

animals carried off was an alligator driven into Payta Bay. The circumstances are worthy of notice, as they illustrate some of the incidents of geological disturbance. At sea rain is met with a hundred miles out, to the surprise of captains, who report the winds and currents as changed.

It is stated in some of the papers that the system of storm-signal observations, now in progress under the direction of the Signal Corps of the army, was devised by Great Britain before it was made use of by the United States Government. This is perhaps correct, so far as it goes; but it is to Prof. Henry, Secretary of the Smithsonian Institution, that we owe the original idea of procuring despatches regularly in relation to the weather, and tabulating them, as also of placing them on a map so as to show, day by day, the general character of the weather throughout the United States. For several years prior to the beginning of the war this system was carried on regularly, and was of great interest to visitors to the Institution. The occupation of the telegraph lines for military purposes, and the fire in the Smithsonian building, broke up the arrangement; and it was about to be resumed when the Government undertook the work, thereby relieving the Institution from the necessity of its further prosecution.

THE California vulture (*Cathartes Californianus*) is the largest species possessed by the fauna of Western America, where it ranges over an immense space of country in search of food. When any large game is brought down by the hunter these birds may be seen slowly sweeping towards it, intent upon their share of the prey. Nor in the absence of the hunter will his game be exempt from their ravenous appetite, though it be carefully hidden and covered with shrubs and heavy branches, as they will drag it forth from its concealment and speedily devour it. Any article of clothing, however, thrown over a carcass will shield it from the vulture. In some localities the nests are known to the Indians, who year by year take the young, and, having duly prepared them by long feeding, kill them at one of their great festivals. The California vulture joins to his rapacity an immense muscular power, as an instance of which it is stated that four of them jointly have been known to drag for over two hundred yards the body of a young grizzly bear weighing more than a hundred pounds.

DR. NEWBERRY, in his interesting report of the botany of the explorations for a railroad route from the Sacramento Valley to the Columbia River, speaks thus of the district lying east of the Sierra Nevada and the Cascade Mountains:—"The general aspect of the botany of this region is made up of three distinct elements. Of these the first is presented by the grassy plains which border the streams flowing down from the mountains. On these surfaces grows a considerable variety of animal vegetation, not unlike that of the Sacramento Valley in its general character. The second of these botanical phases is that of the 'sage' plains, surfaces upon which little or nothing else than clumps of artemisia will grow. The third is formed by forests of yellow pine (*Pinus ponderosa*), which apparently finds on these arid surfaces its most congenial habitat. It sometimes happened to us that, during a whole day's ride, we were passing through a continuous forest of these yellow pine trees in which scarcely a dozen distinct species of plants could be found."

THE night heron of the United States (*Nycticorax Gardineri*) is much dreaded by the Indians, who have many traditions and superstitions connected with it, and believe that it has the power of transforming human beings into inferior animals. Of the blue heron (*Ardea Herodias*), they say that he was formerly an Indian, and that perpetual quarrels raged between his wife and himself. On this account they were both transformed by a superior power, the man becoming a heron, the woman a dabchick (*Podiceps cornutus*), at the same time the brother of the woman was changed into the western grebe (*Podiceps occidentalis*), a native of the Pacific coast.

REPORT ON THE DESERT OF TIH

(Continued from page 35)

THE following are the various observations I have made and tales I have collected about some of the birds and mammals found in the desert of Tih and adjoining regions. For convenience of reference I have arranged them alphabetically. In the cases of well-known animals, or of such as have been before scientifically described, I confine myself chiefly to the Arab stories or legends attaching to them:—

Bears (*Ursus syriacus*), Arabic *Dabb*, are still found on Mount Hermon and the Anti-Lebanon, and must formerly have existed in Palestine, but the destruction of the woods has now driven them northwards. They do much damage to the vineyards in the neighbourhood of Hermon, but seldom interfere with the herds of goats. The Arabs share in the widely-spread belief that bears sustain themselves during their hibernation by sucking their paws. They also say that when the female drops her cub it is quite shapeless, and that she carries it about in her mouth for fear lest it should be devoured by the ants, and then licks it into proper shape. Bear's grease is said to be useful in cases of leprosy.

