

FASCINATING WORLD OF ANIMALS AND INSECTS

PADMA RAJAGOPAL

Introduction

As the human population on earth keeps increasing every second there is greater and greater pressure on all the resources. More and more land is grabbed by man for cultivation or habitation, and in the name of progress and development there is a large scale destruction of forests, mountains, low-lands, lakes, rivers and even the shore lines. It is no wonder that a large number of animal and plant species have disappeared and more and more species continue to disappear every day. In the race for his own survival and well being and to a great extent due to his selfishness and greed Man has totally forgotten that the millions of species of plants and animals inhabiting the earth and which were there millions of years before man came on the scene, have an equal if not greater right to survive. By this ruthless destruction of nature and natural life and the ever increasing pollution of air, water and land, man may ultimately end up destroying even mankind! Only recently there have been some serious attempts to conserve nature and natural life. There is a great need to develop interest among the younger generation in particular, to know something about the animals and plants and to create an awareness to treat them as co-inhabitants of our planet and to protect them.

Children invariably show keen interest in anything strange and fascinating. Very few of us are aware of the enormous diversity of the plant and animals life around us, the innumerable fascinating facts about animals—what ingenious methods they adopt to get their food, what strange and beautiful homes they build without any instruction or learning, how they court and breed, how some of them take care of their young, what extraordinary senses some of them possess, what strange tactics they adopt to protect themselves from their enemies and predators, unbelievable relationships they strike with one another for mutual benefit, social behaviour of the highest order exhibited by some, uncanny migrations over thousands of miles by many birds and some fishes, and numerous other behavioural oddities. This book describes without going into lengthy details interesting and fascinating facts individually with illustrations about a variety of animals.

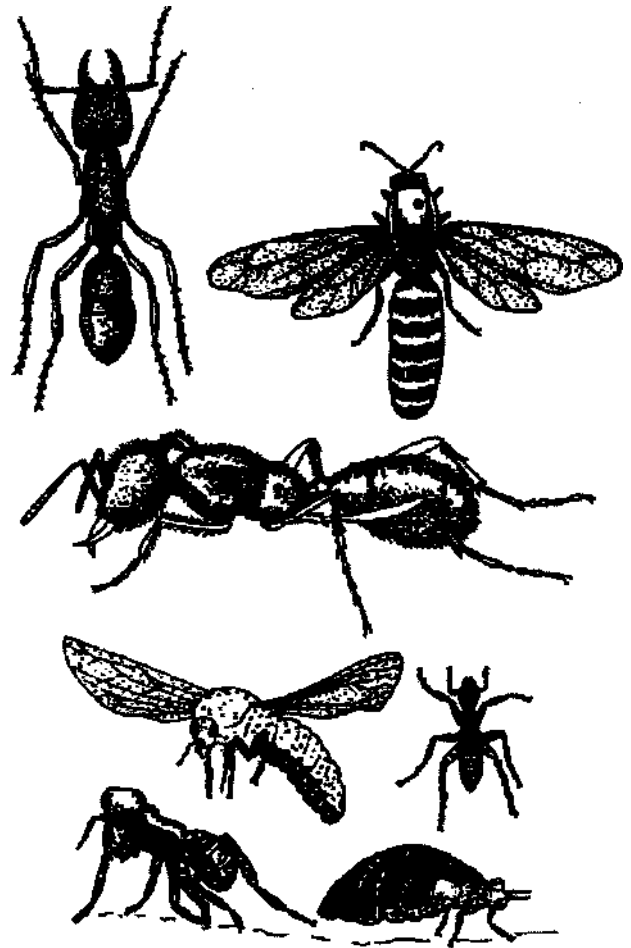
The author, Padma Rajagopal was a distinguished and popular teacher of Biology and a gifted writer of books on animals for children. All the items found in this book were her contributions to the “Playtime” page of the SUNDAY STATESMAN from August 1959 to April 1970 and to the same page of the JUNIOR STATESMAN from May 1970 to July 1977. The kind permission accorded by the Editor-in-Chief and Managing Director of The STATESMAN to reprint them in book form is gratefully acknowledged.

It is hoped that his book will capture the imagination of children and create an awareness in them to strive to protect all animals and plants so as to allow these to share our planet not only with us but with the future generations as well.

R. RAJAGOPAL

Terror of the Forest

Can you believe that even lions and elephants are afraid of a tiny ant? Well, there is an ant in Africa which is the terror for even these animals. The Driver Ants of Africa are so called because all animals—will flee when they approach. These ants live in huge crowds of ten thousand or more. They lead a nomadic life wandering about looking for food, marching in columns of six. Because of this they are sometimes called Army Ants. They will attack even the mighty elephant. Since his skin is too thick for them, they swarm up him in thousands and attack his eyes. Through them they enter the body and soon leave only a skeleton. When a column crosses a python resting after his dinner they eat up not only the python but also the dinner he has just had. And it is more amazing that these terrible creatures can do all this though completely blind.



He Packs a Pistol

Many of you must have had a lot of fun with a water-pistol. There is a kind of fish in Malaya which has one. His activities are not as playful as yours. He uses his gun to get his food. The “Archer Fish” or “Shooting fish” as he is called spurts a jet of water from his spout-like lips and shoots down insects resting on plants on the bank or those that come near the water surface. He is an excellent shot and seldom misses.



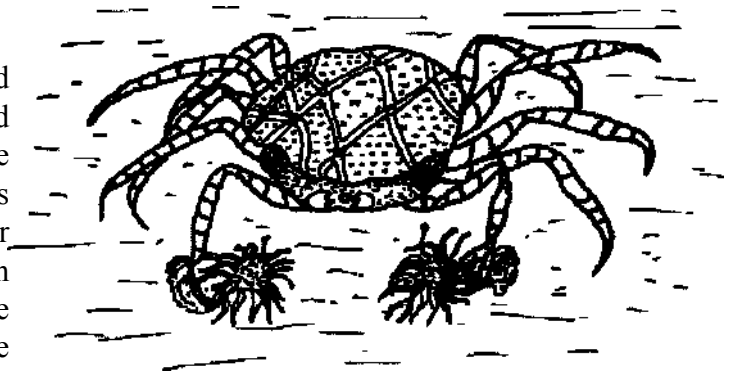
The Sheep-Killing Parrot

Wild creatures do not usually change their food habits easily. The Kea Parrot, a native of New Zealand is an interesting exception. It is a hawk like green parrot which used to live on fruits like all other parrots. When the people, who went to settle in New Zealand, brought sheep to the Island, the Kea gave up its fruit-eating habits and started feeding on sheep. It kills sheep by attacking them with its powerful beak and feeds on the fat that surrounds the kidneys. It has become a serious danger to sheep farms. Its cry resembles that of a cat.



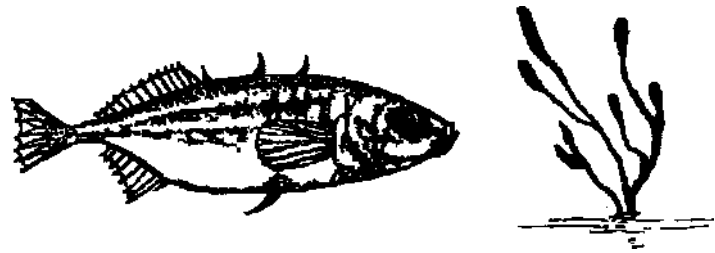
He has bodyguards

In the Indian Ocean is a crab too feeble to defend himself against the many dangers there. But he has devised a novel method of protection. Like the heads of States, he has his own bodyguards. In each of his pincer-like forelegs he carries a sea-anemone. No one dare attack him, for the anemones, true to their master will defend him with their powerful stinging tentacles. It is a nice life for these anemones also, for not all of them have the good fortune of a wandering life, going places.



Fond Father

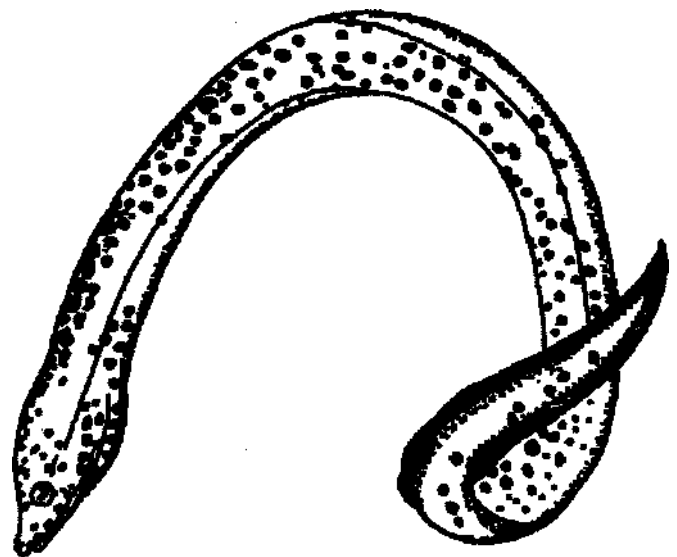
Many fish are devoted fathers, but papa stickleback is more devoted than most. He builds the nest—a neat, little affair of stems and leaves of water-plants. He then leads mama stickle-back, to the nest. Her responsibility is over once she lays the eggs and now papa mounts guard over the nest. But for his care both eggs and young would be devoured by the hungry mother herself or by other fish. When the young ones hatch out and try to explore he promptly puts them back to the “nursery”. Very soon the youngsters become uncontrollable, and there ends papa’s duty for now they can take care of themselves.



