of cultivated land, the laying under water of dwellings, the washing away of embankments, and the drowning of cattle and human beings. On these occasions there are a multitude of hydraulic engineers, if we may call them so, provincial officials of all kinds, high and low, magistrates, burgesses, and peasants, constantly on their legs, examining whether the dams and sluices are in good order, and if any rupture occurs the people are forced to set to work. Even the animals are in an excited state. The cattle must be driven from the low grounds over which the water is spreading; the wild animals, such as mice and the like, have to leave their holes and find new ones on higher ground; the creeping creatures, such as lizards, insects, and worms, take refuge where the water has not yet reached, but at last are drowned. The grain-eating birds, especially the pigeons, can no longer procure their food, and migrate to

the desert and the great caravan route; while the water-birds now find their food abundant in the waters, in which swarm innumerable frogs, fish, and water-insects, and they arrive in crowds.

If, however, the river god has filled his horn of plenty exactly to the brim, and the fact of its having done so has become clear by New-year's or Nerûs day, everybody is in a state of joyful excitement, "fantasies" are indulged in as well as the pleasures of masquerading, and whoever can so arrange it now gets married.¹ For after this time scarcely a moment injurious to the harvest need be feared. The countryman has now more rest than at other seasons, and has time for festivities. At this time the ancient Egyptians also indulged in all sorts of sports and pastimes, and held great annual feasts, such as that of Hermes or Thôt, on the 19th of the month of Tut, which was sacred to him. Along with the water an agreeable coolness has been diffused over the land, previously glowing with tropical heat; the oppressive Samoom of summeryields before a cool north wind; it is the "Nile-autumn," the most agreeable season in the land of Egypt. The vessels move about more than at other times, and the voyages are considerably shortened, up stream by the force of the strong north wind, which seldom intermits, down stream by the strong current. Desert towns become river ports, and the products of the country can be loaded and unloaded outside and inside of their gates. Lastly, that the measure of delights may be full, the Nile water, that drink divine, is cooler and more palatable, although more turbid than before, and dates, melons, pomegranates, lemons, cucumbers, and all kinds of fruits have just become ripe. Accordingly, now is the time when any one who can recruit his health once a year does so, by enjoying a change of air, or taking a course of bathing in the open water or in the public steam-baths, or by trying the fruit-cure.

According to the common opinion the Nile now remains

¹For the three days' rule of Abu Nerus, see Chap. III., The Nerus Day.

standing at its height, neither rising nor falling, till the Christian festival of the invention of the cross (end of September). Even the Mohammedan countryman in this case follows the Christian in reckoning by the cross—at other times so reviled.

AFTER THE INUNDATION.

Although even during the inundation the operations of agriculture do not stand quite still, since the fields not reached by the flood must be continually watered artificially, yet the labour mainly begins only after the Nile has withdrawn, and the fields begin to dry. The plough in the first place has to turn up the soft and clayey soil, which is covered with a fresh layer of clay and deeply sodden with water. The implements of agriculture, still more than those employed in handicrafts, have preserved their primitive character, most of them being exactly the same as those employed by the ancient Egyptians; with the plough that is completely the case. This instrument, which is quite without wheels, is formed essentially of two pieces of timber meeting at an obtuse angle, the lower piece terminating in the share, which is of a rounded wedge shape and shod with iron, seldom entirely of this metal, while the upper or hinder piece rises obliquely, forming the stilt. From the opening of the angle rises the beam, which is fastened to the plough at its extremity directly, and farther up by means of a perpendicular timber. At the fore end of the beam a long cross-bar is let in or attached, and this, lying over the necks of the oxen, and fastened to them on each side by pieces of wood hanging down, or by cords, forms the yoke. The different parts are by no means neatly jointed, cut, and turned, but are mostly made of rough branches just as they grew, with all their knots and bends, clinched together, or merely tied with cords of palm-bast. Place behind this the brown-coloured Fellah, having his bald head covered with a skull-cap, and the upper part of his body or the whole of it bare, except for the loin-cloth;¹ and place

¹ The loin-cloth, often only in the form of a piece of cloth drawn through

in front the team, either oxen, asses, buffaloes, horses, or sometimes though more rarely camels, or it may be a camel on one side, a buffalo on the other, and then we have a true picture of the primeval ploughman. The implement suffices for the soft, slimy, stoneless soil, in which it draws only very superficial furrows, and no one thinks of improving it. For many fields the hoe alone is sufficient.

The ploughing is followed by the sowing, and the harrowing or smoothing of the soil, the latter being usually accomplished by causing draught cattle to drag a palm branch over the surface, more seldom by a toothed roller. The ancients drove swine and other beasts to the fields when the seed was put in. The manuring of the soil has been excellently performed already by the overflowing river; the dark rich soil comes chiefly from the mountains of Abyssinia by the Blue River, the White River contributing little. Only a few cultivated plants require a special manuring, for which pigeons' dung is the kind chiefly used.

Thus gradually does the year wear round to winter, that is, the time when the human body often experiences, especially at night before and at sunrise, a very sensible degree of cold, even in the most southerly parts of Upper Egypt; when a person is glad to take a seat beside the brazier, and wrap himself up in warm coverings (since the temperature often falls to 39° Fahr.); but when the growth of plants, upon the soil thoroughly penetrated by moisture, is most luxuriant, and the Nile valley at its greenest. Every month there is something to sow as well as to gather in, and accordingly always something fresh to eat.

THE EGYPTIAN CALENDAR.

The Arabic calendar for Egypt, little known among us, supplies a variety of interesting information relating to

between the thighs, is fastened to a leathern thong, which, being plaited by the hand of a woman, serves as a talisman for masculine vigour, and is worn by every peasant. Such an article was also worn by the ancient Egyptians, judging from representations.

agriculture, and we give a short extract from it. The Mohammedan, Coptic, Greek, Frankish, and even Jewish feasts and systems of reckoning the months, all which are conscientiously and harmoniously set down in it side by side, as well as the astronomical information regarding the sun's position and the length of the day, we omit, but we do not leave out the scattered sanitary recommendations. The times given for sowing and reaping are more suitable for Lower Egypt; Upper Egypt is ten to fourteen days earlier on the average.¹

SEPTEMBER. 15. Cotton harvest (little cotton is planted in Upper Egypt). 16. Dew begins to fall. 17. Pomegranates sown. 19. Olive gathering (in Lower Egypt). 20. Time of Limunes (or small Egyptian citrons). 21. Dates (also as early as August). 24. Pomegranates. 27. Fresh fruits, best kind of food. 29. Eat *tunke* (*terid*, that is, bread in broth made with meat).

