

FAUNA.

It may be easily imagined that a country so well watered and wooded as Coorg, and with a vegetation abounding in nourishing produce, sustains a great variety of animal life. This was formerly more abundant, ere the resounding axe of the planter and the still more frequent echo of the sportman's rifle disturbed the secluded abodes of the animals and drove them to remoter regions. A brief grouping of the more prominent representatives is all that will be attempted here.

Quadrumana.—Descending in the scale of zoological classification, it is the monkey tribe that first claims our attention, and there are three species for inspection: the black, the grey and the brown monkey. The black monkey or wanderoo (*silenus veter* ; Kg. *karingóde*) is rather scarce and only found in the Male-kádu or Ghat forests. It has greyish whiskers, chest and belly, and is of small size. Its intelligent look and playful disposition render it a favourite with the natives, but like other monkeys it is an unsavoury pet, and its capricious and vindictive temper when getting old, renders it a dangerous playmate for children.

The grey or Hanumán monkey (*Simnopithecus entellus*, Kg. *kóde*) prefers a more open country, and does not shun the neighbourhood of native dwellings where there are *upalí* trees, of the fruit of which it is very fond. Troops of these monkeys may sometimes be seen on an open glade near a large tree, gambolling unmindful of the passing by of a native, but quickly disappearing in the dense foliage on the appearance of a European, chattering all the while, with their frightened little ones clinging to their sides. This monkey is considerably larger than the former species and has a long tail, which is of service in gymnastic feats on slender branches. Its face is bare and rather reddish. It is more docile than the black monkey, but when big, more vindictive and dangerous. A case happened in Mercara, where one of these monkeys attacked a baby in its cradle, and might have killed it but for the timely arrival of the parents.

The brown monkey (*mucha*) is found only in the Male-kádu, and eagerly hunted by the Coorgs, who eat its flesh roasted and in curry, considering it a great delicacy. A soup made of its flesh is given to sick and weakly people. When full grown, this monkey is about two

feet high in a sitting posture ; it has a long tail, a light grey face and chest. It is never kept as a pet by natives. Of the skin of all the three named species the Coorgs make their tom toms or drums.

A little animal of the Lemur kind is the slender loris (*loris gracilis*). The Coorgs call it *chingé-kuli*, or devil of the chinge, the soapnut shrub which grows all over the central and northern plateau of Coorg. Its silent and slow gait, its thin limbs, its closely set and large protruding eyes, and its pointed visage are enough on a sudden encounter to frighten any one who has been attracted by its peculiar noise. It is covered with a light brown woolly fur, whitish beneath, and lives chiefly on fruits, but is not frequently met with. When unobserved, it moves about the tree in a lively manner, but quickly escapes on being noticed.

Cheiroptera.—There appear to be but two species of bats (*vesper-tilio*), which are however very common in Coorg houses and temples, and on sago and plantain trees. Their flesh is considered very strengthening, and in cases where Europeans would give cod liver oil to a delicate child, the Coorgs administer a roasted bat.

Carnivora.—Of these there are many representatives, and foremost the royal tiger (*felis tigris*), which in former days was much more numerous all over Coorg. But even now it is not scarce, though it seldom attacks man, the large game of the jungles and the herds of cattle roaming about being sufficient to satisfy its appetite. During the reign of the Coorg Rajas there were annual tiger hunts, and Linga Raja seldom killed fewer than there were days in the year. He was fond of these animals and kept some about his palace as pets.

An amusing story about these royal pets is told by Captain Basil Hall, who visited this Prince in 1813. "On returning" he writes, "to the great square in the centre of the building (the new palace in Mercara), we found three chairs placed for us on a Turkey carpet, spread on the ground in the open air. The Raja took a seat and made me come beside him, after placing his son, a nice little boy, nine or ten years of age, on my right hand. This young fellow was gaily dressed, with a large overspreading turban. A dark circle, about the tenth of an inch broad, was painted round each of his eyes, which gave him a strange staring look ; and on his cheeks, brow and chin were placed small black marks or 'beauty spots,' about twice as large as the head or dot of a note in music.

The whole area of the court was now begirt with soldiers, each

holding as high as his face an immense bill-hook or knife, the blade of which, near the extremity, could not be less than three inches wide and diminishing gradually towards the hilt. This formidable instrument, well known in Indian warfare under the name of the 'Coorg knife,' is often used as a sword, and when handled by men who are not afraid to close with their antagonist, is said to be a most efficient weapon.

On a signal given by the Raja, a folding door was thrown open on one side of the court, and in stalked two immense royal tigers, held by several men on each side with long ropes attached to collars round the animals' necks. These beasts appeared very tractable, for they allowed themselves to be led very close to us. I confess I did not much like this degree of propinquity, and eyed the slender cordage with some professional anxiety. Meanwhile the Raja and his son and the officers of the household appeared quite unconcerned, though the tigers passed within a few yards of them, and, as it seemed to me, might easily have broken loose.

What degree of training these animals had undergone I know not, but after a little while, the Raja, probably to increase the surprise of his guest, directed the men to let go the ropes and to fall back. There we sat, in the midst of the open court, with a couple of full sized tigers in our company, and nothing on earth to prevent their munching us all up! The well fed and well bred beasts, however, merely lounged about, rubbed their noses together, and then tumbling on the ground, rolled about like a couple of kittens at play. I could, however, detect the Raja spying at me out of the corner of his eye, and half smiling at the success of his trick. After a time the men were recalled and the tigers dragged off.

A pair of lionesses and two furious looking buffaloes were then introduced, but nothing could be more innocent or more respectful to the Raja and his son. Like Falstaff, indeed, they seemed to have an instinctive knowledge of the true prince. Yet for all this, I caught myself several times edging my chair back a little bit and looking out for a clear place to escape, as the monsters stalked up and down the court, and once or twice actually touched the edge of our carpet with their feet. On these occasions, that part of the circle of guards which stood behind us, advanced just so far as to bring our chairs on the outside of their ring and to place themselves between the beasts and us. On clapping their hands and flourishing their knives, the lionesses and

other beasts moved a little further off, after which the guards again dropped to the rear. Still this seemed rather a poor protection; at least I had my recollection so full of the rapid motions of the same class of animals which I have seen baited at Mysore, that I could discover nothing which need have prevented the lionesses from whipping off the heads of the Raja and the heir apparent, or at all events, that of their guest, who having no particular claims to the throne of Coorg, could reckon on none of the benefits of instinctive respect.

The Raja gave orders for half a dozen tiger cubs, about eight months old, and as many puppy dogs to be set to play before us on the carpet, while a full grown royal tiger was at the same time dragged forward and pitted against a bear for a real battle in the open court. Anything more disproportionate or absurd cannot be conceived than this match; and so perhaps the poor brutes thought, for fight they would not, although both of them were well thumped and forced against each other by the attendants. At length a brilliant thought struck the Raja. 'Tie them together!' exclaimed his majesty; and accordingly the rope which was fastened to the tiger's collar was hitched to the belly band of the bear. Neither party liked this. The tiger roared and the bear growled, while the Raja and his son laughed and clapped their hands in ecstasy at their own good joke. Of course the guards and courtiers joined in the mirth, and the whole quadrangle rang with mixed shouts of the soldiers, the growl of the bear and the roar of the tiger. Of all the parties in this singular concert, the tiger appeared to be the most discomposed. His eye flashed fire, his tail waved from flank to flank in the most ominous style. I thought at one time this was to turn out no laughing matter; for, if the angry animal, when at length he lost all patience, had taken a direction towards us, he might have demolished the dynasty of Wadeer, or at least made a vacancy for an officer in his Britannic Majesty's Navy. Fortunately he chose exactly the opposite course, and running furiously across the court, made a flying leap right into one of the low windows of what the Raja called his English drawing room. The glass and framework of the window were of course dashed to pieces in a moment, and the pianos, pictures and book cases must have soon shared the same fate, had not the tiger's progress been checked by the weight of the wretched bear, which hung outside, half way between the window-sill and the ground, somewhat after the fashion of the golden fleece over a mercer's door. The tiger we could no longer see,

but we could hear him, smashing the furniture at a great rate. He was afterwards secured and sent to the rear."

The Government reward for the destruction of a tiger is now fixed at Rs. 5, and for that of a cheeta at Rs. 3; but the unmutilated skin with the claws has to be delivered to the Sirkar. The height of the tiger varies from 3 to 4 feet, and his length from 6 to 7 feet, to which 3 feet may be added for the length of the tail. His weight is from 250 to 400 lbs. The age of a tiger is ascertained, the natives say, by the number of lobes to his liver, one lobe being added every year!

After a successful hunt for a tiger, the natives form a procession, and carry the carcase with the band of tom toms to the *mandu* or village green. The heroes of the day are the man who shot the beast and he who first touched its tail, a feat which used to be rewarded by the Raja with the present of a silver bangle. The carcase is then raised on a wooden frame, and carried to the yard of the lucky sportsman's house, where a ceremony takes place which in many particulars resembles a Coorg wedding. Thenceforth the hero may wear the honourable *gala-mishi* or grand mustachio in Raja's fashion. Mr. Richter who witnessed such a ceremony in Mercara in May 1869, on the occasion of C. Cariappah, the Subadar of the taluk, having shot a tiger, thus describes it:—"Under a screen, on a wedding chair, his face towards the carcase, sat the hero of the day, clothed in Coorg warrior costume and covered with flower wreaths and gold ornaments. Behind him stood his armour-bearers. In front was the sacred house lamp on a heap of rice piled in a brass dish. First each member of his house,—men, women and children,—then all his friends, one by one, stepped up to the bridegroom, strewed a handful of rice from the brass dish over his head, gave him from a brass vessel a sip of milk to drink, and in making obeisance, dropped a silver coin into his lap." This money is given with a view to defray the impending expenditure on a sumptuous dinner, given to the whole company. A Coorg dance round the tiger concludes the *tamásh* and the night wears away with singing and feasting.