Shocking Fellow

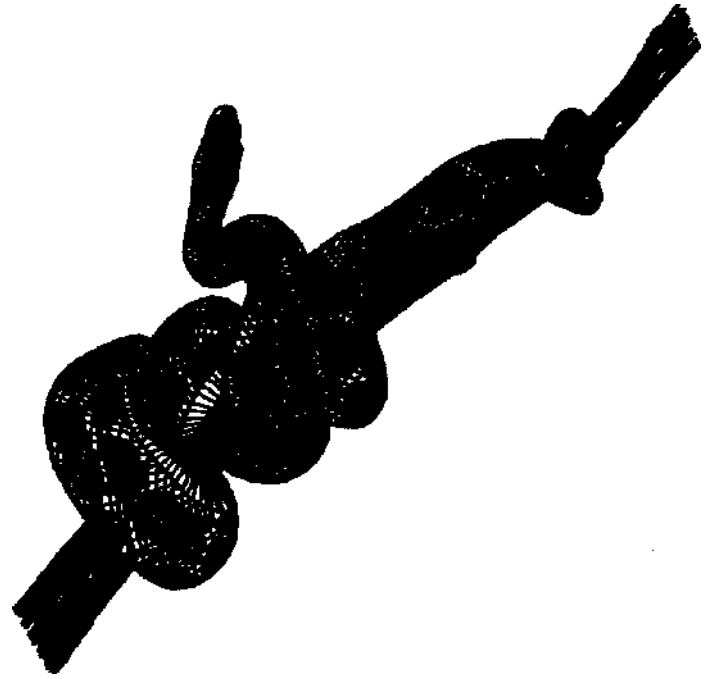
Here is a real livewire! Such a shocker is he that he is known as the Electric “Eel”. No doubt he is electric, but he is not an eel. He only looks like one. He belongs to the cat-fish family.

Fortunately for us he is found only in the rivers of South America. A four-foot moving generator capable of giving shocks that can stun or even kill a horse, he is a formidable adversary . He can produce enough electricity from a row of special glands all along the sides of his body, to light a flat—and would do well for an electric supply! He keeps his enemies away with the electric fence and when hungry he just stuns other fishes around him for his meal.



He's an actor

The best actor among snakes is the hog-nosed snake or the puff-adder of North America. With its stout body, rattler-like markings, and wicked looking head, it is a terrifying sight. But it is a completely harmless animal and knows it too! When cornered, it will put up a great show. Puffing out his neck to twice its normal size and hissing with a noise like a steam engine which can be heard some distance away. It will rear up and strike. A very alarming performance but pure bluff, for it strikes with its mouth closed! If this trick doesn't work, it will try another. Suddenly it starts writhing with mouth gaping and tongue lolling out as though having an attack of convulsions. After a few minutes, it rolls over, on its back and 'dies'—that is, it will lie absolutely motionless. If one remains nearby, it will continue this for even ten minutes. Even if picked up, it will remain limp without showing any sign of life. It is a very fine piece of acting, but the puff-adder spoils it, if you turn it over. For it seems to think that a dead snake should lie only on its back and if turned over, it will turn right back again! If we hide, the 'dead' snake will cautiously raise its head, look round and if no one about, will crawl away with great speed!

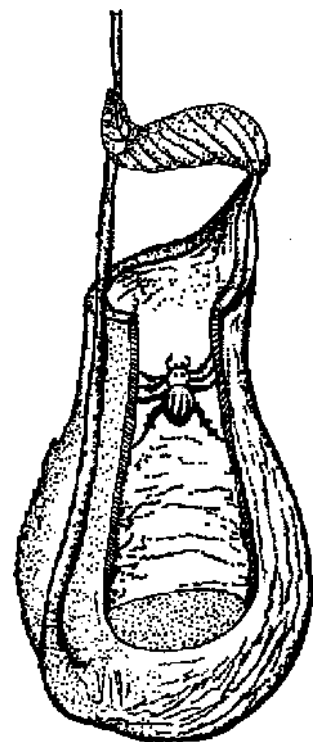


Partners in Gastronomy

A positive deathtrap for insects is the carnivorous Pitcher Plant. It has odd pitcher or jar shaped leaves brightly coloured. Sweet-smelling and with nectar glands to act as bait, they prove irresistible to insects. The bottom of the "pitcher" contains a pool of digestive juice. This soon kills off the victims, digests their soft parts and absorbs them.

An added danger for insects is the plant's partnership with the crab spider. This crafty-creature makes the "pitcher" his permanent abode—though it keeps well away from the digestive juice, as you may note from the sketch—there to live in a sort of peaceful coexistence.

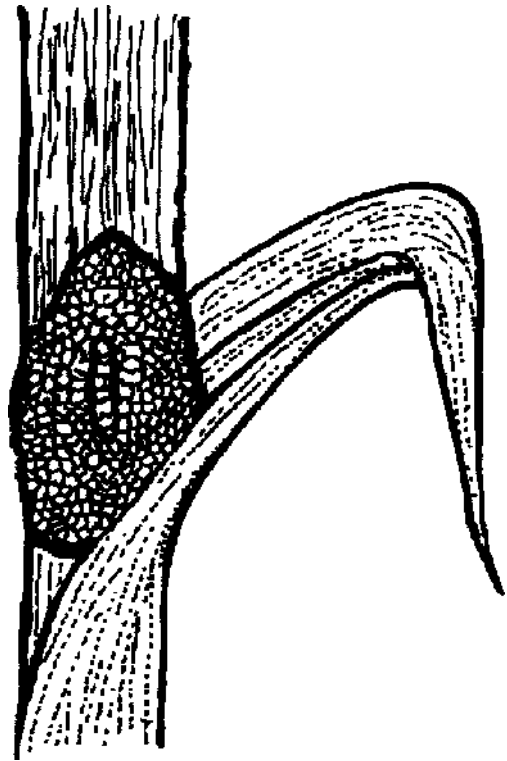
Inside the pitcher the table is set for the spider, who feeds on the insects attracted by the plant. He is, however, considerate to his landlord—it would not do if the latter died of starvation—and sees to it that enough goes into the digestive juice for the plant's maintenance. Though he keeps well away from the dangerous stuff beneath him, he really has no great fear, since he has developed a hard protective coat to neutralise the effects of the juice. In fact when danger threatens, he actually submerges himself in it until the threat is past, when he comes out once again unscathed. *(In the sketch the plant is cut open to expose the position of the spider.)*



Froth Blower

Insects have developed ingenious ways of defending themselves from their innumerable enemies, who are ever ready to make a meal of them. The Frog-hopper is a tiny bug less than a quarter of an inch long living on trees and plants hopping from place to place like a tiny frog. When it is young, the Frog-hopper has no wings or legs to help it to escape from enemies. So, it has developed a remarkable method of protecting itself. It builds a 'bubble fortress' around itself and remains safe inside.

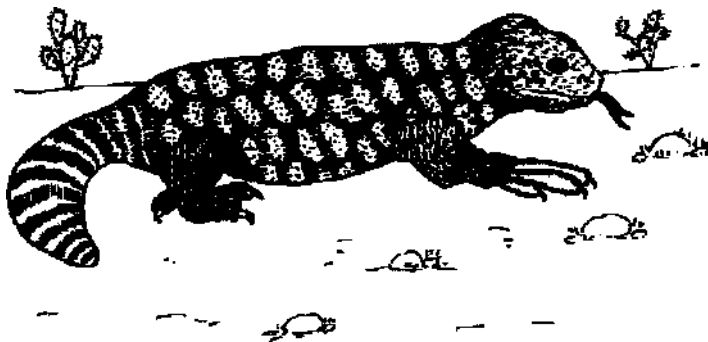
The young Frog-hopper secretes a liquid from its body and the air from its numerous breathing holes blows the liquid into bubbles. It goes on blowing numerous bubbles till they completely cover it. This bubble fortress looks like a bit of beaten egg white. These bubbles do not dry up or burst and protects the soft body of the young Frog-hopper from its enemies and also from the rays of the sun. It grows inside the 'fortress' and develops wings and leaping legs before emerging.



Little "Monster" of the Desert

In the arid desert regions of Mexico and Southern U.S.A. are to be found the 'beaded lizards' or the Gila Monsters as they are called. The Gila Monster is no monster in the true sense, as it scarcely grows more than two feet in length, but among lizards it is one with a poisonous bite more potent than that of many snakes. That accounts for its bad name.

Another peculiar feature of the Gila Monster is that its tail acts as its larder. Although it lives in deserts, it cannot remain exposed to the sun for more than a few minutes nor can it be active when it is too cold. So during the favourable periods, when food is also plentiful, it hunts and eats voraciously. The excess food is stored in the form of fat in its tail, which becomes plump as it eats more and more. When it is too hot or too cold to move about, the lizard remains quiet in its burrow drawing upon its reserves till favourable conditions return. Then it emerges with a tail that has become thin and emaciated.