OCTOBER. 1. Good is it to glance towards the clouds (!). 8. The fruit (the bamujeh fruit) ripens (!). 9. (Sowing of clover, which gives three or four crops; in Upper Egypt instead of it the chickling vetch and liquorice vetch are more commonly sown as fodder and pasture plants). 10. (Maize harvest.) 15. Rice harvest (only in Lower Egypt). 16. End of high water in the Nile. 18. Drink cooling drinks (juice of fruits?). 23. Flax sown. 25. Wheat sown (also barley). 26. Avoid sleeping in the open air. 27. Beginning of morning coolness.

NOVEMBER. 2. Do not drink at night. 5. Rosas. 7. Violets sown. 16. Saffron gathered. 17. Rain. 18. South winds. Drink warm water fasting. 21. Durra harvest (autumn crop, which stood during the inundation). 24. Horses pastured. 25. The whole night becomes cold (in the course of November most of the winter crops are sown—lentils, chick-peas, wheat, barley, beans, peas, lupines, safflower, lettuce, flax, poppy, winter durra).

DECEMBER. 1. Caraway, anise, black cummin sown. Time of the black crabs. 4. Olive-pressing. 5. Eat everything hot. 10. (First cutting of clover.) 11. Insects perish, serpents and mosquitos disappear. 15. Sugar-cane ripe. (Winter melon sown.) 16. Drink nothing out of open vessels for three nights. 17. The ants penetrate deep into the ground. 18. Vapours rise from the soil (mist). 23. First frost. 25. Late wheat sown. 29. Vines pruned.

JANUARY. 3. Avoid eating fowls. 11. Tobacco sown. Strong cold. 10. (Chickling vetch and liquorice vetch cut or eaten off). 17. Baptismal feast. Greatest cold of winter (called baptism-cold; at this time the Christians in their pious zeal take a cold plunge-bath). The Nile water becomes sweet and clear. 18. The depths of the earth

¹ The statements in parenthesis are taken from other sources.

become warm. 22. Eat hot (that is, heating) articles of food (such as legumes). 28. Last severe cold.

FEBRUARY. 1. The sap rises in the stems; cattle in heat. 3. Plums sown; trees planted. 10. Young lambs. 13. The cold is broken. 16. Violets. 18-20. The little sun (see below). 21. Birds pair. 22. Young cucumbers. 25. Avoid sitting in the sun.

MARCH. 2. Water-fowl in great multitudes. 10. Indian cotton (and rice) sown; silk-worms gathered (all this only in Lower Egypt). 10. (Barley harvest.) 12. Locusts develop. 14. Sesame sown. 17. Violent hurricanes and whirlwinds. 18. Swallows. 20. Large sun (see below). 24. Sugar-cane sown; (winter melons ripe). 25. Egyptian cotton sown. Flax reaped. 26. North winds. 29. Caraway sown. 30. Eat the flesh of goats and fowls.

APRIL. 1. Avoid eating cheese. 5. Time for blood-letting. 6. Trees in blossom (dates in blossom; summer durra and indigo sown). 8. Time for purging. 10. (Wheat harvest in Upper Egypt.) 12. The almonds form fruits. 16. Colds prevail. 17. First harvest in Cairo. 20. Preserve roses. 29. Easter Monday; beginning of Chamasin (Easter varies, however).

MAY. 2. Henna sown. 4. Make use of acids. 6. Strong gusts of wind from the north. 7. Blood-letting, and blood purifying drinks. 11. (Summer) cucumbers sown. 12. Late wheat harvest. 14. Avoid salted meats. 17. (Summer) durra sown in Upper Egypt. 21. Poppy heads gathered. 22. Falling of manna and quails (?). 22. Safflower blossoms gathered. 27. Beginning of the strong heat. Sirius sets. 31. Time of apricots.

JUNE. 1. The sap of the trees begins to diminish. 2. According to Hippocrates medical treatment should be avoided for 75 days from this time. 5. End of the "Nile-burning" (drought). 7. Rice sown. 8. The Nile water changes. 9. Rise of the Pleiades (*Tureya*). 10. Great heat in men's bodies. 11. The soil becomes cracked. 14. Stinking miasmata. 15. Honey taken from the lives. 16. Drink no water from the Nile for 15 days. 16-17. Night of the drop (see below). 19. First grapes. 20. Water melons. 22. Strongest heat. 23. The Nile begins to rise. 24. Bathe in cold water. 25. Use tamarinds. 26. Press juice from unripe grapes (*Ausum*). 27. Use acids. 29. Peaches and plums. 30. Last time for sowing sesame.

JULY. 3. The height of the Nile proclaimed. 4. Avoid purgatives. 5. The locusts perish. 7. The Nile becomes rapid. 9. Rather strong north winds. 10. Chief time for honey. 11. The air becomes temperate. 14. Miasmata and fleas vanish; the plague ceases where it prevails. 19. Strong winds. 20. Mustard seed gathered; (summer durra harvest). 21. Samoom winds for forty days. 25. Eye complaints common. 26. Avoid washing clothes for seven days. 27. Grapes, figs. 28. Black cummin. 29. Grape-must.

AUGUST. 1. Summer melons. 3. Sirius rises. 9. Radish sown; cotton picking. 10. Pistachio-nut ripe. 12. First of the pomegranates.

15. (Autumn *durra* sown.) 17. Beware of the stings of insects. 18. The leaves of the trees changed. 19. Avoid eating sweets; garlic and onions sown. 20. Weaning of the domestic animals. 24. Vermin, mosquitos. 25. Morning coolness; young lambs. 29. Drink thick curdled milk; avoid the warm bath. 31. Rape-sowing; Fish-fry; Drink less water.

THE TIME OF THE SMALL AND OF THE GREAT SUN.

The general seed time, the short and verdant period of winter, follows, then, the period of inundation. Already by the 19th-20th of February, four weeks before spring begins astronomically speaking, the cold is broken by the approach of the "small sun," and judging from one's sensations, spring is begun. The name *robi'a* (spring) means literally "pasture," just as the German *Wonnemonat* (May) is properly *Weidemonat* ("pasture-month"), and under this title the native of Upper Egypt includes a part of January and the whole of February, when all the cattle are allowed to pasture for some weeks upon clover and vetches, and are only in exceptional cases, and usually against the wish of the owner, made to do any work. On the 20th-21st March appears the "great sun," which forms the dividing point between the winter and the summer half-year, the time following it being looked upon as belonging to summer. The period "between the suns," that is, between the little and the great sun, is important for gardening operations; whatever has to be set or planted is then put into the ground.

CHAMASIN AND EARLY SUMMER.