Sometimes one sees children with the ornament of 2 tiger's claws joined together by silver or gold and suspended round the neck. This charm is supposed to keep off the evil eye.

The cheeta or panther (*kiruba*) is more common than the tiger. The skin is spotted with black roundish spots. The animal is 2½ or 3 feet high, and 4 feet long from the tip of the nose to the root of the

tail. It is a very destructive beast to smaller domestic animals. In its depredations it is a coward, chiefly attacking its prey by night, and fleeing man if unmolested. Upon the destruction of a cheeta by a Coorg, the same festivities as on the tiger hunt take place, but there is less honour to the sportsman.

A female cheeta cub was reared by Mr. Richter for eight months, who says "she shewed much intelligent attachment, but at meal times was savage. She freely followed me, along with two dogs of whom she was very fond, all over the compound, climbed trees almost with the swiftness of a squirrel, and walked to the end of the thinnest branches till they broke with her weight. She attacked ducks and geese, killed a red squirrel, and when nine months old attempted to run after children. After having parted with her, she recognized me again on meeting her in Mysore, broke through her cage, and ran up to me with the expression of joy."

The tiger-cat (*huli-bekku*) is a cheeta in miniature, and its sleek glossy speckled fur renders it a very beautiful animal. It is about 3 feet long and 15 inches high; it is destructive to fowls. The Holeyas eat it.

The black jungle-cat (*kab-bekku*), of the size of a house-cat, but with pointed muzzle, is very common; it lives chiefly on the fruit of the wild fig tree and sago palm. The Coorgs are fond of its flesh. Similar to this in form, but different in colour, is the civet-cat (*panugina bekku*) which yields a peculiar musky secretion.

The hyæna (*katte kiruba*) is very seldom seen. Of the dog-family there is, besides the Pariah, the wild dog (*ken-náyi*). In resemblance it approaches nearest the wolf. It is a powerful and dangerous brute, remarkable for the strength of its neck and jaws. Its colour is reddish brown, and in size it is equal to a Pariah dog, whose barking it imitates. It is seldom seen alone, but in packs of 10 to 20, and thus united they will attack any beast of the forest, even the tiger. They are swift, and never fail in catching what they once give chase to. On coming up with their game, they seize the animal from behind or in front, immediately destroying the eyes; and having once fixed themselves, they maintain their position, sucking the blood of their unfortunate victim, and never quitting their hold till it has fallen from pain and fatigue. The sambar and other deer are the principal animals they prey upon.

Remarkable for his peculiar and piercing yell in moonlight nights

is the jackal, so common over the whole of India. Besides feeding on small game and poultry, he is not averse to carrion of any kind. The jackal is no favourite of the planters, for he pilfers a great deal of ripe cherry coffee, but is honest enough to deposit the beans, which are considered all the better for their transmission through his body! The fact is, that as the jackal eats only the ripest berries, the beans are naturally of a good quality.

The mongoose or ichneumon mungos (*viverra mungo*; Can. *kira*) is frequently found on the *bânes*, where it is seen running from one copse to another. Its elongated slender body, with pearly ash-grey fur and thick long tail, its pointed head and bright eyes, together with its rapid movements give it a pretty appearance. But for its wanton depredations amongst the poultry, it might become a useful pet, as it destroys rats and snakes. The natives say that after its struggle with a poisonous snake, it has recourse to the *nágadûle* (*Ruta, rue*), the leaves of which act as an antidote.

Black bears (*karadî*) are found in Marenád on the Pushpagiri, Kôte-betta and Kálur-betta, where there are colonies of beehives, for Master Bruin is very fond of honey. His flesh is not eaten, but pieces of his skin are attached to the necks of horses and cows to keep off the evil eye.

On the wooded banks of the Hatti and Shóran-hole and elsewhere, there are small colonies of a species of otter-hound, which the natives call *niru-náyi* or water-dog (*lutranair*). The animal is deep reddish brown on the back, lightest on the sides and below; it lives in artificial burrows and subsists on fish, which it catches with great skill. It is eaten by the Yerawas.

Rodentia.—There are more *mice* and *rats* in Coorg than the farmer and house-owner would wish. The musk-rat betrays itself by its piercing shriek, but in its strong smell has a safeguard against its pursuing enemies. Great havoc has been done on some coffee plantations by the bamboo-rat (*golunda ellioti*) which is gregarious and for want of jungle-food often attacks in great numbers the coffee shrub, selecting the tender and succulent shoots, and, to get at them cutting off the primaries near the stem. Most wary of traps of any kind, this destructive animal is difficult to deal with. The field-rat (*kúd-ûi*) is of a brownish colour; in its provident care against the rainy season it commits great damage to the ripening paddy-fields, and stores considerable quantities of grain

in its subterraneous burrows, to the great satisfaction, however, of the lynx-eyed Woddar (tank digger), who searches after the little granary and carries away in triumph both the owner and its property for his own meal. A formidable rat for its destructive burrowing habits is the bandicoot (*mus bandicota*; Can. *heggana*). It grows to the size of a sucking pig, is of a blackish colour, and lives near houses. To protect their rice against these enemies, the Coorgs store their grain in enclosures called *pattáya*, which are raised 2 feet from the ground, with an open space all round. It undermines walls and causes buildings to tumble down. Its flesh is eaten by the Holeyas, Kurubas and Yerawas.

Of squirrels there are 4 species: the striped, the grey, the red and the flying squirrel. The first species (*tamias striatus*) is very common in the open and warmer districts of Coorg, especially in Fraserpet, where it familiarly runs along the thatched roofs of the European bungalows and amuses their inmates with its little squeak. It is a pretty tiny creature, measuring with its tail about 9 inches. Its body is of a greyish colour, whitish below and having longitudinal stripes—3 brown and 2 white—on the upper parts. In Hindu fable this little animal is said to have been rewarded by Ráma for its services in constructing his bridge over the sea to Ceylon. Passing his hand over its back he said: "Shábás" (well done) and behold, it was marked with indelible streaks!

The grey squirrel is somewhat larger than the former, without stripes, and lives on trees. The red squirrel (*sciurus maximus*, Can. *kenjari*) is a remarkably lively and handsome animal when enjoying its native liberty. In length over two feet, of which its bushy tail measures half, it surpasses its European cousin in size and beauty. All that can be seen of its body from above is of a dark chocolate colour, deepening into black along the centre of its back and tail, while the under parts are of a pale yellowish brown. When young, it is easily tamed, and proves an amusing pet, but it tries its sharp teeth on most substances that come within its power, and too confiding children, when ruffling its temper, may suffer harm. The Kurubas, who know the trees of the forest as familiarly as a policeman the streets and houses of his beat, catch these squirrels by means of nets which they fix to branches that are in the track of the animals.

The grey flying squirrel or flying cat (*pteronomys*) has become better known since the destruction of so many forests, when hundreds of the harmless little animals were caught or shot. It is crepuscular in its

habits, and unless disturbed very rarely seen. Its home is in the holes of trees and it lives entirely on fruit, especially that of the wild sago palm, the toddy of which it is very fond of too. Strictly speaking it cannot be said to fly, but is endowed with a furry membrane between the fore and hind limbs, which enables it when stretched out to take leaps of almost incredible extent, sometimes 100 yards, through which it passes with the swiftness of an arrow. In its flying mode of progression it moves invariably downwards, then it runs up a new tree and takes another leap, which is well sustained owing to the extreme lightness of the animal. The flying membrane or parachute cannot be contracted, but is merely a lateral prolongation of the skin, and therefore also covered with hair. The squirrel is of a dark grey colour with a black line down its face, which, with its prominent black eyes and grey nose, give it a peculiarly fiendish look, and it bites severely. Its fur is very soft and might be turned to good use. The flesh of all the 4 species of squirrels is eaten by the natives.

The common hare (*mola*) is found chiefly in the open country, where long grass-shrubs grow. The natives of all classes are fond of its flesh, and the poor animal is pursued on all sides by man and beast. It is caught in nets and traps. Rabbits thrive very well and are frequently kept in houses.

There is one kind of porcupine (*mullu-handi*, thorny pig) which like the mungoose lives on shrubby Báne land, and is hunted for its flesh by smoking it out of its holes or by shooting it. The quills are thrown away, for the natives believe that if kept in the house their presence will occasion quarrels amongst the inmates. On the Ghats one may occasionally observe the destructive operations amongst the ant-hills of the badgereit or scaly ant-eater (*manis pendadactyla*, *Can. chippina-bekku*, scaly cat). Its flesh is eaten, and its scales are used as the supports of fiddle and harp strings.