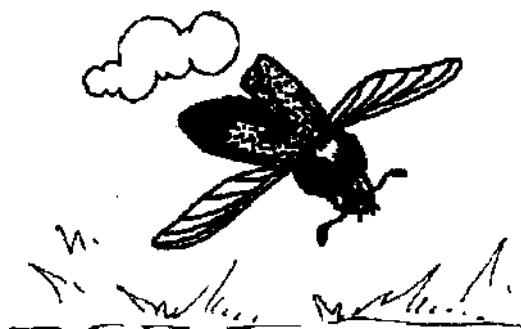


Burying Beetles

The Burying Beetles are so called because of their habit of burying the dead bodies of rats, moles, birds and other small animals. They are large and stout insects with red marks on their head and thorax. These undertakers are remarkable for their ingenuity and skill. In burying a body, they crawl under it and using their front legs to dig and the other legs to scrape aside the soil, they first dig out a cone-shaped cavity. They pull the carcass into this space and then enlarge the hole till the body is fully buried.

If the body is found in sod, they will cut the grass, roots etc., and clear the area. If the place where the body is found is stony, they will drag it to more favourable soil and then bury it. Usually only a couple do the burying, but sometimes there are two or more helpers.

The beetles do not eat the buried animal. It is meant for the use of their young ones. But for these insects and many other smaller organisms, the world would be littered with the dead bodies of a large number of birds and small animals.



Here's a Collector

Of all the bewildering types of rats and mice in the world, the pack rat of America is among the most interesting. He lives in arid desert regions, spending the day in his nest overlain with cactus pads, sticks and other movable litter. In the evenings he goes out to dine on cactus leaves, prickly pear and other desert plants and then starts his real occupation—that of collecting! This is an obsession with him and he isn't particularly on anything special. He will collect anything—stones, sticks and any rubbish he can get hold of. He is specially fond of bright things and will carry away coins, nails, glass pieces, even your watch, cartridges etc. But we can't call him a thief. He usually leaves some other object to replace whatever he takes away—even though the replacement be nothing more than a stone!



Six-Legged Cows

Have you heard of six legged cows? Some of them green in colour, some pink, some brown and black. Some even winged! These strange creatures are the ant-cows. So called because they are looked after and milked by certain kind of ants. They are really known as Aphids. They are a tiny pear-shaped plant-lice, which live by sucking the sap of plants. They exude a sugary substance called honey-dew and it is for this honey-dew that the ants take great pains over them. They look after and care for their tiny 'cows' just as we tend and herd our cows for the milk they give. Some even build special sheds for the aphids near their own nest.



The mother aphid lays her eggs in autumn and these eggs are collected by the ants and tended during the long winter months. In spring the young aphids hatch out and the ants take them out to graze. The ant 'cowherds' stand by, ready to drive away any enemy that would molest their charges. In return for such devoted care, the aphids give their masters, plenty of honey-dew, whenever they ask for it.

He can't be Weighed Down

The Hero Shrew is found in West Africa, where they believe that if you carry his ash, you can be a hero too! His heroism would appear to lie in his incredible powers of resistance to pressure. A full grown man can stand on the Hero's back pressing his entire weight on the creature. Any other animal of this size would be crushed into a pulp, but not the Hero. He merely waits for the man to get down—shakes himself and runs off!



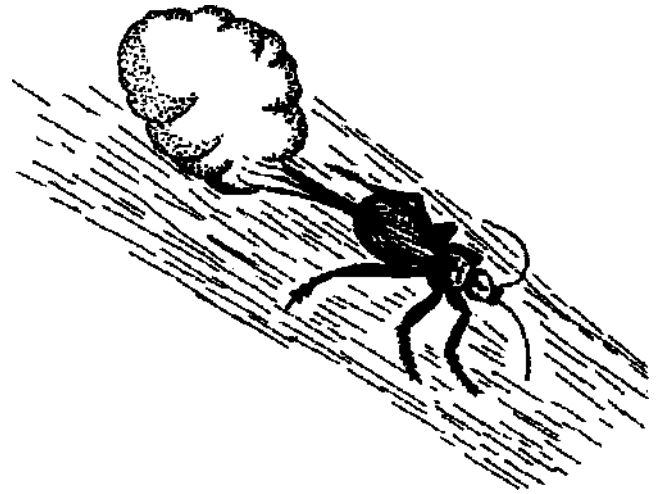
This is because he has a thick backbone designed specially to withstand heavy weights. Why this tiny animal which lives mostly on insects should have this special weight-proof back is still a mystery.

Bombardier Beetle

One of the most interesting of insects is the Bombardier Beetle. A fast-moving creature it seems to be the only creature in nature which knows the use of explosives. The Bombardiers are colourful fellows with yellow heads and legs while the wing covers are dark blue, greenish blue or even black.

The Bombardier is so called because he is quite literally a bombardier. At the end of his body he has “guns” in the form of tiny sacs containing a fluid which can be squirted out. This fluid has caustic properties and its effects on the skin are like those of nitric acid. When this volatile fluid comes in contact with air it changes into a jet of smoke with a distinct popping sound.

A well aimed discharge from these guns can lay even big insects low. But most of the time the Bombardier uses it only to cover his retreat. When it sees an enemy he turns and fires his tiny guns at the enemy’s face. There is a volley of sharp pops followed by little puffs of acrid smoke. The enemy is taken aback by this surprise attack and the sudden appearance of smoke. Taking advantage of this smoke-screen the Bombardier escapes.

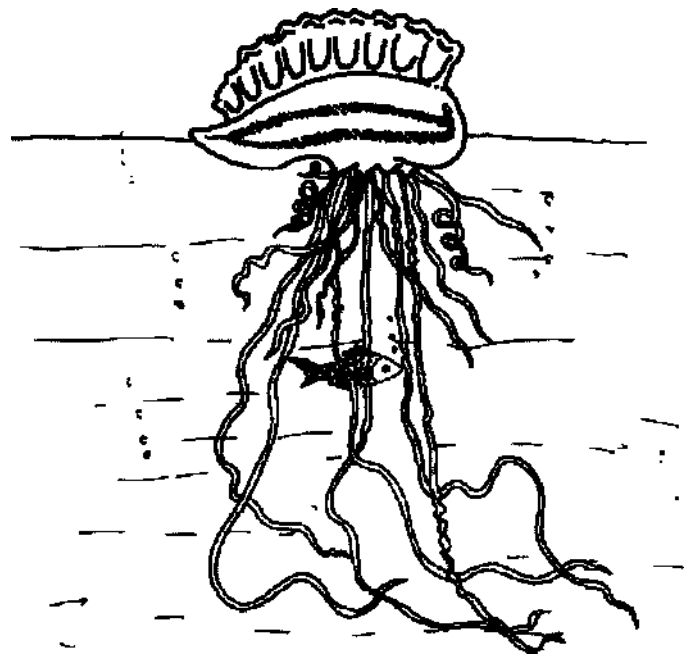


Marine Alliance

One of the strangest friendships in the animal world is that of *Physalia* and *Nomeus*. A relative of the jelly-fish. *Physalia* is a beautiful creature with a pyramid shaped float coloured in the most appealing shades of blue. But this beauty hides one of the deadliest natures in the world and a poison more potent than that of the cobra in the numerous stinging cells of its many long tentacles. Popularly known as the Portuguese Man-of-War is a terror to animals in the sea where it lives, even human beings give it a wide berth.

Living beneath the float among its tentacles is the family of *Nomeus*, the tiny fish friends of *Physalia*. Why the tentacles do not injure them is a mystery. Immuned, the little fish play with the thousands of stinging cells secure from enemies that feed on them.

In return for the security provided by their friend, these fish draw a number of bigger fish near the tentacles. Those venturing too near chasing the tiny *Nomeus* are killed by the stinging cells. Then the allies share the dinner.



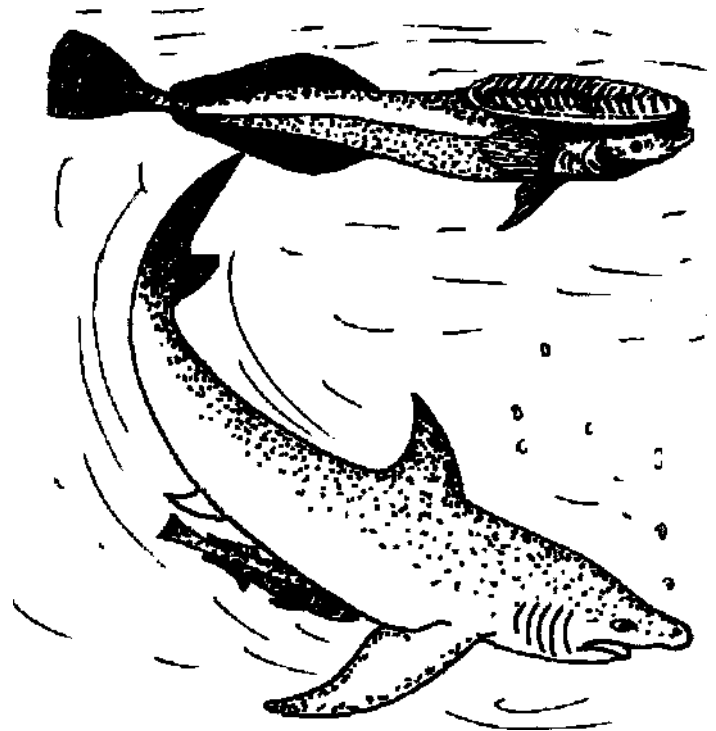
Stocking the Larder

Like the butcher, the Red Backed Shrike has a number of 'joints' hanging around and this is why it is called the 'Butcher Bird'. This small bird has a curious habit of maintaining a larder—a rare thing among birds. It is a ferocious and bold creature and kills any number of small mammals and birds to satisfy its voracious appetite. It never stops hunting and it impales all the surplus food on thorns near its nest. During the breeding season, when large amounts of food are required for young as well, the Shrike has no difficulty about its food supply. Scores of 'joints'—bees, grasshoppers, crickets, mice, voles, shrews, lizards and small birds are found hanging in its open air larder.