Boar, wild, Ar. *Halhouf*, or usually in Palestine, *Khanzir*, which simply means pig. These animals are very abundant wherever there is cover near water, as on the banks of the Jordan and in the Ghor es Sâfi at the S. of the Dead Sea. I was much surprised to find traces of recent rooting by them in the W. Râkhamah, which lies between El Milh and 'Abdeh. This place is far from any water except what may have collected in hollow rocks, and can boast of no cover. The 'Azâzimeh eat the wild boar, but the Ghawârineh, who will eat a hyæna, though it is known to frequent the grave-yards, will not touch them.

In this, as in the case of the other animals, I can insert but a few amongst the many medicinal uses to which they are put by the Arabs, as these are in general unsuited to the taste of European readers.

Bustard (*Otis hubara*) Ar. *Hubara*. I noticed a few of these birds in the Tih; the Arabs say that the lesser bustard (*Otis tetrax*) which is also occasionally found there, is the young of the larger, but does not attain its full growth for two years. They also say that these birds, when attacked by a falcon, will cover it with their fæces, and so drive it off.

Camel, Ar. masc. *jemel*, fem. *ndgah*. A stallion camel is called *fahl*. Collectively, *ibil* vulgo *bil* or *bâir*, pl. *aardn*. *Hojjin* is usually applied to a dromedary, but is properly used of a man, horse, or camel having an Arab sire and foreign dam, which, in the case of the animals, is considered the best possible cross. Hence, a dromedary (or well-bred camel used for riding) is so called.

Camels are most peevish animals, docile only from stupidity; ill-tempered, they never forget an injury. I have but once seen a camel show the slightest sign of affection for its owner, although they are always well treated. All their feelings of like and dislike, pleasure and annoyance, are expressed by a hideous sound between a bellow and a roar, to which they give utterance whether they are being loaded or unloaded, whether they are being fed or urged over a difficult pass; in fact, they disapprove of whatever is done. Without them, however, it would be impossible to cross the deserts, for no other animal could endure the fatigue and want of water; I have myself seen a camel refuse water after having been without any for three days. For their food they always choose the most uninviting thorny shrubs; the *seya* (acacia) which has thorns two or three inches long, is an especial favourite with them. Many of the Arabs subsist almost entirely upon the milk and cheese afforded by their herds of camels.

The Pelican is called *jemel el ma*, or water camel; and the Chameleon, *jemel el yehid*, the Jew's camel.

Cat, or *Kutt*, also *Sinnaur* and *Hirr*. According to some lexicographers, the first name is not a pure Arabic word. Cats are held in great estimation in the east, and large prices are sometimes paid by native ladies for fine Persian specimens. In Cairo a sum of money was left in trust to feed poor cats, who daily receive their rations at the Mahkemah (law courts).

Though the Arabs in Sinai and the Tih spoke of a wild cat, *gatt berri*, I found that this was always the lynx (*Felis caracal*), which is called in some parts of Arabia 'inak el ardh, or earth-kid; in Sinai, it is also spoken of as *ânazeih* (from *ânz*, a she-goat). In Morocco, it is only known as *owdâl*.

I may here remark that the word *Fahd*, translated by Lane and others as "lynx"—an animal that is never used for hunting—really means the *cheeta*, or hunting leopard of Persia and India.

The Arabs in the Tih and in Morocco, as well as the Fellahin in Egypt, eat the lynx, and esteem it a delicacy, but, as some of them eat hyænas, jackals, foxes, vultures, and ravens, they can hardly be quoted as epicurean authorities.

Many animals have in Arabic a large number of names, more than 560, for instance, being applied to the lion. The following story current among them will illustrate this fact with reference to the cat. A Bedawi was out hunting one day, and caught a cat, but did not know what animal it could be. As he was carrying it along with him, he met a man, who said, "What are you going to do with that *Sinnaur*?" then another asked him, "What is that *Kull* for?" A third called it *hirr*, and others styled it successively *dhayim*, *khaid*, and *khaital*. So the Bedawi thought to himself, this must be a very valuable animal, and took it to the market, where he offered it for sale at 100 dirhems. At this the people laughed and said, "Knowest thou not, O Bedawi, that it would be dear at half a dirhem?" He was enraged at having his dream of wealth thus rudely dispelled, and flung it away, exclaiming, "May thy house be ruined, thou beast of many names, but little worth."