Herbivora.—Homebred horses there are none in Coorg, except the wretched tats which are kept by Mussalman residents for carrying loads; but "Young Coorg" is fond of smart Pegu ponies or the powerful Kandar horses. The damp monsoon climate is, however, not conducive to the health of well bred horses, especially new arrivals from a drier country. The Pegu pony is best suited both to the climate and the hilly country. The washerman's donkey and the hybrid goat stand the climate equally well, but sheep do not thrive, except in the eastern districts.

The long continued rains, and the droughts during March and April which are incidental in these months, are unfavourable to the breeding of horned cattle ; but with proper housing, and with an economical saving of the decaying grass which is annually swept away by the jungle fires, and which should be stored up as hay for stall feeding, the Coorg cattle might be greatly improved. Little care, if any, seems to be bestowed upon the selection of bulls for breeding purposes ; beasts of every description and age run promiscuously in the herd, and as there is no check by separating inferior bulls or emasculating them, the progeny must deteriorate. In the Kanawe districts, cattle of the finest description might be reared on sound farming principles. As it is, the cattle of Coorg are of a mediocre breed, better in the north and east, worse in the centre and south-west.

The Coorgs procure their cattle partly from Mysore, partly from the annual fair at Subrahmanya. The ryots have generally too great a number of them, to which they cannot properly attend. It is not therefore to be wondered at that there is almost annually a great mortality amongst the cattle from one or other of the following diseases :—*dodda rôga*, or the great disease, the cattle refusing food and being frequently purged ; *gantlu-kattu* or throat swelling disease ; and *kálu-juara*, or foot-sore disease. The increasing coffee cultivation of late years has somewhat limited the pasturage, and the constant cattle trespass on coffee plantations is a cause of much vexation and loss both to planters and ryots.

The Coorgs, like other Hindus, hold the cow sacred, a sort of sentimental veneration for the animal which ploughs the fields and mother-like gives milk ; but which does not prevent them from inflicting cruelty upon the sacred beast by ill usage, neglect and starvation. The slaughter of kine within the limits of the Coorg Province was distinctly prohibited by General Fraser on the assumption of the administration in the following terms :

To

Lieutenant C. F. Le HARDY,

Superintendent of Coorg.

Sir,

Having ascertained that it is highly offensive to the religious feelings of the people of Coorg, that cows or bullocks should be killed for

the purpose of being used as an article of food, I request that you will be so good as to prohibit this practice throughout the whole district by any person whether European or native.

J. S. FRASER, *Lt.-Col.*

and Commissioner.

Mercara, 16th January 1835.

Whether the sanction of the Government of India was obtained to this prohibition is not apparent, but the Coorgs have always, up to this time, regarded it as binding on the British Government; the prejudice, however, is gradually wearing away since the advent of the coffee planters, who do not scruple to enjoy their beef when opportunity offers.

Not venerated like the cow is the bison (*bos cavifrons*; Can. *kadi*) which is killed by the Coorgs without hesitation; its flesh, however, is only eaten by the lowest classes. It lives in herds throughout the thickest forests and in the highest hills, especially in Marenád and Hormalnád. The male stands nearly 6 feet high at the shoulder, but disproportionately low behind, and reaches the length of 9 feet from nose to root of tail; the tail itself is almost 3 feet long. The hump is rather small. When young, the colour of the bison is of a dark reddish hue, which changes with age into a greyish black, the belly, legs as far as the knee-joint, breast and face being, however, of a dirty whitish tinge. The whole body, especially the dewlap, is covered with long hair, and the eyes are of a light blue colour. The horns are short and thick at the base, but gradually become thinner, leaving the tips small and sharp; they are remarkable for the symmetry of their curvature, take a fine polish, and the fortunate sportsman may be proud of the trophy. The hide, which is very thick, is used for covering shields. Naturally timid and of retiring habits, preferring shady woods to open glades except in the cooler parts of the day, the bison, when alarmed or wounded, charges headlong with mad fury his imaginary or real foes, never turning to bay as long as he has moving space before him. Bison shooting is a favourite sport, both amongst Coorgs and Europeans.

The domesticated buffalo (male: *kóna*; female: *yemme*) thrives very well in Coorg, but the existing breed is an inferior one; however, some Gaulikas from Dharwar have lately introduced a much

larger and more powerful kind, which will gradually improve the native stock. Buffaloes are more numerous in the woody districts, especially in Kiggatnád, and wherever there is marshy land, which is most congenial to their amphibious habits, as they delight during the hot hours of the day in seeking refuge against heat and flies in stagnant pools, where they wallow with supreme gusto with only their noses above water. Buffaloes are a treasure to the farmer ; their strength qualifies them for the plough, for the threshing floor and for carrying burdens ; they yield more manure and twice the quantity of milk of a common cow and that of a far richer kind. With such a list of good qualities one may feel inclined to overlook the extreme ugliness of the beast. It is a bulky clumsy animal, of a greyish colour, with long annulated horns lying generally on the back of its thick-set neck ; its stupid, motionless look, combined with its gurgling bellow, render its presence unwelcome, though it has nothing of the vicious temper of the hill buffaloes of the Todas.

Of the deer-tribe there are several representatives in Coorg ; the samber, spotted deer and jungle-sheep. The samber or elk, (*rusa aristotelis* ; Can. *kadave*) is a fine large animal, with antlers of great size, resembling those of the stag. It is more frequent in the great mountain forests. It is not gregarious, and ruts and drops its horns in spring. The spotted deer (*axis maculata* ; Can. *sárga*) haunts thick jungles in the vicinity of water. It is timid, mild and easily domesticated, an elegant pet whilst young, but becomes rather mischievous with age, as it not only butts at children, but eagerly devours any paper within reach. The female has no horns and is smaller than the male, which reaches a height at the shoulder of 2 feet 6 or 8 inches. The skin is at all times of a rich fawn colour, spotted with white. In almost every Coorg house one finds some horns of the spotted deer, fixed to the walls for hanging clothes on.

The most delicate and beautiful of the deer-tribe is the jungle-sheep (*kuringi*) which somewhat resembles an antelope. It is about 18 inches high, with short horns a little twisted, their roots for the first inch and a half being enveloped in hair. Its colour is fawn, lighter towards the belly, its legs are very thin, but in speed it is like the passing wind. Its graceful form, mild bright eye and harmless habits make it an interesting little pet, but it does not long survive in captivity. The flesh of all the deer-tribe is highly esteemed by the natives.

The common pig and the wild hog abound, and their flesh is prefer-

red by the Coorgs to all other meat. Both kinds thrive very well, but the former is not bred with any care, and its unsavoury habits do not recommend its flesh for European consumption. What the goat is to the Mussalman, the pig is to the Coorg !

The largest of the Coorg Mammalia is the elephant (*âne*), but it is so well known that it needs no particular description. The Coorg elephants are as large and powerful as any others of Southern India. They are gregarious, keeping in droves of 15 to 30, under a leader who directs their movements. They inhabit indiscriminately all the woody parts, but particularly those towards the eastern boundary. They are ferocious and mischievous, destroying garden cultivation and crops of paddy and sugarcane. As they are excellent swimmers, the Káveri is no barrier to their depredations. When met in droves, they seldom attack the traveller ; but it is dangerous to encounter a single elephant. Such brutes, called " Rogues," are supposed to have been driven from the herd, to which they dare not return, and in consequence become furious in the highest degree.

Elephants in Coorg are caught in pits, covered over with a slight framework to conceal them, and placed across the paths which the animals frequent. It is however no easy matter to beguile the sagacious creatures into this kind of trap. If caught young they are easily tamed, but when of mature age it takes some time to bring them into subjection. There are now no tame elephants kept in Coorg, but the Rajas used to maintain many. Wild elephants are also now far less numerous, and the periodical elephant hunts less productive, though the Coorgs, like true highlanders, are as eager for the sport as ever. The indiscriminate slaughter of these useful beasts has, however, been forbidden by Government, and they are now only caught alive.

There is a granite slab in the Superintendent's Cutcherry in Mercara, on which is engraved the record of a grand elephant hunt in the beginning of the reign of the late Raja, which may well excite the jealous astonishment of modern Nimrods. The facts, divested of oriental flourish, are simply these. In 1822 the ryots complained of the great destruction of their fields and houses caused by numerous herds of elephants, when the Raja, "recollecting that it was the duty of a king to destroy the wicked and assist the helpless," resolved upon a wholesale destruction of the beasts, and within 38 days he killed with his own hand 233 elephants, and his soldiers caught 181 alive ! Well may he exclaim in conclusion :

“Is this not a great wonder, that men caught elephants alive as if they were mice, and killed herds of them by using their seven weapons with the destructive force of roaring thunder?”

Birds.—The ornithologist not less than the botanist finds in Coorg a fruitful field for his researches, for birds of almost every tribe are plentiful throughout the country. One would think that during the heavy south-west monsoon animal life in the open could scarcely exist, yet hardly does the sun break through the rainy clouds than all around there is life and joy amongst the feathered tribe. They seem to anticipate that happy time, when after the monsoon, in sunny October and November, dressed in their finest plumage, they pay courtship to their spouses, and warbling and singing, are busy all day long for the comfort of their expected offspring.