Sticking Around

Remora—the Sucker Fish—is not what some may think his name implies, for he excels in getting free lifts. Somewhat like a mackerel in shape, about a foot and a half or two in length, he carries on top of his head a great oval disc. With the aid of this sucker the fish is able to attach himself with great tenacity to anything. Once the disc sticks, it is very difficult to dislodge the fish. He uses his disc on sharks, turtles, whales and even ships and thus rides freely to wherever he wants to go. It can swim but prefers a lift. When a shark carrying Remora is having dinner, the passenger leaves his seat for a meal on the left-overs. Then he is back in his place. Fishermen in many countries use the Sucker Fish to catch turtles. They tie a long line to the fish's tail and launch him out. Remora attaches himself to a turtle, the line becomes taut and both the fish and the turtle are easily hauled in, for the Sucker Fish will not release his hold at any cost.



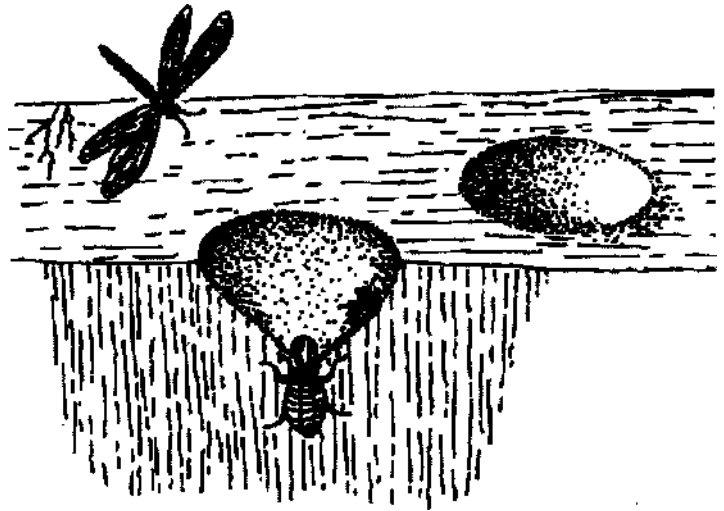
He Sets Traps

Ant-lion Flies look very much like dragon flies. While the larvae of these insects eat very well indeed, they themselves have such weak mouths that they hardly eat at all.

The larvae also look very different from their mothers, with round, flat wingless bodies. By means of a pair of pincer-like jaws they suck up small insects—mostly ants—hence the name “Ant Lion”.

To catch ants the young Ant Lion constructs a funnel-shaped cavity in loose sand and waits at the bottom of the pit with only its jaws projecting out. Any insect running along the edge of the pit dislodges the sand of the sloping sides and starts a miniature land-slide. The Ant Lion jerks some of the sand by means of its head towards the sliding victim and continues to do so till the latter is brought to the bottom of the pit. Here it is immediately seized by the pincher-like jaws and sucked dry. The body of the victim is then ejected from the pit by a flick of the hunter’s head.

The Ant Lion though small is so strong that it can throw a stone ten times its size clear out of the pit with a single

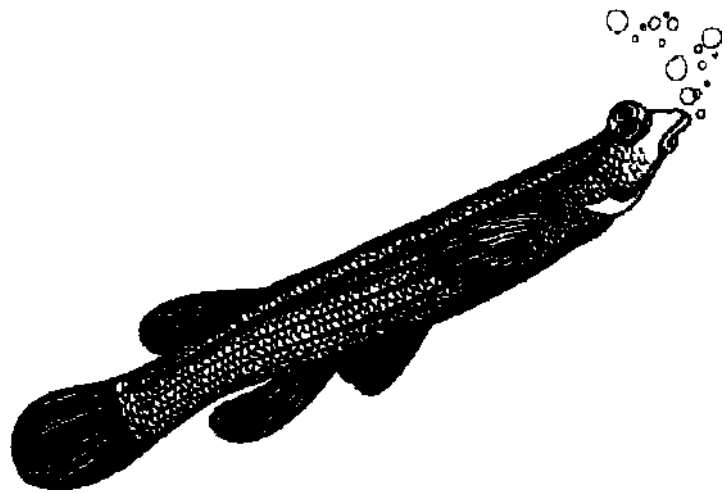


Double Vision

In the quiet rivers and inlets of the Caribbean Sea region lives *Anableps* the “Four-eyed Fish.” Though he is called the fish with four eyes, he really has only two. But these are of a special kind unlike those of any other vertebrate animal. They are built for two kinds of vision. There is a partition in the middle of the eyes and each eye has two sets of pupils—one above the other. The upper pupils are out of the water when the fish is at the surface, and are meant for aerial vision. The fish sees in the water beneath the surface with the lower half.

This is a convenient arrangement for him because he likes to swim up at the surface and feed on the tit-bits found floating there. As he moves along feeding he can spot trouble both in the air and in the water. Another odd thing about *Anableps* is that he has no tear glands to keep the air eyes moist and so he has to duck every few minutes to wet his upper eyes.

These fishes usually go about in schools and it is very funny to watch them swimming along with only the top halves of their eyes sticking out of water.

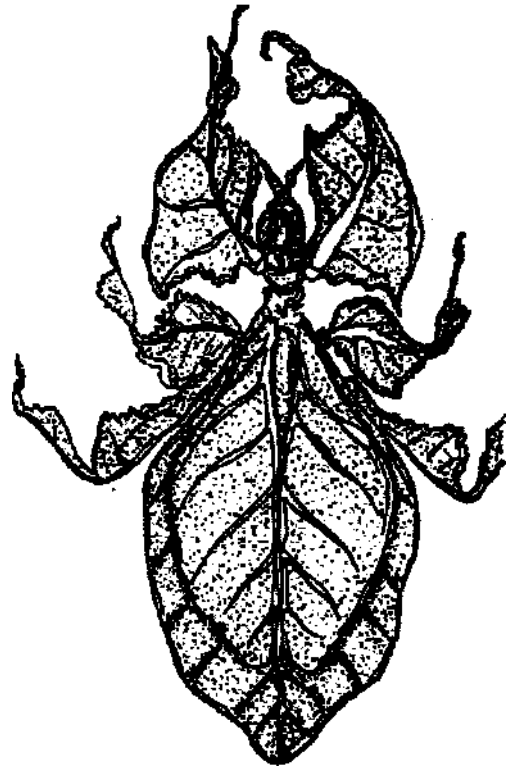


The Walking Leaf

Phyllium—the ‘Walking Leaf’ is a really remarkable insect, found abundantly in the isles of the Indian Ocean. Nature has provided this gentle leaf-eater with an extraordinary kind of camouflage, which protects him from his enemies.

Phyllium eggs look like tiny dried up spiny seeds and hence escape detection. The young insects which emerge from these eggs look very much like the reddish buds at the tip of branches. When they grow up, the adult body has the exact shape and colour of a leaf. Not merely the colour and shape but even the veins are duplicated. The legs are flattened and look like small leaves. They also have irregular ragged margins giving the appearance of leaves eaten by insects.

As though all this is not enough, when there is a breeze, the insects sway themselves in perfect imitation of the swinging leaves—so that even at close range it is difficult not to be deceived.



Slavery and Ants

Many species of ants keep slaves. *Polyergus*—the Amazon is an example. They hold in bondage the black *Fusca* ants. These slaves build their masters’ nests, keep them clean, look after the young, bring food and feed everyone—in short they maintain the colony. The only thing the masters do, is to sally out twice or thrice a year on raids to bring in new slaves.

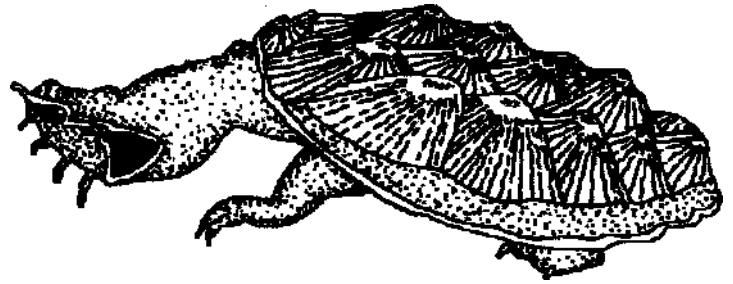
Before the raids, scouts are sent out. These report the location of *Fusca* nests. With the scouts to guide them, the raiders move swiftly in military fashion, with platoons at spaced intervals, to fall upon the unsuspecting *Fusca* nest suddenly. Before the savage attack the black ants flee. The attackers are interested only in the eggs and pupae and unless the *Fusca* tries to smuggle an egg or pupa out of the nest, when it is torn from limb to limb, it is not pursued. The Amazons turn home with eggs and pupae.