In April, at a time which varies, but does not agree with the Gregorian reckoning, occurs the Easter of the Copts, an important point in reckoning among natives of every faith. With Easter-monday, on which everybody goes abroad in order "to smell the good air," begins the dreaded season of *chamasin*. By that term they do not understand, at least in Upper Egypt, a certain kind of wind, but the fifty days between Easter and Pentecost, when unwholesome winds, especially south winds, prevail, and diseases commonly invade

the country. This and the period immediately succeeding it, the dry and hot early summer, when also the Nile has least water, are for Egypt the gloomiest times. Towards the summer solstice the rise of the Nile begins to be noticeable, accompanied by an agreeable and healthy coolness, north winds becoming at the same time more and more frequent. But some time before this, according to the popular belief, on the night of the 16th-17th June, a "drop" has fallen into the Nile and impregnated it, thus gradually producing high water. The period during and after the inundation is among the healthiest and most agreeable, although one would naturally suppose the contrary, and there are, in Upper Egypt at least, no intermitting fevers. In July and August a hot west wind called *samoom* or *samum* (poison-wind) often blows.

SUMMER CULTURE.

Agriculture does not stand still in the dry warm summer; on the contrary, the countryman now really works for the first time; this is the period of summer culture, after which comes the short period of autumn culture during the inundation, when a few fields from which the overflowing Nile is kept back are made to grow durra and maize, and in Lower Egypt also cotton and rice. The work at this time consists chiefly in irrigation. The field that is artificially watered gives two, often three, harvests in the year, the land that is merely overflowed only one. In Upper Egypt the latter forms by far the greater portion and remains fallow in summer, but in recompense the crops, especially the wheat, are much better and more highly prized than those in Lower Egypt, where the greater number of the fields are made to bear crops in summer also. In order to water all these fields once more much labour, money, and above all much water, is necessary, which in Upper Egypt is hard to be got. When it can be managed, however, it is managed, and such fields as can be subjected to an irrigation of both kinds are the best and dearest. Fields that are watered entirely by artificial means serve chiefly as gardens or grounds for growing vegetables.

WATER-RAISING APPARATUS.

The methods and machines for irrigation most commonly used in Upper Egypt are the well-known water-wheel, and especially the shadoof or water-raising apparatus, to which in Lower Egypt, where the water does not require to be raised so high, the swinging basket and a kind of chambered wheel are added—all instruments of ingenious simplicity that fulfil their object very well. Large and skilfully constructed pumping apparatus exist only in the plantations of the pashas, the people will have nothing to do with them; if a private person ventures upon any of these novelties he is sure to let it stand again in a few months and return to his old practice, since something will soon become broken or choked up, and no one can be found for hundreds of miles who is able to put it to rights. The shadoof, as it is still constructed, the Fellahs received from their forefathers, the people of the Pharaohs. In the soft and steep bank of the river, or of a canal, a number of trenches, with terraces behind them, are dug above each other, the number depending on the height of the bank; at the top a reservoir is constructed, the bottom of which is often strengthened by layers of reeds or palm stems. The principle of the apparatus for raising the water is similar to that of a draw-well, perhaps still more practical. On the upper ends of two pillars formed of rough palm stems, or more commonly of clay, a cross-beam is firmly attached, and under the middle of this a long beam is balanced by means of a cord-and-bar joint (so that it may move freely up and down). Behind, that is, at the shorter end, the end farther from the river, this beam terminates in a colossal ball of clay; from the other end hangs a palm twig, to the lower extremity of which a bucket, usually of leather, is fastened. It is the duty of the labourers standing on the terraces to fill the bucket in the lowest basin and to empty the contents into the next above it; the bucket is raised by the weight of the clay ball on the arm of the lever, and the workman has only to guide it. Thus even in ancient times did men discover how to save labour by mechanical means.

Having reached the highest basin, the water flows by a small channel on to the border channels of the fields that are to be watered.

When the river rises one terrace after another is swept away, and when it sinks again as many new ones are constructed every year.

The motive power in these water-raising apparatus is a class of men called "fathers of the shadoof," who in classical brown nakedness enliven at intervals the banks of the Nile, and every now and then utter shrill and plaintive cries, while the beams groan and the buckets splash.

A WATER-WHEEL.

The water-wheel is a far more complicated apparatus, and appears not to have been known to the ancient Egyptians, or only in later times. In Upper Egypt it is almost solely used for gardens. The chief condition for the existence of such a wheel is a well that contains spring water all the year round at a certain depth, and that may be the case some distance out in the desert. Such water, like all in Egypt obtained by digging, is always brackish, often scarcely drinkable. Two small walls standing opposite each other carry a large undressed palm stem lying across them. This forms the upper support, while several pieces of timber form the lower support of a vertical wooden cylinder pointed at both ends, and made to revolve by means of oxen or other animals yoked to a pole projecting from it either horizontally or obliquely. The cylinder turns a toothed-wheel of wood which is immovably attached to it below, and this turns a second toothed-wheel sunk deeply into the ground, the lengthened subterranean axis of this latter wheel again driving round the water-wheel proper. On the water-wheel is laid a so-called endless cord which below dips into the water. To the cord at short intervals clay pitchers are attached, and so ingeniously disposed that they fill themselves with water in the well below, and then being carried up and over the top of the wheel empty themselves one after the other into the

reservoir standing there; the empty pitchers going down the other side again. The driving beam, which projects from the cylinder, and has at the outer end diverging pieces of wood forming a seat for the driver, often comfortably padded, is now pulled round in a perpetual circle by the animal attached to the draught-tree. In order to prevent the beast from diverging from the circular course, its head is also separately attached to the main cylinder by a cord or yoke, and for a similar purpose, or to prevent giddiness, its eyes are tied up. The animal—an ox, a cow, a horse, seldom a camel or an ass—once set in motion revolves, like a planet, in its strictly defined orbit, so long as the *vis a tergo*, namely, the voice of the driver or the lash, or still more commonly the goad, continues. The work proceeds with the greatest briskness when the driver, commonly a naked Fellaah boy, seats himself on the above-mentioned frame, and going round himself with the machine keeps his team on its mettle. At the same time there is a collateral duty that he performs; whenever the beast, he is driving is about to drop its excrement the boy catches it in his hand and lays the collected material beside the course. This is done less perhaps to keep the course clean than to get a supply of the important fuel that is formed by the dried dung of cattle, and cakes of this material are abundantly plastered on the little walls in order to dry.

The water thus raised is collected in a basin, and thence conveyed by a small channel to the land, which may be laid under water by means of a net-work of capillaries drawn at right angles, and surrounding small square fields lying at a lower level. The whole site occupied by the water-wheel is always shaded by an arbour, or by a sycamore, and such spots are among the most delightful that are to be found in this country. The tree (formerly sacred), the arbour, the shade, the splashing water of the well spreading coolness and freshness around, often the only water to be had for a long distance, and therefore supplying men; cattle, birds, and all kinds of creeping things, as well as the vegetable kingdom, the cattle quietly treading their circular course, the pleasing

clack of the toothed-wheels, and sounding above all, the friction-music of the revolving cylinder, now harshly groaning and creaking, now playing in impure but often in pure concord—all these taken together excite the feeling of a deep idyllic peace.