Raptors.—Amongst the birds of prey, the high soaring vulture (*vultur indicus*; Kg. *aliya paddu*), with wings turned obliquely upwards, stands foremost, not only for its size but also for its utility as public scavenger of animal carcasses, in which occupation it is assisted by the Pariah dog and the crow. Occasionally a solitary eagle (*paddu*) may be seen in the mountains. A fine specimen of the golden eagle (*aquila chrysaetos*) came into Mr. Richter's possession a few years ago; whilst on a mountain slope he was struggling on the ground with a large horned owl, both were caught alive. This eagle was a fine bird, in sitting posture 15 inches high; with outstretched wings 4 feet 5 inches; the upper part of the head and neck light buff, of a light brown and grey down the chest, and dark brown, nearly black, on the back, the wings being tinged with brighter spots. The brilliant eye, with its brownish yellow iris and wary look, gave the bird an air of intelligence, while its formidable curved and pointed bill and horny talons kept the inquisitive at a respectful distance. He managed to free himself from his chain and escaped.

The Garuda or Brahmani kite (*haliastur indus*) is more frequently seen. Its plumage is very handsome, the head, neck and breast glossy white, and the back, wings and tail beautifully brown. In Hindu mythology it is Vishnu's vehicle, and therefore held in high veneration by the natives. It is a useful bird, as it devours noxious reptiles, but sometimes it also carries away an unguarded chicken. The pariah kite (*milvus gorinda*) is very common and easily recognised by its greyish brown speckled plumage and short shrill screech whilst soaring over its domain in small circles. It is the scavenger of animal refuse thrown

from the cookroom, but preys chiefly on reptiles, which it carries off with a swoop, and devours flying. The sparrow hawk (*accipiter nisus*), the kestrel-falcon (*tinnunculus alandarius*), the Sultan and the perigrine-falcon (*falco peregrinator* and *peregrinus*) are not unfrequently seen from the hill tops, soaring over the forests in pursuit of their winged prey. The Rajas used the larger kind of falcon, the *kembakki* (red bird) for hunting. The swiftness and majestic flight of the falcon is proverbial with the Coorg bards, who sing of the departed hero: "Like the falcon in the sky, thou wast roaming here on earth." In the eagle-fight we have already been introduced to the great owl (*bubo maximus*; Can. *guma*); but there is also a smaller kind, which on house tops in nightly solitude often disturbs and frightens with its moaning cry of Waugh O! Waugh O! the sleeping inmates, by whom the owl is greatly dreaded. Mr. Richter says his keeping one as a pet some years ago was regarded by the Coorgs with grave apprehension, and afterwards when he was laid up with jungle fever the cause was ascribed to the presence of the ominous bird.

The *Insessores* or Perchers are largely represented in each of the five tribes. Amongst the Fissirostres there is the gregarious bee-eater (*merops*) of both a larger and a smaller green variety. They prey upon insects like the swallows, of which there are also several species found in Coorg. The goat-sucker (*caprimulgus asiaticus*) in its modest greyish-black plumage is often observed in twilight along hedges or in abandoned buildings. Its flight is short and noiseless. Amongst the beautiful Trogonidae there is the Malabar trogon, (*harpactus fuscatus*) a solitary bird of splendid plumage, that delights in the stillness of the forest, where it seizes the flitting insects on the wing. Remarkable for the gaudy brilliancy of its light blue plumage is the Indian roller or blue jay (*coracias indicus*). It is frequently seen on jungle clearings or coffee estates, perched on a solitary dry tree, where it freely surveys its hunting ground and discerns with wary look any approaching danger. It is difficult to get at, though it may be seen all the year round. Nearly allied to the jay are the kingfishers. Of these brilliant birds, which are rather common along streams and paddy-fields, we have three species: the brown headed (*halcyon leucocephalus*), the white breasted (*halcyon smyrnensis*) and the common Indian kingfisher (*alcedo bengalensis*; Kg. *mîn-gotti*—fishcatcher). Their habits are similar; they live on small fishes such as stickle-backs and minnows. Perched immovably upon some overhanging twig, they watch for a passing fish, upon which

they suddenly dart with their long sharp bill, and kill and eat it. Their flight is very swift. They lay their round white eggs in holes of banks.

Amongst the *Scansorcs* or climbers, foremost are the parrots, which are very numerous in Coorg, especially in bamboo jungles. They are remarkable for their beautiful colours, their climbing skill, their powerful bill, their fleshy tongue and their power of imitating the human voice; they are therefore great pets with natives and Europeans. The large green species (*palaeornis torgatus*; Kg. *mále-gini*) with a rose coloured ring round its neck, is for its docility and power of imitation the most valued. There is also the blue winged parroquet (*palaeornis columboides*), the blue headed parroquet (*palaeornis cynocephalus*), and a pretty dwarf parrot, the Indian lorikeet (*loriculus vernalis*).

The melancholy stillness of the forests is often interrupted by the "tap, tap, tap" of the woodpeckers, of which there are several species. The commonest is the one with rufous speckled plumage and red crest (*micropternus gularis*), more scarce is the great black woodpecker (*mulleripicus hodgsoni*; Kg. *marakotta-pakki*) chiefly found in Kiggatnád. The whole plumage is deep black, except the upper part, which in the male is of a lively red. In its pursuit of insects under the bark or in holes of trees, it ascends with great rapidity in a screw line, and its "tap, tap" seems to answer more the purpose of disturbing the hidden insects, which it catches in their precipitous flight, than to peck a hole into the tree. The female deposits 2 or 3 white eggs in the hollows of old trees. The flight of the woodpecker is short, generally only from tree to tree.

The cuckoo family is represented by the black cuckoo (*endymonys orientalis*) and the red winged crested cuckoo (*coccystes coromandus*) both of which are suspected of parasitic habits regarding the disposal of their eggs.

Of the tribe *Temnirostris* or suctorial birds there is the purple honey-sucker (*arachnechtra currucaria*), a beautiful little bird, glittering like a humming bird with metallic lustre, as it flutters over the flowers, whose nectar it sucks with its thin long bill. The Indian hoopoe (*upupa ceylonensis*) is an active elegant bird, with an arched crest upon the head of a ruddy buff colour, terminating in black. When in search of food it emits a sound resembling "hoop, hoop," hence its name. During the monsoon it retreats to a drier district.

The tribe *Dentirostris* has also its representatives in the Malabar

woodshrike (*leptodornis sylvicola*) which resembles a falcon both in form and habits; the black headed cuckoo-shrike, the orange minivet (*pericrotus flammens*), the large raked-tailed drongo, and the paradise flycatcher (*tchitrea paradisi*; Kg. *níkare-bála*=ribbon tail) which is most elegant in form and plumage. Its dark brown body is ornamented with a greenish black crest on the head and two pure white lateral tail feathers, which when the bird flies along in wavy curves from bush to bush, present a most graceful appearance.

The thrushes (*merulidae*) delight both with their sweet song and their pretty plumage. There is the Malabar whistling thrush (*myiophonus horsfieldi*), the blue headed chat thrush (*crocetes cinclorhyncus*), and the white winged ground thrush (*geocichla cyanotus*).

The Nilgiri black bird (*merula similima*) goes here under the native name of Bhíma rája or the Coorg nightingale, so sweet and powerful is its song. An interesting bird of this family is the southern scimitar babbler, and distinguished for the beauty of its golden plumage, is the black-naped Indian oriole (*oriolus indicus*). The common bulbul (*pycnonotus pygæus*) may be found throughout the year. When pursued, it leads the intruder away from its nest by its short flight to other bushes. It sings very sweetly and its crimson and black crest looks very pretty. The tailor-bird (*orthotomus*) is called by the Coorgs *gája-pakki*, in imitation of its sharp cutting cry, which is like the noise of sawfiling and by its frequent repetition as painful to the nerves. It is common about gardens and groves of trees, and celebrated for the artificial construction of its nest. Three leaves of the guava tree are by many stitches skilfully drawn together, and give throughout their length cover to the nest, the full upper half of one leaf forms a curved roof, completely protecting the entrance. It is a very active little bird, and whilst hopping about, jerks up its tail, beating time to its piercing cry. It leaves Coorg during the south-west monsoon. Of similar habits is the wren (*prinia*; Kg. *chirulichita*) of which there are several species. The southern yellow tit (*nachlolopius jerdoni*) and the Indian white-eye (*zosterops*) are also found, the latter in great abundance, likewise the wagtails (*motacilla*), which are often seen along reaped paddy-fields, feeding among cattle on various insects. The Coorgs call them *bálatimoni* (*bála*, tail, *áta*, play) which coincides with the English name, indicating their peculiar habit of wagging their tails.

Among the tribe of *Conirostris* the first place is taken by the most

impudent of birds, the common crow (*corvus splendens* ; Can. *kági*). In Coorg it is less abundant than in the low country. Less frequent is the pretty rufous tree crow, or common Indian magpie (*dendrocitta rufa*), which is found in jungles. It is fond of the fruit of the banyan and its cry is like that of the raked-tailed drongo (*edolius malabaricus*) which frequents coffee estates in the bamboo-district. The well known mynahs, especially the common mynah and the grey headed species (*temenuchus malabaricus*) are very common, less so the southern hill-mynah (*eulabes rdigiosa*). They roost in numerous flocks and feed on berries and grain of various kinds. They also keep company with grazing cattle, feeding on the insects which are disturbed by their footsteps. They are remarkable for their power of repeating words and sentences, of imitating laughing, coughing and sneezing. To Europeans a pleasing acquaintance of the Old Country is the house-sparrow (*passer domesticus* ; Kg. *manc-pakki*=house-bird) which is here as numerous, clamorous and amorous as at home ! The yellow necked or jungle sparrow (*passer flavicollis*) frequents light jungles and chirps exactly like the house-sparrow. The weaver-bird or bottle-nested sparrow (*ploccus baya*) is more numerous towards Mysore, but after the monsoon, when the paddy gets ripe, it may be often seen about Mercara in considerable flocks, which perched on a tree keep up a continual chirping. Its pendant retort-shaped nest, which is over a foot in length, is woven of long fine grass. The entrance is from below, and formed by the neck of the retort, two inches wide ; the main body of the nest is laterally compressed, and divided by an open partition wall into two compartments, of which the lower one is occupied by the hatching bird, which lays two or three white little eggs.