The Arabs say that the occasion of the cat's first appearance was as follows. The inhabitants of the ark were much troubled with mice: Noah, in his perplexity, stroked the lion's nose, and made him sneeze, whereupon a cat appeared and cleared off the mice.

In the East, as in Europe, a black cat is regarded as "uncanny," and various parts of it are used for magical and medicinal purposes; its claws, for instance, are said to be a charm against the nightmare.

Coney (*Hyrax Syriacus*) Ar. *Waber* (lit. fur, from the thickness of their coats) *ghanem beni Israël*—sheep of the sons of Israel. Some Arabs say that this animal may be eaten, but others, as in Sinai, declare that it is unlawful, and call it Abu Salmân, or else the brother of man, and say that it was originally a man who was metamorphosed for his sins, and they believe that any one who eats him will never see his house again. It is a common joke among the Hajjis and people of Mecca to say "A good digestion to you who have eaten Abu Salmân."

Dog, Ar. *Kalb* (in Morocco *jero*, which properly signifies puppy, whelp), is the ordinary dog. A large kind of rough greyhound is called *Seluki*, from the town Seluk, in Yemen.² This dog much resembles the Scotch deerhound (cf. Gaelic name, *slogie*). In Syria and east of the Jordan there is a variety which is smooth, but has its ears, tail, and legs feathered like a setter; the females are said to be keener for hunting than the males, and black dogs are said to be the most patient. The dogs in Eastern towns live in communities, and have distinct bounds, usually ending at a street corner, and woe betide any dog who wanders beyond his own proper limits. I have often, when living at Cairo, amused myself by watching these animals. No sooner does a strange dog appear than all the rightful owners of the soil rush at him; the intruder takes to his heels, but the moment he has reached his own frontier, he turns round and snarls defiantly at his pursuers, and if they do not quickly retire his friends come to his assistance and drive them back in turn.

Dogs are said to have an intense hatred of hyænas, so much so that if a dog is smeared with the fat of a hyæna, he will go mad; and—which seems inconsequent—if a person carries a hyæna's tongue the dogs will not bark at him. This certainly would be most useful on entering an Arab encampment, for there a stranger is immediately surrounded by a pack of snarling brutes, who seem to sleep all day with one eye open, and at night to be continually awake and barking, either to frighten away some prowling jackal or lynx, or to repress some errant sheep or goat, who may wish to wander outside the circle of tents.

The Arabs believe that a dog can tell a dead person from one feigning death, and say that the Greeks (*Room*) never bury a person till they have exposed him to the dogs. It is, however, of only one breed that this is asserted, namely, the kind called *el Kalli*, and which is of small size, with very short legs. It is also called the Chinese dog. Of the origin of this story I am quite ignorant. The following is almost identical with a well-known Northern legend:—

A king had a favourite dog, whom he left at home one day while he went out hunting. Having ordered his cook to prepare a dish of *leben* (sour milk) for him on his return, the cook obeyed the order, but carelessly left the milk uncovered, and a snake came and drank of it and rendered it poisonous. On the

* The usual derivation, however, is "Seleucia."

king's return the dog tried to prevent him from touching it; at this moment the cook came in with some bread, which the king took and became to dip into the *leben*, when the dog immediately bit his hand. Upon this the king was very angry, and stretched out his hand again to the bowl; the dog, however, was before him, and began to lap the sop, whereupon it straightway fell down dead. The king then became aware of the sagacity and faithfulness of the beast, whose loss he mourned ever after, and erected a splendid tomb to his memory.