HARVEST.

The chief time for the corn harvest is April and May. Then young and old, accompanied by beasts of burden and other domestic animals, proceed to the field, though the women, having chiefly the household matters to attend to, are less often seen there. The stalks are cut below by the sickle, or pulled up by the roots. The cattle brought with them then scatter themselves over the shorn fields, as also the poor people for the purpose of gleaning, while the farmer piles up his bundles of ears into a great heap in the middle of the field. There the wheat lies till there is time to subject it to farther operations. The ancient Egyptian, in place of thrashing his corn, which he cut at the top below the ears, had it trodden out by cattle. That plan is but seldom employed now, and thrashing is quite unknown. The separation of the ears and the husking of the corn are much more commonly effected by the *norag*, that is, a kind of waggon with cutting iron wheels, which, mounted by a peasant and drawn by cattle, goes round and round the heap of sheaves in a path strewn with corn-stalks, and chops ears and stalks into innumerable small pieces. These pieces being dexterously thrown up and winnowed in a breeze of wind, in the manner practised also by the ancients, the heavy grain separates from the chaff and chopped stalks, which are lighter and therefore fly farther. A farther sifting is finally carried out by the corn sieve, which allows the grain only to pass through. It is not to be wondered at that after this process impurities of many kinds remain among the grain, and the ordinary market grain consists, besides the grain, of a considerable mixture of chopped straw, lumps of clay, pieces of weed, and pellets of dung, all of which go to make up the measure, and it must be subjected to

the industry of the women at home before grinding or baking is to be thought of. The grain is put into sacks and baskets, the chopped straw (long straw is scarcely to be had in Egypt) into net-work bags, and carried by asses and camels to the barns in the village.

A PALM-GROVE.

We long to escape from the open field and obtain rest, shade, and a draught of forest air. "Forest—what is that?" the native asks us with astonishment. He understands the word (*hersh*) no more than, as we have seen above, he understands spring (*robi'a*) or meadow (*merg*). None of these are to be met with in the land of Egypt. But instead we have something far finer, we think—the palm, crowned the queen of trees, and whole palm-groves. 'To wander under palms appeared to us from youth up the highest pleasure of the tropic world.' We sought for rest; but instead of a soft grassy carpet we find in the grove a clayey soil dried, cracked, and dusty, or if watered, muddy, with scrubby, prickly bushes, and dry and thirsty weeds. We wished for shade; but the shadow cast by the lofty slender stem of the palm-tree is scarcely so broad as our body with arms and legs kept close together, and whoever lies down in this position is again in a quarter of an hour fully exposed to the rays of the never-halting sun; the individual stems stand too far apart for their shadows to meet together; the covering afforded by the crown of leaves proudly waving at a dizzy height above is of no avail on account of the distance, and the few loose feathery fronds that form it let through a thousand beams of light. We wished to breathe pure air; a palm has nothing aromatic about it; stem and leaves are dry and stiff; when we breathe we cannot avoid inhaling the dust that is suspended in the air of Egypt, that here in the grove has settled down more thickly on the pale green leaves and twigs, and now when the least breath of air stirs falls down on our heads and clothes, and even enters the lungs. How much more poetical, then, than a palm-grove is a pine-grove, which in other respects has some resemblance to it! There

are many, too, perhaps even more, who are enthusiastic about the date-tree. Its usefulness in all circumstances we must admit. Its stem, either whole or split longitudinally, serves for beams, but the timber is of no farther use in building, nor is it esteemed as fire-wood. The ribs (*gerid*) of the branches or fronds are much employed in all kinds of wicker-work, for lining the ceilings of rooms, in inlaying and mosaic work; the leaves are woven into mats and baskets, and used also as brooms; the bast furnished by the sheaths of the leaves is made into cords and matting, and serves also instead of bath-sponges for cleaning the body. The broad ends of the leaf-stalks, split up into their component fibres, are also used as brooms. The fruit forms an important article of food; its sweetness even enables it to take the place of sugar; and a spirit is distilled from it. Lastly, by piercing into the heart of the crown, palm-wine is obtained, but the death of the tree is the result.

A GARDEN.

We do not here mean to speak of the fine gardens of many pashas and Europeans in the capital, where plants of the temperate and torrid zones of the Old and the New World, tended by Frankish gardeners, display in charming array their rich perennial verdure, flourishing in the open air under a mild sky and in fertile soil; it is of the gardens of the country people that we shall speak, and these afford scarcely more satisfaction than a palm-grove, and also differ but little from one, since here also, in these areas, surrounded by a mud-wall and watered by a water-wheel, it is the useful palm that forms the most prominent and striking object. To be sure fruit and foliage trees, which closely occupy the intermediate spaces, give shade, coolness, and an atmosphere smacking more of vegetation, but the poetic charm of blossoming flowers is wanting. For flowers the Egyptian countryman has no feeling, he thinks only on dry utility. In this respect the ancient Egyptians were much more poetical, as are at the present day the Moslems of other

regions. The laying out of the whole, too, is as a rule confused; it is scarcely traversed by a path, and the visitor has often literally to bore his way through the thick shrubbery and prickly undergrowth. The rose is the favourite flower; but one does not see many attempts at cultivating either this or other plants so as to produce varieties or fuller and finer flowers. Other plants cultivated are jasmine, rosemary, mignonette, mint, and sesbania, and the people have a special fancy for basil. Besides these the garden always offers a rich variety of vegetables that bear the stamp of the South, and is therefore well worth visiting.

Alongside of the delicious date-palm stands the doom-palm, remarkable for its repeated dichotomous branchings, and for its edible fruit resembling a cocoa-nut; it is called *Cucifera Thebaica*, because the Thebais is its head-quarters, beyond which (that is, beyond lat. 27° N.) it never extends northward. Genuine acacia trees of several species, with highly ornamental feathery leaves, and rather a low stem, from which oozes the well-known gum Arabic, some of them with very astringent fruits, commonly used in tanning, form dense thorny thickets or groves that cannot be approached. Among other trees we do not fail to remark the stately Labbach acacia (*Albizzia lebbak*), first introduced from the East Indies under Mohammed Ali, the myrtle, a willow, and the St. John's bread tree. Of the pine tribe only the cypress can be made to spring from the southern soil; while on the other hand the tamarisks, their representatives, flourish luxuriantly. The Hegelig tree (*Balanites*), a native of the South, also thrives, and the Tamar-henna (*Lawsonia*), which produces the henna pigment in so common use here; while the tropical banana sometimes brings its fruit-cones, the finest of all fruits, to the condition of luscious ripeness. Quite at home here is the *Zizyphus spinæ Christi*, with its miniature apples; the pomegranate-tree, and the wild fig-tree or sycamore, the stateliest tree of this zone. The real fig-tree produces only a middling kind of fig, the citron-tree only a small citron of the size of a walnut, the orange-tree only a green and not very sweet orange. It is too hot here also for the olive, the mul-

berry, and the Indian fig (*Cactus opuntia*), which as far south as Middle Egypt thrive well enough. Apples, pears, quinces, peaches, plums, damsons, belong to a colder zone, and though often planted the trees do no good. The kindly vine, however, has spread even as far as this, and is much cultivated in the gardens in the form of arbours; its sweet and abundant berries are merely eaten, scarcely ever converted into wine—not even by the Christians, who prefer to get drunk on date-spirit.