These are raised in the Amazon nest and the Black ants that emerge take over all the work cheerfully—even the grooming of their masters. The Amazons are so used to being attended upon even with food in front of them, they would die of starvation, if there were no slaves to feed them!



Mocking Turtle

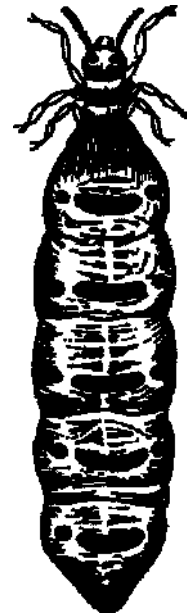
Fishing is not a mere hobby with Mata Mata. This ugly looking river turtle found in Brazil, quite literally, fishes for its food. About a foot and a half in length it has a rough and irregularly shaped shell on which grow a number of water plants. When the turtle is resting among the rocks it is very difficult to distinguish it from the weed-covered rocks. When hungry, it thrusts out a long red worm-like tongue—like rude children do, when mocking people—which serves as a lure for small fish. Sooner or later a fish mistaking the gently moving tongue for a worm gets too near—that is the end of the fish! The turtle reels in its line and begins dinner.



Wooden Diet

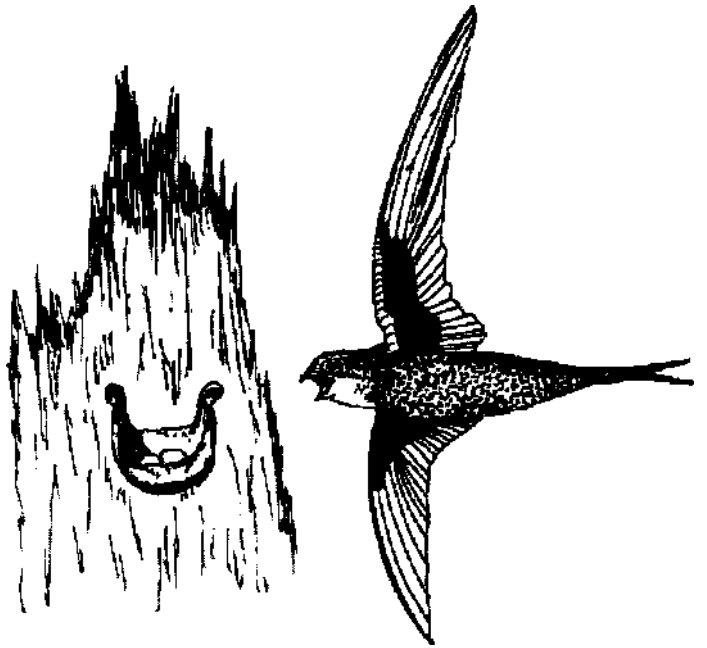
Wood for breakfast, wood for lunch and wood for dinner sounds far from appetising. But for the termites that is the schedule and they devour their food with gusto. Popularly called ‘White Ants’ (which is a misnomer for they are neither completely white nor are they ants), these tiny insects have specialized in living on cellulose—the chief constituent of wood and which is indigestible to most animals.

The extraordinary thing about this diet is that the termites themselves cannot digest cellulose! This is done for them by a large number of microscopic single-celled animals called *Triconympha*, which live in the intestine of the termites. The termites would die of starvation without these lodgers and strangely enough the *Triconympha* are found nowhere else in the world except in the intestine of the termites. So both the friends are benefited—one supplying the food and the other digesting it for itself and its host.



Unusual Nest

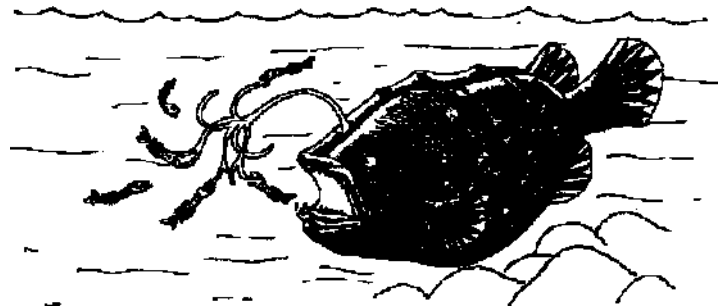
Birds build their nests with a variety of materials—some with twigs, others with grass or leaves. Some make their nests out of clay. The most unusual nests are built by some of the Swifts found in the Far East. The Esculent Swift and the Eastern Swiftlets do not have to go looking for nest building materials, for they build nests out of their own saliva! The saliva of these birds hardens, when it comes into contact with air and the nest built out of it is quite strong. The Chinese make a soup—the Bird’s Nest Soup by boiling these nests. It is considered a great delicacy by them.



Attached Husband

The male Angler fish of the deep seas is attached to his wife—literally. He is a tiny fellow, less than four inches in length. His wife reaches three feet or more and weighs well over 25 to 30 lbs. She is an unlovely creature, with a cavernous mouth and sharp piercing teeth, which have earned her the name of “Black Sea-devil”. She carries her tiny husband permanently on her head.

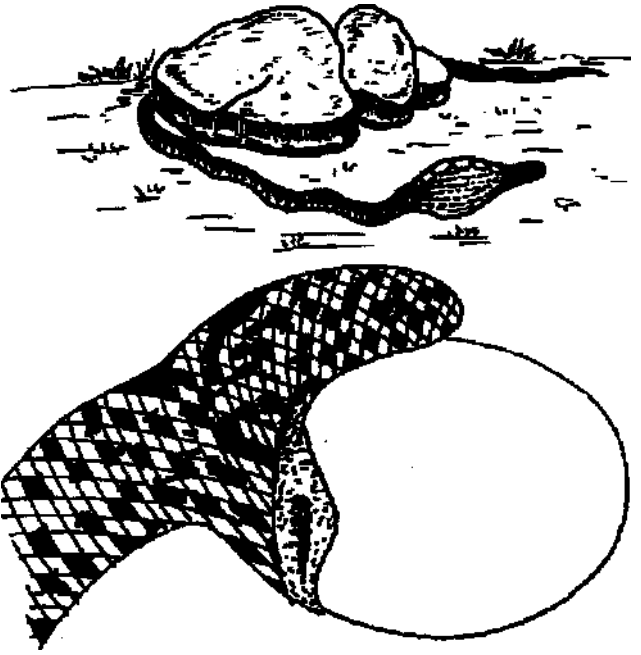
Even when quite young, the male attaches himself to her head and becomes undetachably grafted to her. After that he stops growing. Since the outer skin of both are continuous and even the blood systems are connected he looks more like an appendage, than a husband. He has a very easy life. His wife supports him in style carrying him about and providing him with food. He has neither to hunt nor even eat his food. It is sent to him through the blood of his wife.



Fresh Eggs Please

Dasypeltis the egg-eating snake is very fussy about his food. Found in Central and South Africa, he feeds exclusively on eggs and he is very particular about having fresh eggs every time. He has such an acute sense of smell that he can distinguish fresh eggs from stale ones by smelling them. If he can't get fresh eggs, he would rather go hungry than eat stale ones!

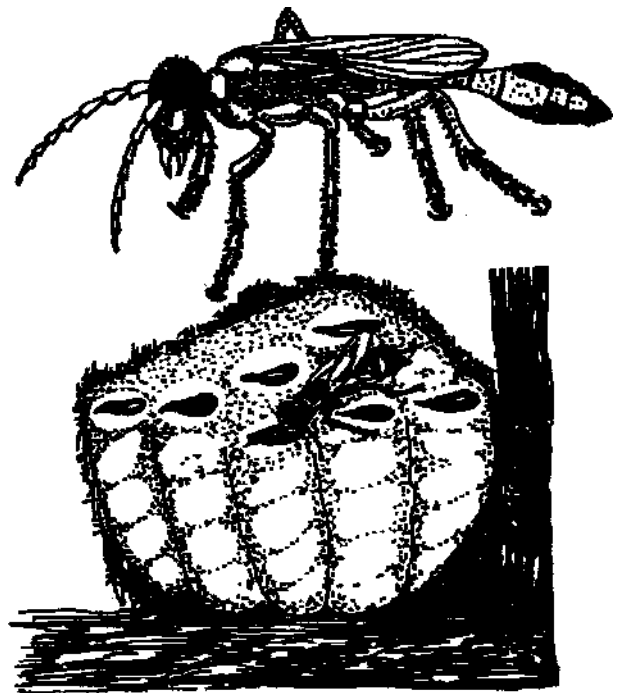
He has a distensible mouth and swallows the eggs whole. He has very few teeth in his jaws. Instead, in his gullet he has special set of teeth-like projections, which, by moving forward and backward saw through the shell of the eggs. The snake then swallows the liquid part and spits out the pieces of shell.



Fresh Food

The Mud-Dauber wasp is an extremely conscientious mother. Unlike many other insects, she doesn't lay her eggs at random and let her young ones shift for themselves. Instead she makes elaborate preparations before the young ones arrive. First she gathers mud from the edge of ponds and lakes and constructs a nursery of fifteen or more tubular rooms—one for each egg. Next she sets out to stock the larder, for the grubs that hatch out will need plenty of food to grow and they would not be able to get this by themselves. Besides, the grubs only eat spiders!