There are several species of larks rather common in Coorg. They have much the same plumage and habits as our European warbling lark, and are sometimes caged by the natives.

One of the largest birds here is the hornbill (*buceros cavatus* ; Kg. *malcrapa*=*male arapa*, forest resounding). It is upwards of 4 feet in length, black on the belly, chin, wings and back, with one band across the tail, the rest of which is white, as also the neck and parts of the wing. The curved large bill of the male bird is vermillion above, with a black central line, and yellowish on the sides, the lower mandible is whitish and the base below the eye black. On the upper mandible there is an extraordinary prominence of vermillion colour, 4 inches broad and

8½ inches long, terminating behind in a black curvature, and the concave front uniting its dip with the ridge of the beak, so that the two sides rise to a narrow ledge 2 inches above the true bill, from which they are distinguished by a black triangular stripe. The appendage looks as if 2 horizontal horns were superadded to the bill, which from point to gape is in a straight line 11½ inches in length, and from point to the end of the protuberance 16½ inches. The Coorgs make powder flasks of the hollow bill and the quills they use for writing. The noise of its wings, when flying, is very loud, and its progress is so slow that a man can follow it. In its prey it is omnivorous.

Of the third order of birds, the *Rasores* or scrapers, Coorg can make a goodly show with a variety of pigeons, of which the blue pigeon (*tora pakki*) is the most common, but the green and the yellow pigeon, and the ring-dove are not scarce in the forests. The peacock (*pavo cristatus*; Kg. *mailu*) with its shrill morning call, and the timid jungle fowl (*gallus sonneratii*; Kg. *kid goli*) with its self-betraying "cock a doodle doo" are numerous in bamboo jungles, especially during the last few years of bamboo seeding. Both species, together with the woodcock and the common partridge (*perdix cinerea*; Kg. *ganjalakki*) and the quail (*coturnix*) are at the time of the ragi crop frequently brought to Mercara for sale by a class of jungle people who are most expert in catching these birds, the voices of which they very cleverly imitate. In the neighbourhood of Subrahmanya, peacocks may not be killed, as they are believed to be the vehicles of the god residing there. The hackles of the jungle cock are much valued for their beauty, each being marked by roundish hornlike plates of various shades of yellow. The Coorgs keep these as trophies, as the Indian does a hairy scalp. The single feathers are turned into artificial flies, to fishes the most attractive bait, and consequently highly prized and dearly paid for by the devotee of "the gentle art." The crow-pheasant or common coucal (*centropus rufipennis*), distinguished by its cinnamon brown wings, long tail and crow-like head, is very frequently seen on bamboo land, where it hides itself in the dense clumps, uttering as it slowly flies away a deep note like a monkey. It feeds on insects and small reptiles and is eaten by the natives.

A few representatives of the fourth order of birds, the *Grallatores* or waders are: the egret (*egretta flavirostris*; Kg. *balya-pde*=great crane) which towards the end of the monsoon is frequently seen stalking

along paddy-fields or streams in search of prey. It is white as snow, about 3 feet high, with long yellow legs and straight yellow bill. It keeps in small flocks. The little green heron (*butstrides javanicus*; Kg. *kiru-pöle*=small crane), the Indian waterhen (*gallinula*) and the plover, or peevit (*uppu-tite*, imitating its cry) are found in marshy places; likewise the snipe (*gallinago stenura*; Kg. *bandu-koneya*=mud squatter) whose flesh is in great estimation with both Coorgs and Europeans; also the green sandpiper (*aclitis ochropus*) may occasionally be seen.

As there are no large tanks in Coorg, few of the *Natatores* or swimming birds are to be found. There is only the wild duck or teal, of a larger and smaller species, which the Coorgs call *koku* and *yérande-pakki*; the latter dive under the water as soon as they suspect danger, and remain submerged for a long time. Geese and turkeys are kept domesticated, but the cold and wet monsoon weather does not agree with turkeys.

Reptiles.—The reptiles are represented by two kinds of tortoises, a variety of lizards, snakes and frogs.

The *Tortoises* are found in paddy-fields and small tanks. The shell of one 11 inches long and 7 inches broad, proved to be of a dull bony nature, unfit for ornamental use. Since the devastations of the coffee-borer, common lizards, bloodsuckers and chameleons, all of them insect-feeders, have become of greater importance to the agriculturist. Alligators are occasionally seen in the Káveri, especially near Ramaswami Kanawe. Last year one of 9 feet in length was caught in Beppu-nad which had a woman's nose-ring and a silver bracelet in its stomach.

Snakes are rather plentiful in Coorg, but it is not easy to ascertain the correct names of the different species. Classifying them as poisonous and harmless snakes, the native name may at least serve to lead the curious upon the right track. The cobra di capella or hood snake (*naia tripudians*; Kg. *nallu pámbu*=good snake, in the sense of Eumenides?) is more frequent in the Bamboo than in the Male district, and often takes possession of an ant hill for its habitation, but deserted huts and the thick thatch of out-houses are also its favourite haunts. It is kept and worshipped in demon temples, and sometimes in private rooms to guard treasure. In a specimen 5 feet long, the hood, which is formed by the expanded skin of the neck when the snake is excited, measured 7 inches in length and 4½ in breadth. It is whitish in front and black on the lower part of the back, shading off into brown and white towards the

flattened head ; in the middle of the hood there is a peculiar mark, resembling a pair of spectacles with the bridge downwards, the frame being white and the space of the imaginary glasses black. Before an attack, the cobra half raises its coiled body into a graceful curve, dilates its hood, and swaying to and fro, its bifid tongue quivering all the while, it keeps its victim spell bound with its fiendish brilliant eyes, till it darts forward and hissing inflicts its deadly wound. In spite of the most strenuous exertions of science, combined with benevolence, no infallible remedy has yet been discovered against the bite of the cobra, and all the boasted native charms have proved worthless, though snake charmers have by their knowledge of the habits of the cobra and by the influence of the melancholy strain of their rude flageolet acquired a great power over the reptile.

The number of the poison fangs of this and all other venomous snakes is but two, one in each side of the upper jaw, and they lie flat along the roof of the serpent's mouth whilst at rest. It sometimes happens that two fangs are seen on each side, but then one will be loose and ready to drop, the fangs being renewed from time to time like the skin. The fangs, about half an inch in length, are curved inwards, and though as sharp as the finest needle, are yet hollow and their root is in direct communication with the venom ducts and glands behind them. In biting, the same muscular action that raises the fangs compresses the venom glands, and by the force of the actual bite a drop of the venom is injected through the canal of the fangs into the tiny wound, by which in a few minutes the whole system of the victim is poisoned and inevitable death ensues. Varieties of the cobra are the *pillandi-murga* and the *kád-murga*, the former is greyish white and 1 to 1½ foot long, the latter is dark brown ; their bite is less poisonous.

The *kare-náda* (black snake) with white marks about the throat, is 8 or 10 feet long, and very rapid in its movements. It is found in dense forests and is sometimes washed down by the mountain torrents. Its bite causes death within half an hour. The late Raja is said to have ascertained the power of the venom by experimenting upon sheep and buffaloes. The bite of the *pa'le-kolaka* produces festering sores over the body ; the Coorgs string the bones of this snake together and wear them as a charm against sores or swelling of the glands. There are two kinds of snakes prevalent in the cardamom jungles, the green and the grey *mandali*, or *kumme-pánbu* and *kur u-tu-mandoli*, which during the day are

in a state of torpor, but active at night, on which account the natives term them blind snakes. They are often trodden upon by the cardamom cultivators, but a certain charm is said to render the poison innocuous. The first is the green tree-viper (*Trimesurus viridis*), the second the *daboia elagans* or chain viper, also called *tic polonga*. The *kádu-bale* and *kérc-bale nuri* or the jungle and tank bracelet snakes (*Lungarus arcuatus*) have white rings round their dark body, which become visible when the snakes are irritated. They are from 4 to 6 feet in length. The *pachi-balli-murga* is dangerous to cattle whilst grazing.