FIELD AND GARDEN PLANTS.

The vegetables most common in gardens are the *bamiyeh* (*Hibiscus esculentus*, one of the mallow tribe) and the *moluchtyeh* (*Corchorus olitorius*, a tiliaceous plant, tasting somewhat like spinach), *kulkds* (*Arum Colocasia*, with a taste like that of a potato), the egg-plant (*Solanum melongena*) and paradise apples (*Solanum lycopersicum*); while *Solanum tuberosum*, that is, the potato, is not planted at all in Upper Egypt, and in Lower Egypt only here and there, as, e.g., at Alexandria. It is brought almost entirely from abroad, is dear, does not keep well, and therefore is little used in Egypt. There are also turnips, mangolds, purslane, spinach, mallows, cabbage, celery, carrots (a purple-red kind), sorrel, rockets, beet, lettuce (eaten raw or cooked, seldom with vinegar as a salad), lastly, radishes (a peculiar kind, of which as a rule the leaves only, and not the small sharp root, are eaten), onions, garlic, cives, parsley, cress, and mustard. Of plants for seasoning there are caraway, coriander, anise, dill, fennel, black cummin, and red pepper. Our district is specially favoured as regards plants of the order Cucurbitaceæ. There are no fewer than five kinds of those cooling fruits the melons, which enable us easily to put up with the absence of many other kinds of fruits, cucumbers from dwarf to giant size, gourds that may be made excellent vegetables with plenty of cooking, often of extravagant form and dimensions.

The following are mainly cultivated in fields: of the cereals,

wheat, barley (but not oats), durra, maize, seldom the Soudan millet (*duchen*) and Indian millet; in Lower Egypt, rice; of legumes, lentils, beans, chickpeas, lupines (*tirmis*), lubias, and several other kindred legumes; of green fodder, clover, fenugreek, lucerne, and chickling vetches. Farther, of dye-plants, indigo, henna (mostly shrubby), safflower, saffron, madder; of oil-plants, rape, lettuce, castor-oil plant, sesame, safflower, poppy; of fibrous plants, flax, hemp, cotton (more in Lower Egypt); of narcotic plants, tobacco, hemp, poppy (but opium and hashish are mostly imported from abroad); lastly, the sugar-cane, partly for the preparation of sugar, partly (a smaller kind) for eating.

THE GARDENS AND CULTIVATED PLANTS OF THE ANCIENTS.

The ancient Egyptians bestowed much attention upon their gardens. These contained flowers in the richest abundance, partly growing in the ground, partly in pots standing in the beds near the garden walks. The larger gardens included alleys lined with trees of various kinds, parks for game and poultry, special kitchen-gardens, arboretums, and vineyards. In the last the vines, which were formerly much more extensively grown, were trained on bowers or trellises; in gathering the grapes, if we can trust to the representations, apes were made use of, whose dexterity in such matters, though unquestionable, must have been of rather hazardous application. Instead of employing the water-wheel, the ancients conducted abundance of water from the Nile by special canals, and usually constructed ponds and lakes in the gardens to serve not only for irrigation, but for sailing and fishing.

The cultivated plants of ancient Egypt were in great part those of to-day. Not the smallest difference can be detected between the fruits and plants found on the oldest monuments and those of the present time. Many were employed and cultivated to a greater extent than now, as the castor-oil plant; of some, as the lotus and papyrus, which were once so famous, the native at the present day hardly knows the

name. The lotus, like the Egyptian fig-tree, was a sacred plant; its blossom was esteemed the most beautiful of flowers, and its root-stock and seeds were used as food; of papyrus all kinds of plaited work were made, such as mats, curtains, ropes, sails, and light canoes, while its spongy pith, besides being eaten, was used for making paper. Other plants were not introduced till later, some only in modern times; among them we may specify cotton (already mentioned by Pliny), the sugar-cane (in the time of the Caliphs), rice, iudigo, tobacco, and maize.

THE WILD PLANTS.

In our rural wanderings we take care to examine and collect also the plants growing wild. Here we find very few of those with which, in our tours in the Fatherland in former times, we filled our vasculum, since we have already left "Linne's, and even Decandolle's kingdom" behind us, and now stand in that of Forskal and Delile, in the sub-tropical zone of palms and myrtles. We find very little, however, of any kind, less than in most other parts of the world, scarcely more than in the desert, and what we do obtain is dry, rigid, bulky, prickly, hairy, and downy, so that it is ill suited for the herbarium. The scarcity of wood in the country is so great that dung forms the chief fuel, and all goods which can be so treated are packed in crates formed of palm branches instead of boxes and cases, while timber is little used in building. A large proportion of the timber used for building, even for ships, has to be imported from abroad. The whole known flora of Egypt, inclusive of the deserts belonging to it, comprises 1140 species, of which again 400 at least belong to the strip of coast on the Mediterranean. In floral wealth, therefore, Egypt will not compare at all with any district of equal size belonging to the temperate or tropical zones. In this country, wherever there is a spot where a wild plant can grow, especially where the soil is watered, there forthwith comes the countryman and sows a crop on it, extirpating the wild plants as so many weeds. There are here only two soils

—the cultivated clay-soil and that of the desert. In the desert the plants grow almost exclusively in the valleys, since the slopes of the hills, with the exception of a few water-courses, are devoid of soil or moisture. In this country there are none of the plants whose habitat is rocks, alpine heights, woods, moors, meadows, mounds of debris, swamps, and lakes, since such localities either do not exist or do not enjoy shade and permanent water. Consequently there remain only the fields, whether cultivated or fallow, steep and uncultivated river margins, hedgerows, the river, and the bed of an inundation canal. In such places there springs up of course a considerable number of plants, but even then only in a scattered fashion, never forming a continuous covering. Not even the grasses, which appear in tolerable variety, unite to form a carpet of verdure; there are therefore no meadows, which elsewhere lend such a charm to the landscape, the only substitute for them being the clover-fields, which serve as pastures, and the corn-fields so long as they are green. The leaves of the plants in the dry, glowing, dusty atmosphere never attain that fresh rich green which so delights the eye, and even the flowers want for the most part the deep fiery colours. Perennial plants, and especially the trees, are evergreen; they have no period of rest, and between the falling leaves of last year new ones already sprout again in January. Mosses, ferns, fungi, and cryptogams in general are extremely few. In the wild-growing flora orchids are entirely wanting. The clayey valley of the Nile possesses some, though not many, of the wild plants in common with the desert, and it has been observed that such plants as in the desert send out long fibrous roots in order to imbibe the scanty, deeply-seated, and widely-spread moisture, when settled in a moist and cultivated soil acquire shorter roots and become more tender, so that even biennials turn into annuals.