A live spider will not allow itself to be eaten and a dead spider will rot away even before the young ones emerge from eggs. The Mud-Dauber wasp solves the problem in an ingenious way. She seeks out the unfortunate spiders and stings them with surgical precision at the right spot. This paralyzes but does not kill them. Each cell is stocked with sufficient number of such living, paralysed spiders and the rooms are sealed. Thus her young ones find fresh meat, when they emerge from the eggs.



He Takes his Pick

Camarhynchus—the Woodpecker finch has nothing to do with the Woodpecker. A relative of the sparrow, he is one of the greatest rarities in Nature—a tool-using bird. Found abundantly in the Indefatigable Islands—one of the famous Galapagos group of islands in the Pacific—this curious bird is primarily an insect-eater, though he occasionally includes plants in his diet.

In feeding he uses a tool—a long cactus thorn—to dislodge insects from holes and crevices too deep for his bill to probe. When an insect comes out he drops the thorn and gobbles up the prey. Then he picks up his tool again to bring up more victims.



Mayimba: The Wily Bird

Mayimba, the honey-guide is a dingy little bird found in Africa. Its food consists almost exclusively of the larvae of bees. Mayimba has no way of getting at these, because attacking a hive calls for very special equipment and the honey-guide has no such equipment. But the wily bird has managed to find an effective solution to her problem. It gets someone who is equipped for the job to do the dirty work for it. Since the partner gets ample compensation, both are happy.

The hive-breaker is the Badger, whose thick hide and coat of coarse hair make him practically sting-proof. He is a glutton for honey, but he dislikes long treks in search of hives. When he teams up with the bird, he does not have to roam at all. He simply waits, till the Mayimba comes shrilly announcing a new “find”. The Badger immediately tramps off behind the bird, which leads on twittering loudly as it goes. Now and then the Badger grunts to show that he is following.

As soon as the hive is reached, the impregnable Badger charges, shattering the hive into a thousand bits and scattering the grubs far and wide. While he concentrates on the honey, his little bird-friend is busy too, gorging itself on the scattered larvae of the bees.

If a Badger is not available the honey-guide may even ask for help from human beings who (knowing Mayimba’s habits) are only too willing to oblige.



Motherly Toad

Pipa, the Surinam Toad, is a large and ungainly animal with an unusually flattened body, found in South America. Though *Pipa* lives wholly in water, her eggs are not laid in water. During the breeding season, the back of the female becomes soft and spongy. The eggs when laid, pass on to this spongy back and stick there. Soon they all sink completely out of sight, each into a small pit which becomes covered by a flap of skin on top. Within this protected cup, the eggs develop into tiny froglets. The water stage is completely omitted. When development is complete, the froglets push open the door of their individual nurseries and pop out!



Living Barrels

Ants are so fond of honey-dew—the sweet fluid secreted by plant-lice—that it has even been called their “national” dish! Unfortunately for them, it is not available all the year round and since they cannot build special rooms to store the stuff, it becomes a real problem.

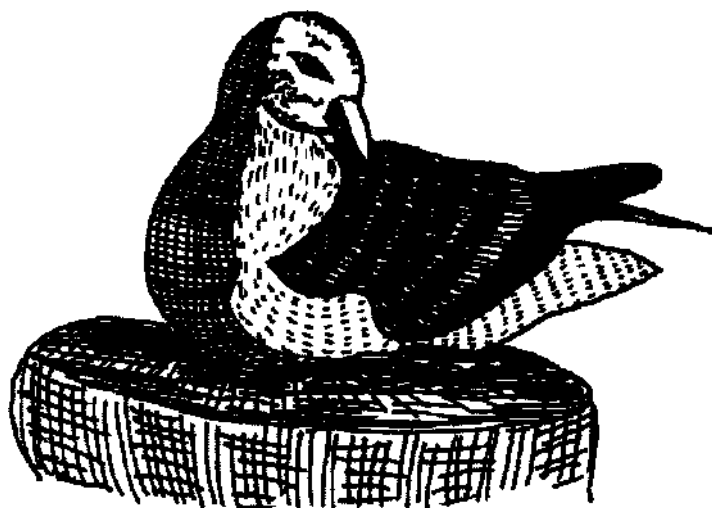
Some ants have found a way out of the difficulty, by using some of the ‘workers’ of the colony as storage vessels. These ‘workers’ have large abdomens which can expand. Other worker ants of the colony gather honey-dew from the plant-lice and fill these vessels. The living honey-pots become so swollen that they cannot even move. The workers hoist them on to the ceiling of the nest. They spend the rest of their lives clinging on to the ceiling and supplying honey-dew to the ants of the colony, who come running to these living barrels whenever they feel like having a drop!



Food and Light

Fulmarus gracialis, the Fulmar petrel, lives in the small arctic isles north of Britain. A smoke-grey gull-like bird, it is about a foot and half in length. In common with all other birds of its family, the Fulmar petrel secretes a stomach oil which has an unbearably evil smell. When attacked the bird ejects a jet of this oil through its beak—a very effective defence trick, for the petrel can squirt with great accuracy over a good distance of four to five feet.

In St. Kilda—one of the isles where it used to breed in large numbers—the islanders not only used its meat as food but had also found a unique way to utilize the foul oil of this bird. They used the bird, itself as a lamp—passing a wick through the stomach and out through the beak. This unusual lamp burned till the supply of oil in the stomach gave out.



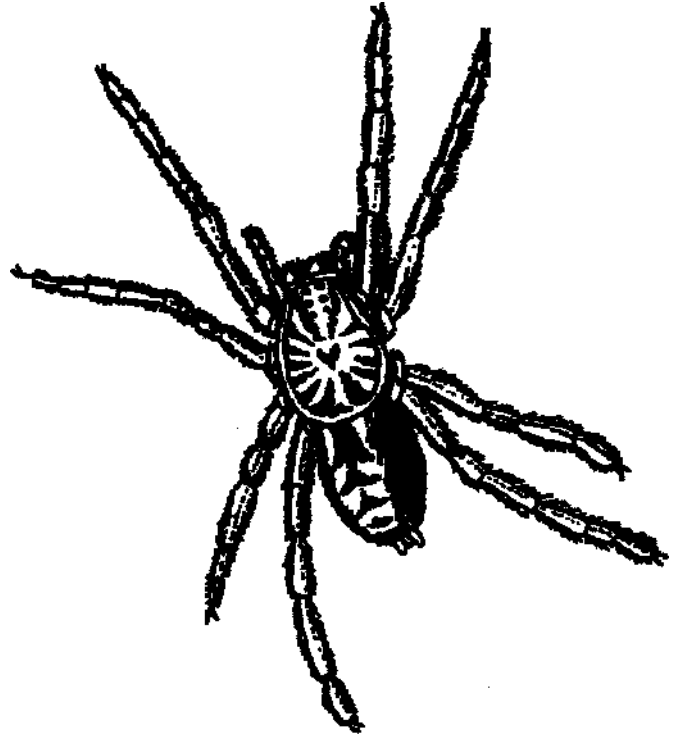
She's a Stay-at-Home

Hornbills are rather odd looking birds with huge super-structures on their beaks. These “casques” though really very light make the birds look top-heavy. The male hornbill has the unusual habit of walling up the female bird during the nesting season. Hornbills nest in hollow trees and after the female bird gets in, the male closes up the hole with clay leaving only a small opening in the middle. Inside the hollow, the female remains a willing prisoner for quite some time and during this period the male feeds her through the small opening in the middle. Only when the eggs are hatched and the young birds are ready to fly does the female break the clay wall and come out.



Joy Rides for Hundreds

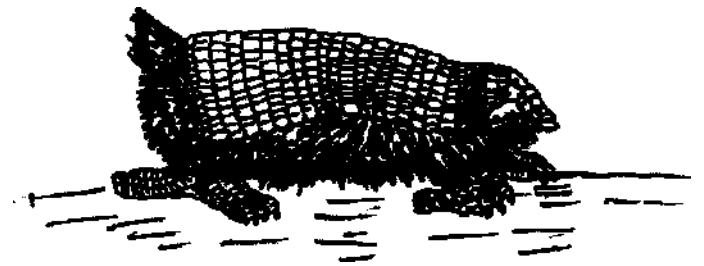
The Wolf Spider is a very devoted mother—unlike most others of her kind. She lays her eggs in a silken purse and carries them along with her wherever she goes. Her duties do not end when the eggs hatch out. The tiny wolf-spiders which pop out of the eggs—nearly two hundred of them, climb on to her back. She carries them about for six months. This is a fairly good load, but sometimes she has to take on more; because when she meets another mother wolf-spider carrying her children, there is always a fight. The children know this and all of them hastily climb off their perch and run for cover. At length one of the mothers is killed and the victor makes a meal of her. After dinner is over, all the children—not only hers, but the two hundred and odd of her “ex-opponent”, also climb on to her back! Occasionally she may meet another ‘mother’ and return home after two meals and an extra four hundred children. But this does not worry her, because the tiny spiders do not eat anything at all during this six-month joy ride.