Amongst the innocuous snakes, the largest is the *peram-pámbu* (big snake) or rock-snake, a kind of boa constrictor (*python molurus*) which grows to a length of 12 to 15 feet and has in thickness the girth of a man's arm. It is even said to devour spotted deer, and after the monsoon is sometimes shot by Coorgs in the cardamom jungles. Next in size is the black tank or rat snake (*Ptyas mucorus* Kg. *karingere*) which catches mice and small reptiles. It frequently lives in the thatched roofs of native houses, and its flesh is eaten by the lower classes. Remarkable for its beauty and graceful evolutions is the green whip-snake (*Pache-pámbu*), which is commonly seen in shrubs. In native opinion it enjoys the imaginary purity and sanctity of the Brahman, and its skin is said to get blistered by the very shadow of man falling upon it! An extraordinary forest snake is the *kánam-pámbu*, which is said to have a crest upon its head like a cock! The *iru-tale* or two-headed snake (*Silybura elliotii*), one foot long, is considered as capable of progressing equally well forwards or backwards, being gifted with a head at either end of its body. The flying snake or *páram-pámbu* is very thin, of a brownish black colour, and 18 inches long. Equally thin, but shorter is the *clat-áni-murga* or writing-stile-snake, which is black with white spots. Other harmless snakes are: the *billulli*, the *niru-kuduma*, the *tíra-pámbu* or cane-snake, &c.

The *Batrachians*, or the family of frogs, fill the air with their croaking concert before the monsoon and during the occasional breaks prognosticating impending rain. There is the large bull-frog, which makes itself heard at night; the common brown frog, which chiefly infests paddy-fields and tanks; and a small green frog, that lives on shrubs and trees; but all of them are feeders on insects, which they catch very cleverly. Toads, very ugly and very large, are found wherever there is a convenient hiding place on damp ground.

Fishes.—The river Kávéri and its affluents, with the small native tanks and even the paddy-field rills are well stocked with a great variety of fishes, which are caught by every class of natives who have leisure for and take pleasure in the sport. Shooting, angling, netting, basketing, and poisoning with *cocculus indicus*, are the usual methods of fishing. The following names are based on Dr. Nash's list of 14 Coorg fishes and Colonel Puckle's Memorandum on Fishes about Bangalore.

The queen of Coorg fishes, in size and quality, is the lady-fish (*Silurus, callichrous chekra*), *bále-mínu* as the Coorgs call it, on account of its resemblance in whiteness and smoothness to the inside of the plantain-tree-bark. They distinguish 3 kinds, of decreasing size: the *patna-bále*, the *bále*, and the *kincha-bále*. Next in size and excellence of its flesh is the black cat-fish (*clarias magur*; Kg. *kulla bare?*), of a dark green colour approaching to blackish purple on the back, and fading to a greenish white; it is chiefly reared in tanks, spawns in the mud, and is full of eggs in April, May and June.

Similar in appearance and size is the black murl (*ophiocephalus striatus*; Kg. *bare-minu*). It lives in muddy tanks, guards its young till they are about 2 inches long, before which they may be seen swimming in two lines above their parent. It grows to 2 feet in length, and is of a dull brownish green on the sides, darker on the back and whitish beneath. The painted murl (*ophiocephalus marulius*; Kg. *Kávéri-bare?*) is a very handsomely marked fish of 4 feet in length; upon the darkish grey ground there are white markings like flowers, hence its name of flower murl. It is found in the Kávéri and in the deep pools of other rivers. It spawns in April and May.

The black dhok (*ophiocephalus gachua*) grows to within one foot in length and is commonly found in clear tanks. Its colour is greyish green, with irregular herring-bone bands of lighter colour. The anal and dorsal fins are dark grey, the edges being tipped with the light green belly colour, but the pectoral fins are dull orange and strongly marked with dark grey dotted bars. The painted dhok is like the former in shape, size and colour, but the head is handsomely mottled and banded, and 9 or 10 distinct blotched bands below, and 8 or 9 dark coloured bands above them, run along the sides of the body. The lower jaw is marked on each side by 4 black dots.

The stone loach (*nemacheilus striatus*; Kg. *pálavari?*) is found in sandy and stony river bottoms, where it lies hidden until disturbed

or rising for air, when it quickly comes to the surface and as speedily returns. It is a small fish; its silvery sides and yellowish brown back are dotted with black. There is a well defined dot at the base of the caudal fin, which gives at the first glance the appearance of the little fish having an eye at each end. If well dressed it is fair eating.

The manincha or *malanchi minu* (slimy fish) is a kind of eel; it grows to a length of 6 feet and is perhaps identical with the *murana maculata*. Its flesh is very good eating and highly esteemed by the natives for its medicinal qualities against piles.

The Indian trout (*garra jerdoni*; Kg. *pandi-minu*, pig-fish) may be found in all the mountain nullahs; it is about 6 inches long, its head and neck are thick like those of a pig, hence its name. Its colour is a mottled green and grey. It has a suctorial disk under the chin, by which it can attach itself to rocks. The carp or roach (*puntius*) occurs in several varieties, all of which are esteemed good eating. The banded goldfin (*barilius cocsa*) is an exceedingly pretty fish, about 5 inches long, and found only in shallow running streams. The back is greyish blue, with 8 or 9 lateral darker bands, the sides are silvery with blue reflections and fading to white below. The silver-fish (*chella cultullus*) is of about the same size as the former, handsomely shaped, and covered with brilliant silvery scales, which are easily rubbed off.

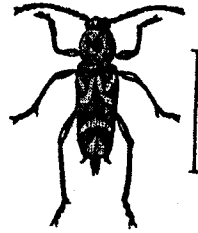
From August till November the flooded paddy-fields give shelter to numerous little fishes, from half an inch to four inches in length. The smallest is the bitter *kaipe*, next the *kumbalakotte*, the *koile*, the *ponakani* and the *avari*. They are cagerly caught by the natives, who are very fond of fish curry.

The shells which have been collected in Coorg comprise the following:—3 species of the genus *Unio*, 2 species of the genus *Helix*, the genus *Melania*, the genus *Paludina*, the *cyrena malaccensis* and the *cyclophorus excellens*. The Helicidæ are eaten by the natives.

Insects.—With the termination of the monsoon, the insect world, in its varied and often brilliant array, asserts its dominion in the sunny air, on the reinvigorated vegetation, the placid waters and the warm ground. Then is the time for the entomologist to enrich his collection with fresh specimens of the different insect forms, and certainly Coorg offers a rich reward to the enthusiastic lover of nature. A small collection of Coorg beetles sent to a German entomologist, was highly appreciated for the variety and beauty of its species. Almost every family of the Coleoptera

has numerous representatives, and even a glance over them all, were it possible to enumerate them, would be too much for the patience of the reader.

Passing over the beautiful family of the *Cicindridæ* or sand-runners, the still more brilliant *Buprestidæ* and *Elateridæ*, and the powerful family of the *Scarabæidæ* with the giant stag-beetle (*Iucanus malabaricus*) over 3 inches in length and with light brown elytra ; our attention will be arrested by the formidable looking *Cerambycidæ* or long-horns, for amongst this family we find the contemptible and yet terrible little enemy of the coffee planters in Coorg and Southern India generally—the Coffee-Borer (*Clytus coffeophagus* or *Xylotrechus quadripes*), of which our woodcut gives a very good representation. The full grown beetle is about



The Coffee-Borer beetle
(*Xylotrechus quadripes*)
slightly enlarged.

three quarters of an inch long, though the male is considerably smaller ; both sexes have an elongated cylindrical body and are equally marked. The head is small and depressed ; the eyes are large and brilliant, with a small whitish indentation near the root of the antennæ, which are of moderate length, filiform, eleven jointed and pointed at the tip, the first joint being thicker and the second shorter than the rest. The mandibles are short, strong and incurved. The prothorax is slightly oval, nearly as broad as long, covered with greyish green minute hairs, and marked by three black roundish spots, the middle one being four times larger than those on the sides. The elytra are thin but horny, long and slightly tapering ; on a black ground there are three symmetrically curved greenish transverse lines and a perpendicular one at the base, forming on the left wing with the first curve the letter *y*. The last pair of legs are particularly long, and indicate by their strong light brown femora considerable walking and jumping powers ; the other joints are black and the tarsi armed with bifid claws.

The beetles are most numerous directly after the monsoon, but many stragglers appear all the year round. They are diurnal in their habits, not gregarious or migratory, and unaffected by light at night. They are generally quiescent during the cool hours of the day, reposing on the bark of the coffee stem or under the leaves, but the warm sunshine calls forth their full activity. The female beetle is more plenti-

ful, and constantly busy with depositing her eggs on the sunny side of the stem alongside and into the natural fissures of the bark. As the beetle moves over the stem, the ovipositor, which is a telescopic tube, is in constant activity, sweeping like the finest hair-brush over and into every little cavity, and with unerring instinct she stops at the proper place and securely fastens one or several eggs; but it is difficult to say how many altogether, perhaps not over 100. The beetle does not attack the tree, and dies after a fortnight.



The telescopic
Ovipositor, highly
magnified.

The ova, just perceptible to the naked eye, and in groups of 3 to 8, appear under the microscope whitish, elongated and pointed at the top, and are so securely hidden that they become visible only on removing part of the corky layers of the bark. The ova gradually enlarge, till after 12 or 15 days the white membrane bursts, and the young grub, of the size of a maggot, begins to exercise its mandibles, eating its way into the juicy part of the soft bark and gradually into the hard wood of the tree. It is in this state of the larva that the insect has its longest existence—of about 9 months—and commits such fearful havoc.