THE ANIMAL WORLD.

We have still to glance briefly at the fauna that is to be met with in Egypt. The remarkable form of the camel, the

most important domestic animal of modern Egypt, we see everywhere in large numbers and performing the most diverse functions; still more numerous is the useful ass, once sacred to Typho, not held in high esteem, but belonging to an excellent race. Compared with it the horse plays, we may almost say, a subordinate part. The latter is used for riding by a very few personages of the highest rank, or it drives the mill, but rarely draws the plough. The common Egyptian country horse has not much in common with the celebrated Arab; it is rather heavy, gallops well, trots little, but is said to have good powers of endurance. Many horses also are imported from Arabia, Syria, Nubia, Darfur, Barbary, and Europe. The mule is much employed for carrying loads, as also the horse and the ass.

Not long ago Egypt was rich in cattle, but the epidemic of 1863 and the following years, which still continues to rage, has almost entirely annihilated the old long-horned race represented on the monuments. The imported foreign cattle, the ox of Soudan and European races, become acclimatized with difficulty; the Indian and African zebu, likewise introduced, which even the ancient Egyptians employed, is, in the opinion of the country people, ill suited to the agricultural labours of this region, consisting, so far as cattle are concerned, in ploughing, and turning the water-wheel and the norag. Fortunately the grayish-black buffalo, which loves a kind of amphibious life, has been spared by the disease, as likewise the camel, and it forms a substitute for the ox, being strong though rather slow to work, and yielding rich and good milk, nourishing but somewhat coarse and tough flesh, and strong leather. The flesh and milk of the camel are little esteemed. Neither buffalo nor camel is represented by the ancients. Flesh meat is mainly furnished by the Nile sheep, which belongs to the fat-tailed race, and is mostly of a dark-brown colour, with thick wool and a tuft on the head. When the poorer classes eat flesh it is that of the goat. Both animals were once sacred. The so called Egyptian goat proper, with the long ears and the curved nose, is oftener seen in Lower Egypt. The unclean swine, once an emblem of Typho, may

be heard grunting at most in the sty of a Roman Catholic monk or a Greek tavern keeper. The strict prohibition of its flesh by Moses and Mohammed is based, however, more on a prejudice borrowed from the ancient Egyptians than on superior wisdom, since the Europeans in Cairo and Alexandria, and the Greeks in Upper Egypt, partake of it without bad effects, and the natives themselves eat the fattest mutton even in the hot season. Besides, pork was eaten by the ancient Egyptians at least once a year, when sacrificing to Typho.

Of the existence of the half-wild jackal-like dog, which, like the jackal, was once sacred, and at Lycopolis was embalmed in multitudes, we have already had occasion to convince ourselves. The cat, whose progenitor is believed to be the *Felis maniculata*, of Upper Egypt and Nubia, leads a very dainty and thievish life, and is also half wild. It is much preferred to the dog by the adherents of Islam, and is also, to some extent regarded with superstitious awe and therefore well treated, the ginns or spirits being supposed frequently to make use of it as form and medium. The ancient Egyptians held it as sacred. The striped hyæna is not at all uncommon, both in the desert and among the ruins and quarries on the edge of the Nile valley; it is only at night that it visits inhabited districts in search of carrion. The jackal (*Canis aureus*), called in Upper Egypt *dib*, which means strictly wolf, also frequents the borders of the desert, but always in the neighbourhood of inhabited localities; during the night and before daybreak its "hideous howl" is heard in concert with the not very different barking of the country people's dogs, whose duty it is to guard the farms against the predatory excursions of the jackal, which is not contented with carrion, but is still fonder of poultry, lambs, and goats. The Nile fox also (*Canis Niloticus*) is fond of poultry; but it is most successfully hunted in the gardens, especially at the time when the grapes are ripe. In the western desert it is represented by the little-eared fox or fennec, in the eastern by the *Canis famelicus*, which is similar to it. Of beasts of prey there are also sometimes

found the swamp-lynx, the wild cat (*Felis maniculata*), several other species of jackal (*Canis mesomelas* and *C. variegatus*), the genet and the zorilla (*Rhabdogale mustelina*). The Pharaoh's rat or ichneumon belongs, like the wild boar, to Lower Egypt. Of the antelopes that inhabit the desert the gazelle (*Antilope dorcas*), which also occasionally approaches the Nile, is the most common; this very clean little animal is not seldom kept in a tame state by the inhabitants. The hare (*Lepus Ægyptiacus*) is common in the Nile valley and in the desert, especially in tamarind groves. It is not hunted, and the genuine Mohammedan despises its flesh. The dwellers on the Nile, in general, are no great sportsmen, although there are here no restrictions. There are, however, some professional hunters, especially hunters of the hyæna, commonly Bedouins. Among the ancient Egyptians hunting was a favourite amusement. Hedgehogs are not uncommon, but the porcupine, which is figured on the monuments, is no longer to be met with. The once sacred hippopotamus too has long been driven from Egypt proper; that he still exists, however, in the neighbouring countries in the Upper Nile is made feelingly manifest by the judicial lash which is prepared from his hide and is in common use.

Besides the innumerable mice and rats that infest the dwelling-houses, ships, and store-houses, large thick-headed field-mice frequent the fields and earthen dykes, and in many quarters are esteemed as dainties by the peasants. A shrew, which was deemed sacred by the ancients, also occurs. Grottoes, old temples, and tombs are haunted by bats of many genera and species, and in fabulous numbers; one of the most interesting is the date-eating, but not blood-sucking, vampire (*Pteropus Ægyptiacus*).

Monkeys, which were sacred animals among the ancients, are nowhere found wild in Egypt proper, though they may be seen often enough in the possession of professional monkey tamers; a "right man" would have nothing to do with monkeys, as they bring ill-luck upon a house, or at any rate disorder and uncleanness. Indeed there are scarcely any other animals kept but gazelles, as no advantage is derived

from them. It is only the great pashas in the capital that care to keep lions and such like in their courts. The large animals of Soudan (giraffes, antelopes, ostriches) are often met with during the time of high water in late summer and autumn on the vessels of the Soudan traders (*gellâb*); who sell them in Cairo.