Donkey, Ar. *Himâr*. The donkey, much used by the Arabs, (for it will thrive in the desert where a horse could not exist) chiefly for carrying waterskins, as the Bedawin often encamp several miles from water, and the women bring up a supply every two or three days.* At Damascus there are three breeds of donkeys—(1) The white, which is most valuable, being sometimes worth 30*l.* or 40*l.*, and in Egypt I have heard of 60*l.* being given for a fine animal of this kind; (2) the ordinary donkey, which is used for riding, &c.; (3) A large donkey, standing from 13 to 14 hands, which is used for carrying burdens in the town; in the country, however, it is useless, as unlike the other breeds, it is far from sure-footed.

The Wild Donkey, Ar. *Air, fera*, or *himâr wahshi*, is found to the east of Damascus; it is said to be very long-lived.

Dugong (*Halicornes Henrichii*), Ar. *otum* (called by Dr. Robinson *tân*). This curious mammal is found in the Red Sea, and harpooned by the fishermen as it basks on the surface on the water. The skin is used by the Sinai Bedawin to make sandals of, for which purpose it is admirably adapted. In some parts of Arabia, it is said, that *khjaf*, or boots to protect the camels' feet from the rocks, are made of it. Some commentators take the Heb. *tachash*, which is translated "badger-skins," to mean the *otum*, and there is an Arabic word, *Tukkas*, applied to the dolphin species generally.

Fox, Ar. *Tadleb*, *Abou'l Husein*. In the East, as in Europe, this animal is looked upon as the type of cunning, and numberless stories are current concerning it. The following are examples:—

When a fox is over much troubled with fleas, he plucks out a mouthful of his hair, and then he takes to the water, holding the tuft in his mouth; all the fleas creep up on to this to escape drowning, and the fox then drops it into the stream and retires, freed from his enemies.

The celebrated Arabic author and theologian, Esh Shafey, relates that when in Yemen, he and his fellow travellers prepared two fowls for dinner one day, but the hour of prayer coming on, they left them on the table and went to perform their devotions; meanwhile a fox came and stole one. After their prayers were finished, they saw the fox prowling about with their chicken in his mouth, so they pursued him and he dropped it; on coming up nearer to it, however, they found it only to be a piece of palm fibre, which the fox had dropped to attract our attention, and had, in the meantime, crept round and carried off the second chicken and left them dinnerless.

The fox is said to feign death, and to inflate his body, and when any animal, prompted by curiosity, comes to look at him, he springs up and seizes it.

The fable of the fox and stork is changed to the fox and raven; the former invites the latter to dinner, and gives him soup in a shallow wooden bowl; the raven returns the compliment, and pours out some wheat over a *silleh* bush. The *silleh* is one of the most thorny of the desert plants.

Another story told of the fox is, that one day he met five slaves, who were travelling with a large supply of food and other goods; he joined them, and after a time they reached a well, but had no rope wherewith to draw up the water. The fox suggested that they should throw down the meal and that one of their number should go down and knead it, which was accordingly done. After a while the fox said to the four who remained above, "Your comrade must have found a treasure, why don't you go down and share it?" This hint was enough, and they all hurried down, while the fox decamped with their goods and chattels.

A fox's gall is said to be a specific for epilepsy, and his fat for the gout.

Gazelle (*Gazella dorcas*), Ar. male *'ard*, fem. *ghazâleh*, also (chiefly in poetry) *Dhabyeh* (cf. Tabitha, Acts ix. 36). This gazelle is found in the more open parts of the country between Sinai and the Lebanon; their haunts vary much with the different seasons. Though we never found any in the centre of the

* A tribe in the Desert, towards the Euphrates, is said to use donkeys only, and to possess neither horses nor camels.

Tih, the Arabs said that, after a good rainy season, large numbers come there.

The Arabs speak of three kinds, viz. :—1. *El Rim* (antelope addax). 2. *El Edam* (*A. leucoryx*). 3. *El 'Afar*, which I cannot satisfactorily identify.

The tongue of an antelope must be an invaluable charm, for if it be dried and powdered, and then given to a woman who henpecks her husband, it will ensure her future good behaviour!