The full grown larva is about three-fourths to one inch in length, broadest at the head and tapering behind; of a pale yellow or whitish colour and fleshy appearance. The body consists of eleven segments, has no legs, but some of the abdominal rings have small tubercles on the back, which aid the insect in moving forward. The head is hard, flattened above, of a brown colour and armed with powerful mandibles, with which it reduces the wood to a fine powder for its food, and having passed it through its body, the glutinous powder is accumulated behind, and so closely packed that the tunnel is completely filled up and inaccessible from without. The first working of the larva in and under the bark, leaves an unmistakable trace behind in a clearly defined swelling of the wounded bark, which sometimes cracks along the course of the larva. With the growth of the larva the tunnel also enlarges, and its progress is in a most irregular manner, winding up and down the tree and penetrating to the very end of the tap root. But though there may be as many as 20 or 30 larvæ at a time in one tree, their tunnels neither coalesce, nor do they emerge on its surface. When near its transformation into the pupa state, the larva turns towards the bark,

and often makes a clear horizontal sweep round the alburnum, so that the tree must die, and snaps off at the least touch. This last operation of the borer accounts for the sudden sickly change in a tree seeming shortly before to be in perfect health, and frequently occurs shortly after the March and April showers, succeeding a period of very dry weather. The flow of sap in the reinvigorated tree may also induce the larva to turn towards the bark, for, contrary to other boring insects, the coffee *xylotrechus* revels in the most juicy green wood and dies in a dry stem. In its last lodgement the pupa occupies a spacious cell, prepared by the larva and separated from the outside by merely the bark or a thin layer of wood. The pupa is yellowish white like the larva, exhibiting the outlines of the future beetle shining through the covering membrane. In this quiescent state, the head towards the bark, the pupa remains for about two months in its dark chamber, when it emerges from its pupa covering, matures its beetle nature and with its powerful jaws eats its way through the bark—where afterwards a small round hole will indicate its departure—to perpetrate its pernicious work on an extended scale by a numerous progeny.

The whole existence of the coffee borer, from the egg to the death of the beetle, does not exceed 12 months. Its presence in a coffee tree becomes apparent by the sickly look of the tree, the older leaves of which become yellow and the young shoots peculiarly twisted. The formed coffee berries do not ripen, but fall off with the leaves, and the tree dries up or lingers in a sickly unfertile condition. The destructive operations of the borer are not confined to particular localities, but spread almost all over the coffee growing districts in Southern India, and the devastations and consequent loss on many coffee estates are the more lamentable as the chance diminishes of finding an immediately effectual and reliable remedy.

The insect, which is no doubt indigenous, has through various collateral causes, real and hypothetical, such as the destruction of forests, abnormal seasons, dying of bamboos, disturbance of the balance in the local fauna, &c., increased to an enormous extent, so as to render its presence a pest to coffee cultivation since the year 1865, a pest which spread to an alarming degree all over the Province. The removal and destruction of far gone trees; the scraping, rubbing and washing of healthy ones with acids, to remove or destroy the ova; the shading of plantations in dry localities with permanent shade trees such as the

charcoal and jack trees ; proper cultivation :—these and others are the remedial and preventive measures recommended by practical agriculturists, and also by the Commissioner whom Government deputed to investigate this important subject.

A beetle neither notorious for destructive habits nor particularly useful, but interesting on account of the brilliant phenomenon it affords when swarming in myriads on trees and shrubs during the warm April and May nights, is the fire-fly (*lampyris splendidula* ; Kg. *minambulu*, glittering insect). It is not peculiar to Coorg, but nowhere else seen in such astonishing abundance and brilliancy. The following description of such a scene by Dr. Mögling is as beautiful as it is graphic and true. "A thunder storm, succeeded by a rich shower, has closed a sultry day. The sun has set unobserved. The western sky is overhung with clouds. In the cloudless east, the full moon rises slowly. The air perfectly pellucid ; the stars glittering in fresh glory ; not a breath of wind ; all still. You turn from the broad red orb of the rising moon to the host of golden stars on the deep azure, from the soft to the massive banks of clouds, lit up here by faint lightnings, there by the pale beams of the moon, their bold edges fringed with silver, and wonder at the beauties of the world above, where, on the dark blue depths of heaven, light seems to vie with light in the illumination of the vast dome built by the unseen Master. But look below and what a scene of marvellous beauty bursts on the view. Shrub and bush and tree, as far as the eye can reach, burn with magic light. The ground, the air, teem with lustre, every leaf seems to have its own fairy lamp. The valley at your feet, the wooded hills at your right and left, the dark distant forest, all are lit up and gleam in ever varying splendour, as if every star had sent a representative to bear his part in this nightly illumination of the dark earth. Whence all at once these innumerable lights ? No sound is heard, silently all these shining throngs pass before you in fantastic confusion. Look at this bush, that tree ! Myriads of fiery sparks brighten up with phosphoric glare through the labyrinth of leaves and branches ; a moment and they vanish. Now they flash up brighter than ever, as if this world of magic lustre was animated by pulsations keeping regular time. You sit and look, and think you could sit all night beholding the fairy scene".

Among the *Hymenoptera* we must pay a grateful tribute to the honey-bee, for the Coorg honey is plentiful and of an excellent flavour,

Some bees build their hives in hollow trees (*hudejénu*), some in rocks (*hedjénu*), others on shrubs (*kólujénu*). They are most frequently found in Surlabi-muttu-nád, in Yedava-nád, Gaddi-nád, Madikéri-nád and Kiggat-nád, where may be seen a rock called Tembare, on which from 200 to 300 swarms of bees are to be found. In the forests, on some trees, especially the *goni mara*, there may be from 100 to 200. A jungle tribe, the Jénu Kurubas, gather the honey in the month of June. Having hit upon a hive in a hollow tree, during the day time they tie up to the latter a bamboo, the branches of which cut short form a convenient ladder, and at night, provided with a basket lined with leaves, and attached to a long rope they climb up with a strongly smoking torch, which they hold near the hive. The alarmed and half stunned bees fly away, and their honeycombs are removed and let down in the basket. Whilst thus engaged, the Kurubas sing a peculiar song, made for the occasion, and expressing their feigned sympathy with the spoliated bees so rudely disturbed of their nightly rest. The Kurubas sell the honey at $2\frac{1}{2}$ seers for the rupee. The wax has to be delivered for a pittance to the contractor of jungle produce, who, as the Government agent, is alone entitled to sell it. The rate of sale is $2\frac{1}{2}$ annas per seer of 24 rupees weight.

Wasps' and hornets' nests, suspended from trees, like inverted cabbage heads, are frequently met with in jungles, and are better left alone, for their inmates attack any intruder with painful stings. Small and large ants, of black and red colours, are very numerous, and maintain the ferocious character of the family, pursuing the disturber of the domicile of their bustling community and inflicting severe bites upon the unfortunate victim. They play an important part in the cleansing and purifying department of the economy of nature. Their structures, domestic economy, and operations in the transport of objects many times larger than their own bodies, are truly wonderful.

Of the numerous and most beautiful family of *Lepidoptera* or butterflies and moths, Coorg presents a goodly show, but though fine collections of them have been made, their classification is still uncompleted. With the close of the monsoon the lantana hedges, and especially the sandy banks of streams, seem to be the rendezvous of a great variety of butterflies, of which some are remarkable for their size and brilliant colouring. Three species, of similar size and shape, chiefly attract attention: one with black velvety upper wings of about 6 inches in width, and light blue under wings; one with similar upper wings but the swallow-tailed lower

wings ornamented with a pale yellow satin-like spot ; the most beautiful, however, is the third, the black upper and lower wings of which are dotted all over with minute brilliant green little dots, in addition to which the tailed lower wing is marked with a brilliant large greenish blue spot. A darting showy butterfly is one green mottled. A slowly moving but high soaring butterfly is one large winged and yellow speckled.

Distinguished amongst the moths for swiftness and power of flight, are those that appear in the twilight (*crepuscularia*), called hawk-moths, which include the remarkable death's-head-moth, the *sisia*, the sphinx of the vine, of the oleander—the caterpillar of which has been found in great numbers on chincona trees—and many others. Amongst those that come forth at night (*nocturna*), and the largest perhaps amongst all the moths, is the *allas*, which measures nearly 10 inches across the wings. The ground colour of the wings is a warm brown, with reddish brown curved bands, faced by white and black lines, dividing the wings nearly into halves, a similar band running across the body and a little over the wings with an outward curve. The whole space encircled by these bands is of a deeper brown colour, and ornamented by 4 triangular transparent mica-like spots, set in black rims, and by a small elliptical second spot on each of the upper wings. These are curved downwards, tipped with an orange band and a black eye, which gives the extremities of the wings a striking resemblance to a serpent's head. The upper wings are edged with a fine black wavy line, and the lower wings with black dots surrounded by yellowish bands. The male is of a darker hue than the female, and whilst the antennæ of the former are broad bipectinate and like a feather in miniature, those of the female are narrow. Another large and beautiful moth of the same group is the greenish-white swallow-tailed *lithosia sanguinolenta*, 6 inches in width. Its upper wings are ornamented with a crimson line on the front edge and two lunular ocelli or spots of black and crimson shading off into a pale rose colour ; the lower wings, which terminate in long twisted tails, are marked with similar spots.

The *Bombycidae*, to which the above moths belong, are represented by several other fine species, especially the genus *saturnia*. There are some moths of a light brown colour belonging to the same genus, the caterpillars of which attach their silken cocoons to the branches of the *careya arborea*. They are chiefly found in the open parts of Kiggatnád, and the trees are sometimes covered with clusters of these pale yellow

cocoons. The thread of this silk is so interwoven and gummed together that the cocoons seem to be worthless for any practical purpose.