Of the 360 species of birds the greater number are old acquaintances from Europe. In the hot, dry, early summer this class of animals is almost entirely absent, and on a hot summer's noon the few that are left conceal themselves and become dumb. Even the shore-birds are mostly identical with European species, though they are also to some extent distinctly Egyptian, or at least African species. Among birds of prey we may mention the great white-headed and eared vulture, the little vulture, some species of eagles and falcons (especially the little kestrel and several noble falcons, which are still employed in falconry as they were among us in the middle ages),¹ the kite that may be heard everywhere, and several owls. Of scansorial birds there are the lark-heeled and the crested cuckoo, while woodpeckers are absent; of Clamatores there are several peculiar goat-suckers and swifts (of the latter a *Cypselus parvus* frequents the region of the doon-palm), the hoopoe, which is common in all Egypt, also bee-eaters and a kingfisher; of the order of singing birds (in the wider sense) there are the hooded crow (?), while the great black Noah's raven (*Corvus umbrinus*) belongs to the desert; also the crested lark, the sparrow, which is here common, a butcher-bird, peculiar species of swallows, the wagtail; and of singing birds proper; the Egyptian nightingale and the stone-chat; but on the whole the singing of birds is not heard in Egypt, as the birds that pass through or winter in the country do not sing in the winter season. Of the partridge tribe the cackling sand-grouse occurs in the Nile valley, but is more common in the desert; quails are only birds of passage. Native wading birds (exclusive of those frequenting the lakes of Lower Egypt) are the curlew, the cattle-ibis

¹ A falcon was sacred to the sun-god Ra.

(*Bubulcus ibis*), which always marches after herds of cattle at pasture, and was formerly sacred, the two egrets, the crested lapwing, the Egyptian plover (the celebrated *trochilus* of the ancients), and the marabout; lastly, of water-birds that belong to Egypt there are the Nile goose, and several gulls and sea-swallows. On the other hand, the country becomes in winter the rendezvous of a considerable number of the large and active tribe of birds. Those that migrate come from the North to the land of Egypt, almost the only possible highway to the interior of Africa, in order either to pass the winter here or to go still farther south, and again pass through in the end of winter. As soon also as the Nile has spread itself over the fields, the water and marsh birds of the Mediterranean and the lakes of Lower Egypt visit Upper Egypt in immense flocks.

Of the poultry tribe fowls and pigeons in particular are kept. The rearing of the former is facilitated by the hatching stoves, which were known even in the time of the ancients; for the latter dwellings, often more roomy and elegant than those of the people, are everywhere provided, and in these they dwell in immense numbers, both the tame particoloured or white breeds, and the bluish-coloured wild breeds, to which we may add the elegant turtle-doves, also abundant. Geese, ducks, and turkeys, here called malta-cocks, are less numerous.

The brilliant birds of the torrid zone remain within the tropic, which does not touch Egypt proper at all. Some few of them, however, during the tropical rains, that is to say, in early summer, migrate northwards, but here only reach the south of Egypt; among these are the sacred ibis, the tantalus, and an African honey-sucker.

The Reptilia are represented by some remarkable genera and species. The Nile crocodile, though it has become scarce, is still found in Upper Egypt, and every year demands some human victims. A lizard, which from its Arabic name of *waran* has been called the warning-lizard (*monitor*), and which resembles, though smaller, the crocodile, to whose eggs it is very destructive, may not unfrequently be seen roaming

about the sloping banks of the river and its canals; the mountain waran (*Pammosaurus*), on the other hand, belongs to the desert. Of tortoises and turtles there occurs in Egypt, in the Nile, a fine river-turtle (*Trionyx Niloticus*). Gaily-coloured lizards may be seen everywhere sunning themselves on banks, and into the lower part of the wall of almost every house the slippery scinc, which was formerly used in medicine, has penetrated. On the walls of rooms glide and squeak the small nocturnal geckos, the pilfering but otherwise harmless "fathers of leprosy." Here and there upon trees the chameleon, so celebrated for its change of colours, may be observed, while the ground agamas and harduns, which are sometimes prettily coloured, several feet long, and with long ringed tails, prefer the desert.

Egypt has been since early times renowned as a land of serpents. There are about twenty poisonous and non-poisonous species. As in the days of Moses there are still at the present day a considerable number of serpent-charmers. If any one wishes to collect serpents he must have recourse to these people, who display great skill in discovering these creatures and enticing them out of their lurking places. The serpents with which these Psylli give their exhibitions, and which consist chiefly of the once sacred African cobra (*Naja haje*), are always deprived of their poison fangs. The horned viper, which is also very poisonous, is oftenest represented by the ancients.

In the stagnant waters left behind by the inundation millions of frogs and toads are developed every year; as the land dries they all perish except a few that remain to keep up the race, having either taken up their quarters in a spot that continues moist, or penetrated to a deeper and moister stratum of the soil. Salamanders are entirely absent.

Among the most highly-prized gifts of the bounteous Nile are its fishes. These are mostly peculiar forms, having little affinity with the fishes of European waters, but more with those of other African rivers, for example, the Senegal. The number of species hitherto found in the Nile over its whole course amounts to about eighty. Their geographical dis-

tribution is very interesting. Seventeen species are found in the lower Nile, that is, below the cataracts. Among these are some unmistakably Mediterranean fish which periodically migrate up the river from the sea, such as several mullets (*mugil*), the Twait shad (*Clupea finta*), and the eel; they are naturally most common in Lower Egypt. From the former the Arabian cured herrings (*fezich*) are chiefly prepared. Thirty-six species have been found in the upper and lower Nile; in the latter many occur only at the time of the inundation. Nineteen species are characteristic of the upper Nile, of which eight also occur in the west African rivers, and are genuine tropical forms. Altogether the Nile has twenty-six species in common with West Africa, but with East Africa only five or six. In the lower Nile, besides the above-mentioned Mediterranean forms, there are representatives of the family of the perches, of the carps, and in especial richness of the sheat-fishes, to which also the electric Malapterurus or thunder-fish belongs; also of the purely tropical family of the Characinæ and Chromidæ, and of the Mormyridæ, which are confined to Africa. The *Polypterus bichir*, one of the few living representatives of the ganoid fishes so numerous in the ancient world, is an interesting species, as is also the balloon-fish (*Tetrodon Fahaca*), a marine form occurring in the Indian Ocean and the Red Sea, but not in the Mediterranean. During the overflow the fishes, which are now pretty numerous, swim into all the canals and over the inundated surfaces. When the water begins to dry the poor creatures cannot get back, and a great part of the young fry, like that of the frogs, perishes; they are now taken in immense numbers, with very little trouble, even by children. The ancient Egyptians were very well acquainted with the fish, as with animals generally; and many Nile fishes, as also those of the neighbouring Red Sea, are very cleverly represented either in paintings or sculptures, particularly such as were sacred, the Oxyrhynchus for instance, with its remarkable snout, the Lepidotus (probably a barbel), the Phagrus or eel, and the Latus, which is perhaps the Malapterurus.