Goat, Ar. *ma'az* f. *ma'azeh* or *anz*. A he-goat (either wild or tame) is also called *tais*. In mountainous districts, large herds of goats are kept by the Arabs, chiefly for their milk and hair, which is used for making tents and sacking. The Arabs more usually eat a kid than a lamb on the occasion of a feast, and always a male. Full-grown animals are seldom killed. There are several varieties of goats from the upright eared kind to the Syrian goat with pendant ears, 12-14 inches long. That usually seen in the desert has ears slightly drooping and rather curling up at the top.

Horse: the generic term in Arabic, *Kheil*; a horse, *hisán* (in Morocco 'otud'); a mare, *fars*; a colt, *mohrah*.

Atik is a thorough-bred Arab. Tradition says that the Devil will never enter a tent in which an *atik* is kept.

Hejjin: a crossed horse. (The term is explained under the head "Camel.")

Berdhán is a pack-horse with foreign sire and dam.

Kadish is a badly-bred *berdhán*.

The Bedawin reckon seven principal breeds of horses, which are as follows:—

1. *Misalsal*, which ought to be thin-crested, with short white stockings, red-eyed, short-coated, full in the barrel, and long-winded.

2. *Haikali*.

3. *Sharthar*.

4. *Hareifish*, a breed well known in Syria.

5. *Tubal*.

6. *Fij*.

7. *Kameit*. These horses are usually bay, with black points, and ought, say the Arabs, to have a very fine muzzle; head thin, and well set on; upright, small ears; conspicuous white star on the forehead; round quarters, and to be well ribbed up; with a short or rat tail. They add, a well-bred horse is known by having the tail thick at the root, and carried well out.

The favourite colours are chestnut, gray, dun, black, and dark bay. The Prophet is related to have pronounced the following dicta:—"The best horses are black with white foreheads, and a white upper lip; next to these a black horse with a star, and three white stockings; next a bay with these marks." "Prosperity is with sorrel horses." The same authority judged *shikhil*, i.e., having the right-fore and left-hind feet white, to be the sign of a bad horse.

The first man who tamed and rode a horse is said to have been Ishmael. The first horse appeared when Adam sneezed on first awaking into life (cf. the story of the cat.)

Hyæna (*H. striata*) Ar. *Dhabl*, also (in Sinai) *Arkudha*. This animal is found throughout the desert and Palestine. It is a cowardly beast, feeding chiefly on carrion, and is consequently little feared by the natives; as I have before mentioned, the Ghawárinéh eat it. It is said to change its sex yearly; the same fable is told of hares.

Jackal, Ar. *Ibn 'Awi*, or in Syria *Wadwi*, in Morocco *Deeb* and *Taaléb Yusuf*. These animals are not found in the desert, but are common in the cultivated parts of Egypt and Palestine, where their weird cry is very frequently heard, beginning just after sunset. They are timid beasts, and do little damage, except in the vineyards, where they commit great ravages, being exceedingly fond of grapes.

Ibex (*Capra bedén*), Ar. *Bedan* (from *bedn*, a body: probably so called as being the largest game in Sinai), the correct Arabic is *waal*; this is the name given to them north of Damascus. Some travellers have called them *Taytal*, but the word is not Arabic, and is only used by the Sinaitic Bedawin when speaking to Europeans, "poor simpletons," as they politely put it, "who don't understand Arabic." The derivation of this word I am quite unable to determine. Among themselves the Bedawin speak of the buck as *Bedan*, and the doe as *Anz* (she-goat), and the kids as *Dhalit*. A male in his first year is called *Fenagilt*; after this he is distinguished by the length of his horns; thus in his second year he is called *Abu Shibrain*, the father of two spans; in his third, *Theathi*; in his fourth, *Rubai*; in his fifth, *Khammasi*; and they add that the horns never exceed five spans

in length, which I believe to be true, for on measuring the largest pair that I have ever seen, I found them to be just 5 spans (about 41 inches) long. The term *gartini* (red) is applied in a general way, much as we speak of red deer. These animals are found in Sinai and on both sides of the Dead Sea. I have reason to believe that those near Palmyra are a different variety.