The larva of the *senzera coffeophaga*, commonly called Red Borer on account of its colour, is found in coffee and young casuarina trees. It burrows its tunnel chiefly along the pith, leaving an open communication with the outside of the tree, through which its globular woody excrements are discharged, and which betray the active enemy within. Running a wire through the hole, or stopping up the orifice with a peg, are the safest means for destroying the insect, which otherwise is apt to take a horizontal turn in its progress and thereby cut off the upper part of the tree. Its devastations are however insignificant compared with those of the White Coffee-Borer. It is not usual to find more than one red borer in a tree. In its chrysalis state it is enveloped in a delicate silken cocoon. The moth measures about three-quarters of an inch across the wings, which are pure white, and spotted with small dots of a bluish-black. The body is marked with a large black spot, and the abdomen with rings of the same colour. The antennæ of the male are bipectinate to about their middle.

More destructive to young coffee plants is the Ringer—the larva of the moth *agrotis sagetun*, as identified by Dr. Bidie. At times it multiplies to such an extent that many acres of young coffee would be rapidly destroyed by it unless checked in its devastating course. The Ringer gnaws off a circle of the bark just above the ground, stops the circulation of the sap, and thus of course kills the plant. The grub is an inch in length, of a greyish black colour, and lives in the ground. Its agency for evil is active only at night time, when its natural foes, the birds, &c., are at roost. Vegetable gardens, especially when planted with beans and potatoes, are equally subject to its attacks, which are only checked by digging it up close to the destroyed plant, or by applying quicklime to the ground. The moth measures about one and three-quarters of an inch from wing to wing. The upper wings are of a clouded brown, and the lower pair of a greyish or bluish white colour.

The charcoal tree (*sponia wightii*) is infested by the larva of the family *hepialideæ*. It is a very lively creature, from 3 to 4 inches long, pale red, with 8 pairs of feet. Its large burrow in the tree is easily detected by the protruding bag-like cover over the entrance, consisting of a texture of threads mixed up with powdered wood. The moth, when in repose, bends down its greyish brown wings, which measure nearly 4 inches across.

Of the *Hemiptera* there are some brilliant but disagreeably odiferous species. The white and the black bug have come to notice by their attacking coffee, but the brown or scaly bug (*lecanium coffeæ*) is the more dreaded species. The male, as usual with moths, is innocuous save as the progenitor of evil, but the female, after feeding on the sap of the tender shoots or bark, scatters its hundreds of eggs over the coffee tree, the branches of which are soon covered, and the foliage greatly suffers, while part of the berries turn black and fall off. The bug generally appears first in some sheltered damp ravine, but rapidly spreads over an estate, and after two or three seasons disappears, leaving the trees in an exhausted condition. Still, it is not so much dreaded as the white borer; for the bug-covered trees recover with propitious weather, and sometimes appear to compensate their owner for the temporary curtailment of produce by an unusually heavy crop.

Amongst the clamorous chirpers, the large *cicada* or knife-grinder is conspicuous for the tremendous noise which it creates on a sunny day in a bamboo-clump or in a grove on bane land. It is nearly three inches in length.

The *Diptera* are largely represented and some much dreaded, such as the gadflies and mosquitoes (*culex irritans*), which torment both man and beast. The blue-bottle, like the vulture, makes its mysterious appearance wherever animal substances are decaying. The common house-fly is at times very numerous, but its beneficent moisture absorbing services are hardly appreciated. Just before the monsoon, fleas (*pulex irritans*) seem to seek a sheltering abode in houses and become a great nuisance, but with the cold weather they make themselves scarce.

Among the *Neuroptera*, passing over the beautiful dragon flies,

That flutter round the jasmine stems,

Like winged flowers or flying gems,

our attention is arrested by the destructive *termites* or white ants. They are not so numerous in Coorg as on the coast, but buildings in the Province are not free from their attacks, which they carry on in the light-excluding mud galleries which they construct on every exposed substance they seek to consume. Their conical shaped mud nests, which are sometimes 10 feet high, deserve the name of ant *hills* when compared with the tiny insect-architect. They are frequently seen in the dry Kanawé district, where the bark and alburnum of sandalwood trees seem to have great attractions for the white ant.

The order *Orthoptera* contains, besides the familiar cockroach, the silvery-grey fish-insect (*lepisma*), the cricket, the grasshopper and the locust, some singular looking creatures, namely: the walking-sticks, the leaf-insects, and the praying mantis, which are not unfrequently found in Coorg. The walking-sticks or spectres (*phasmidae*) closely resemble a vivified twig. When at rest, the two pairs of posterior legs lie close to the slender body, and the two anterior legs are joined and projected, covering, with the body, which is 5 inches long, a space of 10 inches at least. It is but seldom provided with wings; the long legs are three jointed and the femurs armed with short spines. The leaf-insect (*phyllium siccifolium*) is nearly 5 inches in length, and in the middle 2 inches broad; its bright green body is on both sides expanded like a leaf and on it rest the two reticulated green wings, joining their back-seams like the mid-rib of a natural leaf, from which the opposite side-ribs branch off at regular intervals. The first two joints of the 6 legs are likewise green, and expanded like the petiolar stipules of the lime tree; the last joint is short and provided with claws. The head is rather large and depressed, the eyes protruding and yellow, and the antennæ very short. In the *mantis* or praying insect, the front limbs are folded as in the attitude of prayer. With these sabre-like forelegs the reputedly sanctimonious mantis entraps and decapitates the small insects on which it feeds. When two of these insects are placed opposite each other, they will fight with extreme ferocity, like a pair of game cocks. A most extraordinary species is the dry-leaf mantis, which seems to be a compound of the three above-mentioned insects. It has the forelegs of the mantis, the thorax and posterior legs of the walking-stick, and the wings of the leaf-insect, with some peculiarities of its own. The head, with its large elliptical protruding eyes, its hornlike appendage and filiform antennæ, has a formidable appearance, which is heightened by its erect position as it bends upright the expanded prothorax and puts forth its powerful long forelegs. The thorax is like a thin stick one inch long, and the wings, which overlap each other and are bent downwards, resemble a withered leaf. The long legs have at the extremities of the first joint a lateral expansion, of the same colour as that of the whole insect, which is a light brown.

Amongst the *Aptera* or wingless insects we need only mention the centipedes and millepedes, which are rather numerous in Coorg, especially the *scolopendra*, the bite of which causes severe pain, and the *julus*,

which is frequently found under the bark of trees, coiled up like a watch spring. Other unpopular parasitic genera comprised in this order, and which are co-extensive with man's habitation, are not wanting in Coorg, especially among the uncleanly low-caste people.

The *Arachnidæ* or spiders and scorpions have also their numerous representatives. The Coorg spider abounds in all parts of the Province. Its central globular black body is supported by 8 hairlike legs, 2½ inches long, which give it a ghastly appearance. These spiders are gregarious and haunt dark and damp places, where often thousands are crowded together, forming one black mass, which, if disturbed, disentangles itself with astonishing rapidity and spreads in every direction.

The yellow-banded spider is an interesting object for observation, as it spans its extensive curious web on sunny thoroughfares, watching in the centre for its prey, and rushing at the least vibration along the disturbed thread to catch the unfortunate intruder. The largest spider perhaps in existence is the *mygale*, which lives in the ground. Its body is two inches and a half in length and one inch broad, and the longest leg over 3 inches. The upper mandibles terminate in downward curved horny claws, with which it wounds its victims, the poison being conveyed through the perforated claws. It is of a greyish colour, alternately marked along the legs with pale yellow and black bands. The creature is covered with grey bristles, which are longest on the legs.

Scorpions (*chélu*), especially the large greenish black kind, are frequently met with on damp ground under large stones or near decaying trees, where they attain a size of over six inches in length. Their sting is very painful, and the wound causes a considerable swelling of the injured limb, which lasts for several days. The smaller greyish-yellow kind occurs chiefly in damp rooms, and its sting is less painful.

The class *Crustacea* has its representatives in several kinds of crabs:—*nalli*, which live under stones; *kallalli*, found in streams; *hullalli*, found in paddy fields; and *mandalli*, found on damp ground. They are eagerly eaten by the natives, and among the Yedava-nád people a mother will exhort her children with the proverb:

 Eat kallalli and become a clever man;

 Eat hullalli and become brave as a tiger;

 Eat mandalli and become master of the house.

The land-crabs often do great mischief to cultivation, especially to coffee nurseries in damp ravines.

Of the *Annelides*, the Coorg leeches (*jigim*) impress themselves on the memory of every one who ventures into the jungles during the monsoon. They are from one to two inches in length, very slender, and astonishingly swift in attacking their victims. Thousands of leeches seem to keep watch right and left for the approaching wanderer walking along a jungle pathway, and should he stop for a moment the bloodthirsty creatures make up to him from every quarter in their peculiar doubling-up way of progress, and woe to him should they unobserved gain access to any bare part of his feet, for they will mount up and bleed him unmercifully, till he feels the blood trickling down. In some constitutions the wounds produce festering sores. A simple means for keeping them off is a little salt tied in a bag round the ankle. The medicinal leech (*atte*) is also found in tanks, and made use of in the Hospital.