The Smallest Armadillo

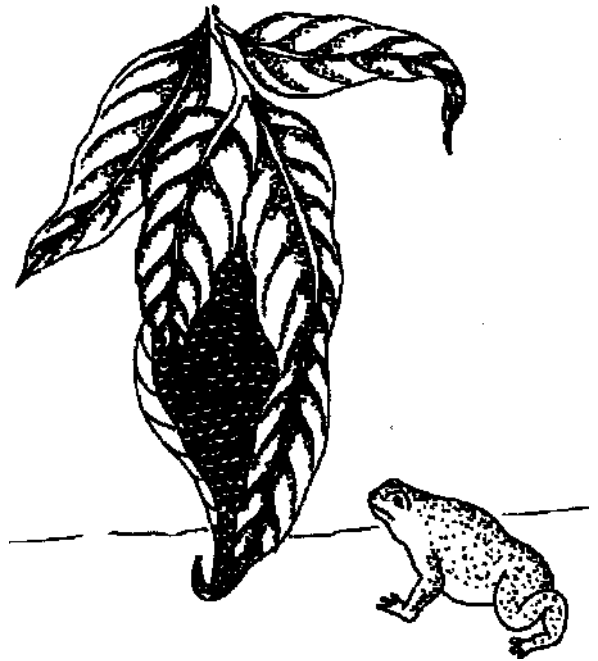
Chlamyphorus, the Fairy Armadillo is a fascinating little animal. Barely six inches in length, it is the smallest of the armadillos and also the rarest, even in its native Argentina. It has a beautifully sculptured armour shield covering the entire upper surface. While the ‘fairy’ has a conventional conical head, its rear looks very odd indeed! It appears as though this has been sawed off in the middle, resulting in a squarish tail end. This is covered with a hard bony shield.

A runnel dweller, the ‘fairy’ has many enemies and when it spots one, it scuttles into the burrow and wedges itself in. The hard shield covering the rear end blocks the opening of the burrow and forms a perfectly fitting back door, baffling the intruder.



Leafy Cradles

We are so used to the idea of frogs laying their eggs in water that it seems strange to learn that quite a number of them lay their eggs on land, in creeks and crevices, some in special foam cushions etc. A little South American frog (which has the odd name of “Wallunnkukk”) and his wife design a beautiful cradle for the eggs from leaves of branches overhanging a pool of water. As soon as the eggs hatch out, the tadpoles drop down into the water and swim away.

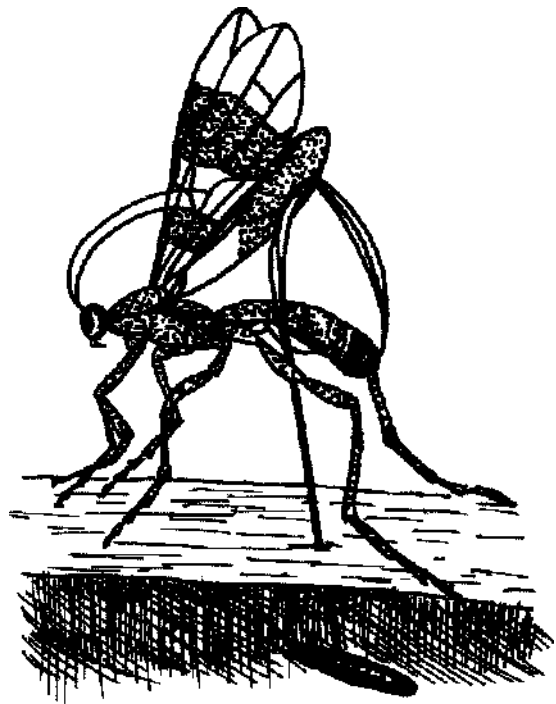


The Strange Ichneumon

The *Ichneumon* fly is not a fly at all but a wasp. It has the unusual habit of laying its eggs only in the living body of some other insect, grub or caterpillar. Since the creatures it chooses are generally pests to us, the *Ichneumon* renders us a service.

The female has a long ovipositor or egg-laying organ with which she pierces the body of her victim and inserts the eggs. Some of these flies have a very keen sense of smell and locate nests deep in the wood of trees. The ovipositors—six inches or so in length—which drill through three or four inches of wood in order to reach the caterpillar inside the wood tunnel!

The *Ichneumon* larvae hatch out in the living bodies of the grubs and thus have an abundance of food from the very start.

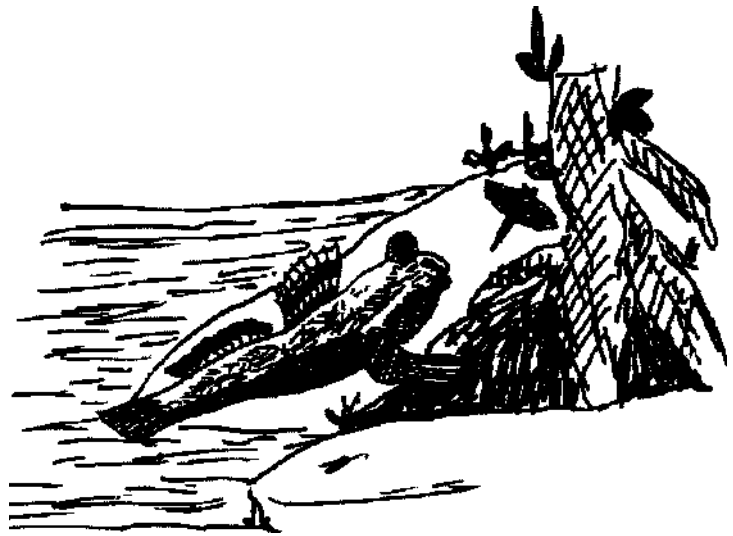


The Mud Skipper

Periophthalmus, the Mud Skipper, is a grotesque little fish with a big clownish face and huge goggle eyes. Strangely enough, he is really not comfortable if he has to stay too long in water. He prefers to clamber ashore and lie basking in the sun, like a lizard, with just his tail dipping in water. Since he can ‘breathe’ with his tail, he can stay out for hours on end—snapping up passing insects, which would be inaccessible to him in the water.

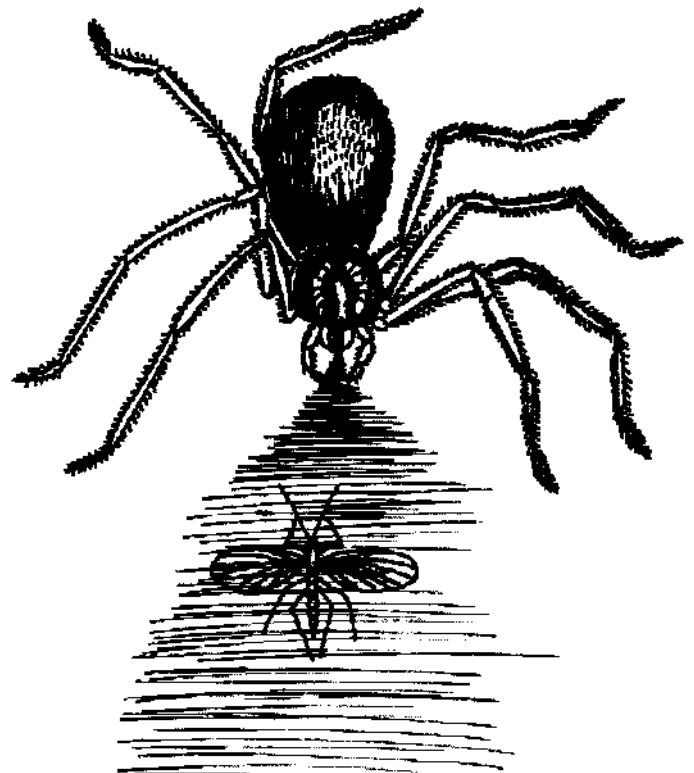
Whenever the mood takes him, he literally walks off anywhere using his arm-like pectoral fins. These, which end in webbed ‘fingers’, facilitate movement on land. He can leap and skip along at a good speed. If danger threatens, he will jump into water, but takes care to keep to the shallow parts, never venturing out into depth.

His huge eyes are set close together on his head and unlike most other fish, can see well both in and out of water. The eyes are mounted on short stalks and can be rotated in all directions, so he can see on all sides without turning his head. In water, these fish look queer, with only the stalked eyes visible above the surface, skimming at great speed!



Sticky End

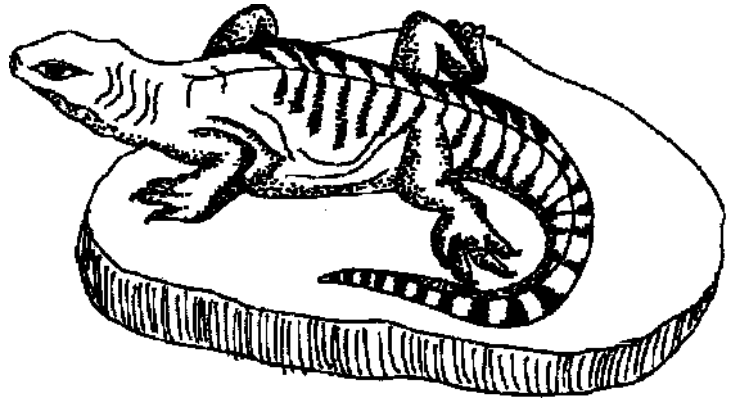
Scytodes, the gum spitting spider, doesn't invite its prey ‘to walk into its parlour’. In fact, it does not even build a web. The method used by this beautiful black and yellow creature is unique, for no other spider uses gum to catch its victims. When *Scytodes* goes out to forage, it ambles along slowly and if it spots a fly, it stops quite some distance away from the victim. Before the insect realises the presence of danger and flies off, a shower of gum drops begins to cover it. *Scytodes* has started spitting gum at the fly! The spider even moves its head right and left so that the prey becomes hopelessly entangled, the gum congealing quickly into sticky threads. The more the victim struggles, the more entangled it becomes. When at last exhausted it gives up the struggle, *Scytodes* moves over for his dinner.