Jerboa, Ar. *Yarbuah*, also *Dirs* or *Dars*, and sometimes *Za rumaih* (the lord of the little lance). There are several kinds of jerboas and desert rats; some of them are only found amongst the rock, others only burrow in the sand and gravel. Opinion is divided amongst the Arabs as to whether the jerboa is lawful for food or not; some eat it, but others reject it as being "a creeping thing." The Arabs say that they never drink, and believe that they live in communities, and appoint a sheikh, whom, however, they unhesitatingly kill should his rule not suit them. There is an Arabic proverb about a deceitful man: "He acts like a jerboa." This is said with reference to the ground outside a jerboa's hole, which, though seemingly solid, is really undermined, and gives way when trodden upon.

Leopard (*Felis leopardus*), Ar. *Nimr*, occasionally called in Sinai *Giblán** (corruption of the Turkish *Koplán*), the cubs are called *Weshék*. In the more secluded and inaccessible mountains of Sinai these animals are far from rare, and in a former visit to that country I was told that eleven camels had been killed by them during the preceding year in the district lying between Senned and W. Nasb. Like the hyrax the leopard is said to have been formerly a man changed into his present shape for performing his ablutions before prayer in milk, thus despising and diverting from their proper uses the good gifts of God.

Leopards are tolerably abundant on the shores of the Dead Sea; their tracks were here mistaken by M. de Saulcy for those of the lion, which animal is, however, quite extinct in Palestine and the Tih.

The Bedawin assert that young leopards are born with a snake round their necks, and that when a leopard is ill he cures himself by eating mice. Their fat is used medicinally, and their hair is burnt as a charm to drive away scorpions and centipedes.

Lizard. The larger lizards, especially the *Uromastix spinipes*, are called in Arabic *Dhabb*, and the smaller *Hardhun*. The Bedawin say that the former lays seventy eggs and even more, resembling pigeons' eggs, and that the young are at first quite blind. They are believed to be very long lived, indeed I have heard 700 years assigned as the term of their existence. By some tribes they are eaten, but are generally thought unclean. The Syrians curse them freely, for they say that they mock the devotions of the true believers. Certainly the way in which they jerk their bodies up and down is not unlike a caricature of the Muslim prostrations.

The dried bodies of some of the Skinks or Sand-lizards (Ar. *Sakankúr*) are much sought after as an aphrodisiac throughout the East. The particular kind in vogue is found in Nejed, and large quantities are brought by the Hajj caravans.

Owl, Ar. *Boomeh*. This bird is in some places regarded with veneration on account of a tradition which says that the souls of men appear on their tombs in the form of owls. I am told that they are sometimes used by fowlers as decoys.

Pigeon, Ar. *Hamán*; wild-pigeon, *Yemám*. In Egypt there are enormous numbers of pigeons who live in towers specially built for them. They are chiefly kept for their dung, which is very valuable as manure, and largely exported.

Most mosques are tenanted by pigeons, and not unfrequently a sum of money is left by some pious Moslem to buy corn for them. At Jerusalem they are especially numerous, whence the Arabic proverb, "Safer than the pigeons of the Harem." The mourning of doves is as frequently alluded to in Eastern as it is in Western poetry.

Quail, usually called in Arabia *Summana*, or *Selwa*. I only met with one specimen in the Tih, and that was called by the natives *Firreh*. There is a tradition that the first instance of meat becoming corrupt and stinking was when the children of Israel stored up the flesh of the miraculous quails contrary to the commands of the Almighty.

Raven. There are three species of this bird scattered over the Desert, viz., *Corvus corax*, *C. umbrinus*, and *C. affinis*; all of these are called by the Arabs *Ghoráb*. They are generally found near a herd of camels, and may often be seen perched on the backs of these animals searching for ticks. Their chief food consists of reptiles and insects, but any dead or dying animal

* Gíblán is the name of the chief of the Nimr (leopard) family of the Adwán Arabs in Moab.

will attract them. On one occasion I saw two ravens attack a horse which had fallen from exhaustion.

An Arabian proverb says, "Take a raven for your guide and he will lead you to a dead dog."