Of the innumerable race of insects Egypt exhibits a great

many South European forms, but also some that are specifically African, especially in Upper Egypt. The country is remarkably poor in large butterflies, but it possesses those citizens of the world the painted-ladies. Small moths are much more abundant, and at night swarm about a light. Among the beetles, which also are not very numerous, the commonest are the black beetles and dung-beetles. The best known is the sacred ball-rolling beetle (*Ateuchus sacer*), the *Scarabaeus* of the ancients, which was so often represented by the ancient Egyptians on monuments and on gems. The ball that it forms is in the almost pantheistic mythology of Egypt compared with the matter of the world, which is also regarded as a ball. The principle of light and of the creative power of nature, the Chepera, whose symbol is the same beetle, and that too always in connection with the sun's disk, places in this world the germs of being and of light, as the beetle lays its eggs in its ball. The divinity Ptah, that is, the formative and quickening power, gives to these germs form, and produces the structure of the heavens and the earth. There are also beetles of very splendid appearance (*Buprestis*), sand-beetles (*Cicindela*), beetles that love putrefaction (*Hister*, *Dermestes*), and during the overflow numerous water-beetles.

The wasp-like or hymenopterous insects appear in fine large forms. The Egyptian bee is a mere variety of our own, and has also already been introduced into Europe. The ancient Egyptians were celebrated bee-keepers, but apiculture is now of little importance. The inhabitants eat a great deal of "honey" to be sure, but it is the "black honey" or molasses of the sugar-cane; "white" honey is mostly imported from Arabia, and is dear. The bee-keepers are said to convey their hives by boats and camels to suitable localities, even into other provinces; and after the period of gathering is over to bring them home again. To this order of insects belong also the ants, which contrive to gain entrance into all houses; and articles of food, sugar in particular, must be hermetically sealed, hung up, or protected by a circuit of water.

Of the Orthoptera locusts have proved a scourge to Egypt from the most ancient times, having been the eighth of the ten plagues in the time of Moses; among the most troublesome vermin are cockroaches, including the American in addition to native species.

Among neuropterous insects there abound everywhere on the Nile and canals ephemera and beautiful dragon-flies, especially a red-coloured species. Termites also belong to this region, but it is hardly their proper habitat, and they are not dangerous.

The Diptera or two-winged flies play an important part, there being several hundred species known. The common house-fly is nowhere bolder than here, and adds a decided element of unpleasantness to a residence otherwise so agreeable in this warm country. Equally annoying is the mosquito (*Culex*), more, perhaps, through the nocturnal hum of its multitudes, which almost drives the novice to despair as he attempts to sleep than through the smart and soreness produced by its sting. At certain periods all pools of stagnant water are full of its worm-like larvæ, and they swarm also in drinking-water, which must be strained through a cloth before drinking, the common people managing this by placing their coat-sleeve between their lips and the pitcher.

More than enough of other vermin also exist in the land of palms—such as fleas, bugs, and lice in all known forms. To these must be added also scorpions, tarantulas, and centipedes, and those scourges of the cattle, gad-flies and ticks.

Among Crustaceæ, instead of our crayfish, there occur in the Nile several kinds of crabs (*Telphusa*); and we found in the Thebais multitudes of a kind of shrimp (*Palemon*), a genus which otherwise is found only in the sea or in the lower course of the river. At the time of the overflow a multitude of minute crustaceans are developed in cavities that are gradually filled by the percolation of the Nile water, such as Phyllopora, water-fleas, and soldier-crabs, with Rotifera and Infusoria. In a few weeks, on the drying of the soil, they disappear again, apparently without leaving a trace behind.

Lastly, fresh-water bivalves also are absent, while fresh-water univalves and Annelida (among these latter the Egyptian leech), though they do occur, are not found in any great variety of forms. We were already struck with the monotonous character of the country; the same characteristic runs through its fauna, and flora, which display a remarkable poverty of species in almost all classes.

MONUMENTS OF ANTIQUITY.

We have approached the desert; before us lies a field of ruins. Half-dressed blocks of stone, shattered colossi and their members, fallen pillars, walls deeply embedded in debris there lie sown; everything transportable has been scattered through all the world. But here and there there still stand high and sublime the most wonderful architectural monuments of a noble and hoar antiquity, reaching back thousands of years. Many are even yet so well preserved that we can trace the plan, and by putting together this and that ruin gain an accurate picture of the former condition of the whole. The buildings we find are almost without exception works of piety. Of private buildings, even of royal palaces, hardly any now exist; they were built of materials easily destroyed, the former indeed of dried clay in the form of bricks. The dwellings of the eternal gods, however, and of the dead, are so strongly built that even the barbarians were not able to master them completely, though their rudeness and zeal for destruction were almost as grand as the art and the constructive skill of those who erected them.

We shall not enter upon particulars, we shall relate nothing farther of the hundreds of sphinxes which form the entrances to the temples, of the gigantic monolithic statues of polished granite standing or sitting like guardians of the sanctuary; of the graceful high-soaring obelisks, the gate-towers or pylons towering over all; of the pillared courts and halls, sometimes with no fewer than thirty-six columns 70 feet high and .37 feet round, and hewn from a single block; and lastly, of the building in the rear forming the holy of holies,

where stood in mystery the image of the god. And what we have just mentioned is only a scheme, a system of a temple. As many as four such systems may lie behind one another, and the great whole, a temple city, is surrounded by a wide inclosure-wall. No description, no painting, can reproduce the overpowering impression that these buildings, matched by no others on the earth, produce upon even the most uncultivated spectator. The people themselves ascribe them to the ginns or to the people of Pharaoh, who, like the ancestors of the human race from Adam and Noah down to Abraham, are assumed to have had a stature above what men now have. Others think that the fathers of the Franks once lived here, and that the reason why the Franks visit these cities so often is that they may look upon the native country and the works of their ancestors. The Franks alone are believed by them capable of producing works of such grandeur.

However, it is not merely the colossal in size, but also the tastefulness in style—the buildings of all kinds narrowing to the top, the columns far from clumsy notwithstanding their thickness—as well as the almost inconceivable care and industry displayed in the execution of details (almost all the surfaces of the walls, towers, and pillars being entirely covered with painted or sculptured figures), that compel our admiration. No doubt these sculptures and paintings do not altogether please us. We expect more from an artist than caricatures and lay-figures. We are reminded of the antediluvian saurian dragons, the megatheriums, and all those attempts of the 'prentice hand of Nature, in some respects incomplete and generally colossal. The figures impress us as being horribly stiff, showing no natural power, formed on one model, and drawn without any knowledge of perspective.

But if we get over our original aversion, if we consider the narrow limits that were imposed upon the talented artists by the hierarchy, that power which raises rude peoples but keeps down those that have raised themselves; if we go more deeply into the study of those artistic productions; if we turn our eyes with toleration from that which is un-