An Arab tradition evidently taken—as many others are—from the Old Testament, ascribes the first idea of burial to the raven. "While Adam was absent on a pilgrimage to Mecca, Cain and Abel each erected an altar for sacrifices. Cain, a husbandman, offered the refuse of his garden, but Abel chose the finest young ram of his flock and laid it upon the altar. His sacrifice was accepted, and the ram taken up to heaven, there to remain till it was required as a substitute for Ishmael when his father Abraham should offer him up on Mount Moriah. Cain seeing his offering refused, conceived so sudden a jealousy against his brother that he slew him, but being perplexed after the deed, and knowing not how to dispose of the body, he carried it about with him for many years. At last he saw two ravens engaged in deadly conflict, and one having killed the other scraped a hole in the ground and buried it, a hint which Cain took, and thus instituted the first burial rites as he had caused the first death. Adam returning mourned for his son and cursed the ground which had drunk up his blood, wherefore say the Muslims, the earth will never more absorb the blood of one who is slain, but it remains above ground, a lasting testimony to the murderer's guilt."

Sandgrouse (*Petrochelidon setarius*).—This species is most common in the Desert, but three other kinds are also found, viz. *P. exastus* and *P. sengalensis* (found by Tristram near the Dead Sea) and *P. arenarius*. All these are called *Kata*, or, in Bedawi dialect, *Gata* (in Morocco *Koudri*). The first and last mentioned species are called by some Bedawin *Koudriyeh* and *Sunifeh* respectively.

These birds require to drink morning and evening, and thus often prove of great service to the traveller by indicating the proximity of water. While staying at Damascus I was assured that these birds exist in such numbers in the territory of the 'Anazeh Bedawin that during the nesting season two men will go out with a camel's-hair bag between them and fill it with eggs in a very short space of time. The women then squeeze out the eggs and cook them, leaving the shells inside the bag. The *Kata* is said always to lay three eggs, neither more nor less. Its bones when properly prepared are said to be a cure for baldness, and the head may be used as a charm to extort secrets from a sleeping person. From its being so sure an indicator of the presence of water, the Arabs have the proverb "More truthful than the *Gata*."

Sheep. The proper Arabic name is *Dhán*; *Ghanem* is the general term for flocks of sheep and goats.

In the Tih there are few sheep, but in Moab and Palestine they are numerous; these are generally the fat-tailed variety (*Ovis laticaudata*). A fine-wooled breed is found in some districts. I have always noticed that in the East sheep's milk is much better than that of either cows or goats.

Snake, Ar. *Haiyeh*, *Taubtan* 'Offi (cf. *opsis*) *Dúdeh* (lit. worm) *Rakshak* (speckled one). Owing to its being winter when I passed through the Tih there were very few snakes to be found. The attitude taken by a horned snake (*Cerastes hasselquistii*) which I captured was remarkable. Immediately I saw me it began to hiss, and, tying itself as it were into a knot, created a curious grating sound by the friction of its scales. This snake is considered the most deadly of all by the Arabs, who hold it in great dread. They also affirm that if a snake has swallowed a bone which it cannot digest it will coil itself tightly round a tree or stone till the bone inside it is completely broken up.

Tortoise (*Testudo graeca*), Ar. *Salahfít* (in Morocco *afkah*). The water-tortoise (*Emys caspica*) is called *Lejah*. The former is occasionally found in the Tih, though common in Palestine. The latter abounds in the pools and streams of that country. Another species of land tortoise (*Testudo marginata*) is mentioned by Tristram, as being found on Mount Carmel. The water-tortoise is known to be carnivorous, and the Arabs declare that the land species also eat snakes, but this I believe to be quite false. Tortoises have a very strong odour, and I have frequently seen pointers in Morocco stand to them as they would to game.

Vulture, Egyptian (*Necphron peronopterus*), Ar. *Rakhamali* (Heb. *rachami*) or *Onak* (in Morocco *Sezw*). This is the only vulture at all frequently seen in the Desert. The Griffon (*Gyps fulvus*) and Lammer-geier (*Gypaetus barbatus*) seldom wander beyond the limits of cultivation. The Egyptian Vulture is commonly found near Arab encampments, where it shares the office of scavenger with the dogs. Many tribes, however, both in North Africa and the East, consider its flesh a delicacy.

Wolf (*Canis lybus*), Ar. *Deeb*. These animals are found in the mountains of Sinai and Palestine, but rarely in the Tih. They do not pack like European wolves, but hunt by twos and threes.

The Bedawin say that "they sleep with one eye open," and have a similar proverb to our own, "A wolf in the stomach." Hunger is sometimes called *Da' ed deeb*, wolf's malady. Various parts of the animal are used for charms, e.g. a wolf's head in a pigeon cote, or a tail in a cattle stall, will keep off other wild beasts.

In addition to stories about real animals, the Bedawin have many fables of imaginary creatures, such as the Ginn, the Efreet, and the Ghoul. These hardly come within my province, and are well described by Lane ("Arabian Nights," vol. i.). I may however mention the *Nis-nás*, which is said to resemble a man bisected longitudinally, and to possess but one arm, one leg, and half a head. The story goes that it is found in Yemen, and that the people there hunt and eat it, notwithstanding that it can speak Arabic! The *Hud-hud* (so called from its cry) is a mysterious creature, not uncommon in Sinai. The Bedawin declare that it is never seen. Though I often heard its plaintive cry close to my tent, and rushed out gun in hand, yet I never could obtain so much as a glimpse of it. At one moment the sound came from just over my head; the next instant it was far away up the hill side, and would either pass into the distance, or as suddenly return to me. From this I am convinced that the cry is made by some bird, probably of the owl tribe. The Arabs, of course, will accept no such materialistic solution of the mystery.

The Botany of the Tih, especially in a season of drought such as we experienced, is very limited. The climate is so dry that mosses and even lichens are not found, except near Nakh, where I gathered some much resembling the true Reindeer moss. This only grows on the northern side of the hillocks.

The passage in Job xxx. 4, "Who cut up mallows by the bushes," seems wrongly referred to the Sea Purslane (*Atriplex Halimus*.) In North Africa and the country east of Bir-Erba there is a small mallow which is eaten. This invariably grows either where an Arab encampment has stood or on the site of an ancient town. It has a small pinkish flower, and seldom exceeds seven or eight inches in height.

In the caves near Ain Muweileh a considerable quantity of salt crystallises on the surface of the limestone. Though disagreeable to the taste, it is eaten by the Arab.

At Petra the natives chip the interior of the caves. The fragments of sandstone are crushed and boiled, and a saltpetre sufficiently pure for the purpose of making gunpowder is thus obtained. The sulphur is found on the Lisan and coasts of the Dead Sea.

The above report necessarily contains but a sketch of our work. It will, however, I trust, give some idea of the country we had to examine, and of the difficulties which we encountered. In conclusion, I must here tender my best thanks to the University of Cambridge for having aided me in the investigation of this hitherto so little known but important district. It is the intention of Mr. Palmer and myself to publish together as soon as possible a full and systematic account of our explorations.

CHAS. F. TYRWHITT-DRAKE

(Note by Mr. C. R. Crotch on the Coleoptera brought from the Tih.)

"In the small collection now before me are contained ninety species of Coleoptera, representing more or less all the larger families of the order, except the Water-beetles, an omission easily to be accounted for. The group most largely represented is, as throughout Syria, the Heteromera. These curious apterous, sluggish forms seem to thrive under the most arid conditions. The whole cast of the fauna is essentially Mediterranean; that one is on its southern side is shown by genera like *Adesmia*, *Graphipterus*, *Pachydeura*, &c. The relations of this collection with an Egyptian one are very marked, many specimens being identical. None of them, however, extend to the Algerian deserts, though congeneric species occur there in their place. Nearly all are confined to the S. corner of Palestine and E. of Egypt, except the Dung-beetles (*Histerida*, *Aphodiidae*, and *Coprida*), and these are more or less identical with those of S. Europe. The paucity of vegetation is very strongly indicated by the fact that the two great groups of Rhynchophora and Phytophaga number only seven species between them."