A Swell Guy

Sauronwlus, the Chuckwalla is a large lizard, nearly a foot and a half in length. It is a desert dweller, dull rusty brown in colour, which harmonises perfectly with the desert background. It loves the heat and if the temperature drops, it will stop eating and will literally starve to death. It has a tough scaly hide sagging in loose folds, giving it a clumsy, ungainly appearance. But these folds, though ugly, help the Chuckwalla to escape from its many enemies.

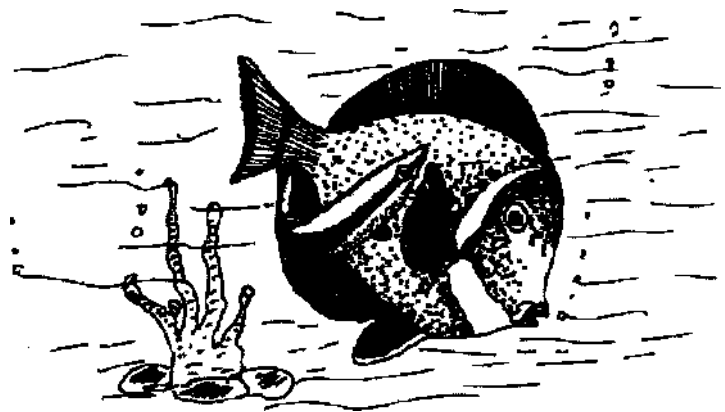
The lizard spends much of its time sunning itself on the rocks. If an enemy, like the desert hawk is sighted, it will dart into the nearest crevice and blow its body up like a balloon—till the scales of the skin press tightly against the rock wall. Once wedged in this fashion, it is almost impossible to dislodge. When the danger passes, the lizard comes out—deflated—its normal baggy self again!



Aquatic Beauty Parlours

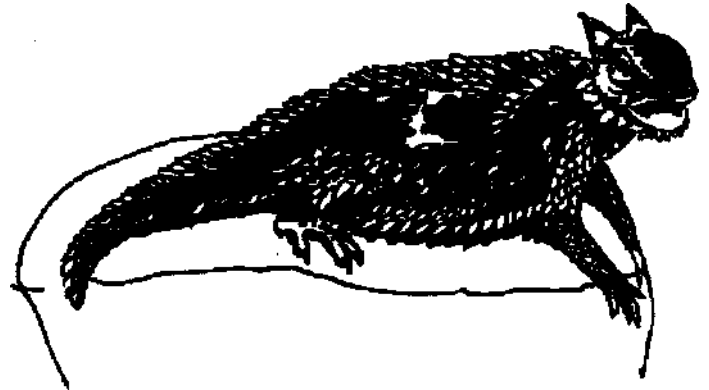
A regular beauty parlour is run by some species of small fish in the Eastern Pacific coral heads. Many of these like the blueheads, neon gobies, wrasses etc., remove parasites and other detritus from the gills and heads of larger fishes. These ‘cleaner’ fish tend to stay in particular areas, which become recognized as ‘cleaning stations’. The larger fish make periodic trips to these beauty parlours, which are very popular indeed. As soon as one fish moves away after being attended to, another moves in. In some cases, like the Surgeon Fish, the “customer’s” colour changes to a dark brown as soon as she settles down. This seems to be the signal for the cleaners to start work.

The larger fish could easily swallow the “cleaner” fish in one gulp, but they evidently are well aware of the importance of the service rendered by these beauticians.



The Horned Toad

The Horned Toad is not a toad at all, but a lizard. It is so called because it has a peculiarly flattened and broad toad-like body, which is covered with spines. There are specially large 'horns' projecting backwards from the head, hence the name. These little reddish brown animals are found abundantly in the desert regions of Mexico spending much of their time buried in sand or snapping up insects. They love warmth and if the temperature drops they will not eat even ants, which they relish most. They also have a strange habit when annoyed or frightened, start squirting a thin stream of blood from the corners of their eyes! They are easily captured and if handled carefully they become tame and make excellent pets.



Home, By Gum

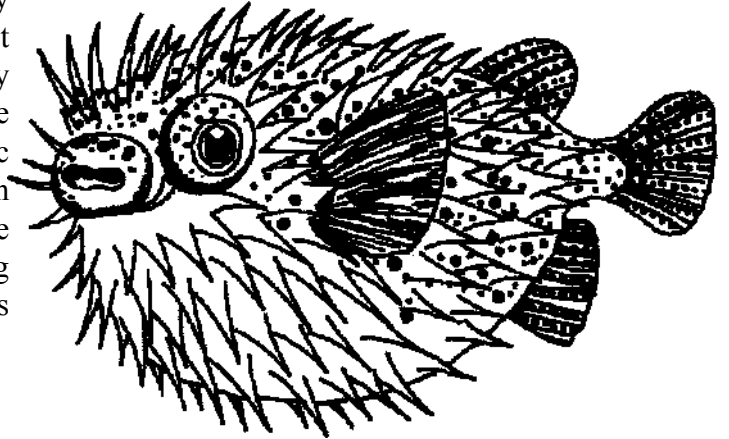
Oecophylla—the red 'Tailor Ants' don't live in nests in the ground like other ants. They live in trees binding leaves together to form a roomy nest. The adult ants have no thread to sew the leaves with but the young ant larvae can produce silk from special glands to produce a cocoon when they pupate. The tailor ants use these larvae to make and repair their leafy homes.

When making the nest some workers hold the edges of two leaves together, while some others hold larvae in their jaws and squeeze them. Silk comes out like paste out of a tube. This sets immediately binding the leaves together. The larvae are passed to and fro like shuttles between one leaf and the other till a solid bond is made. The exhausted larvae are then put back to recover.



Unattractive Fare

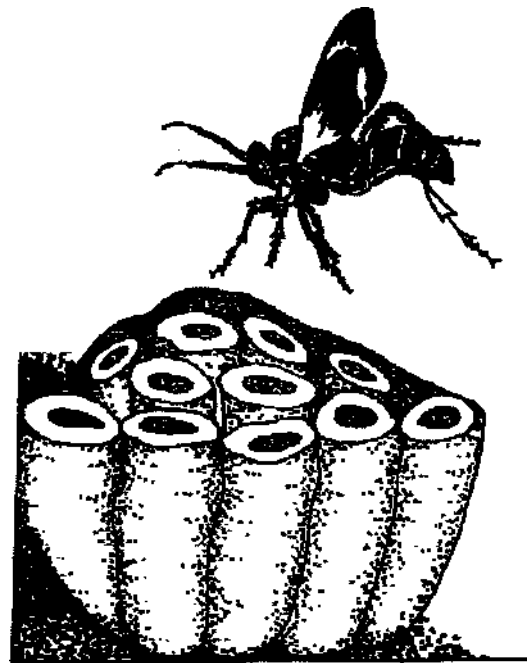
Normally the Porcupine Fish does not look very different from other fish. But when it is alarmed it undergoes a most extraordinary change. It actually swells—inflating its body to several times its usual size by taking air or water into a special bladder-like sac connected to its food pipe. Hundreds of spines which normally lie flat on its back become erect and make the fish look like an animated pincushion. Any intending enemy seeing this sudden transformation hastily backs away in search of less dangerous food!



The Housebreakers

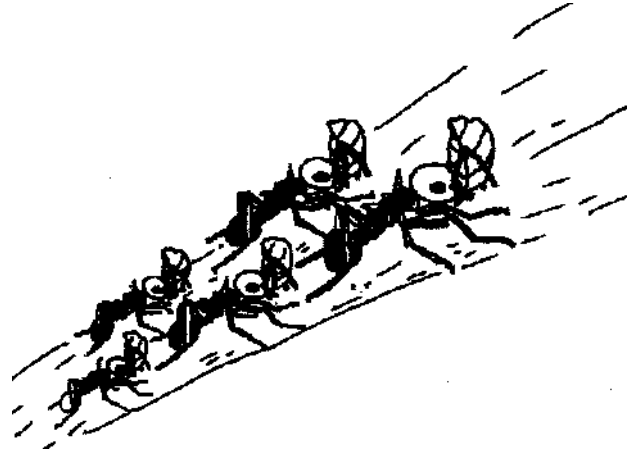
Chalybion, the Blue Burglar, is a wasp, very much like the yellow-legged Mud Dauber, only it is steel blue in colour. Blue burglars are villainous housebreakers, causing a number of tragedies, in Mud Dauber nests.

When the Mud Dauber, like the good mother she is, stocks the larder with spiders for her unborn young, seals the cells and flies away, the Burglars arrive on the scene, armed with water they collect from nearby puddles. They soften the nest wall with this water and break it open. Then they callously throw out all the spiders and the Mud Daubers' eggs, and give the cells a thorough cleaning. They stock the cells with a new supply of spiders and lay their eggs on them, seal the cells for the second and last time and fly away!



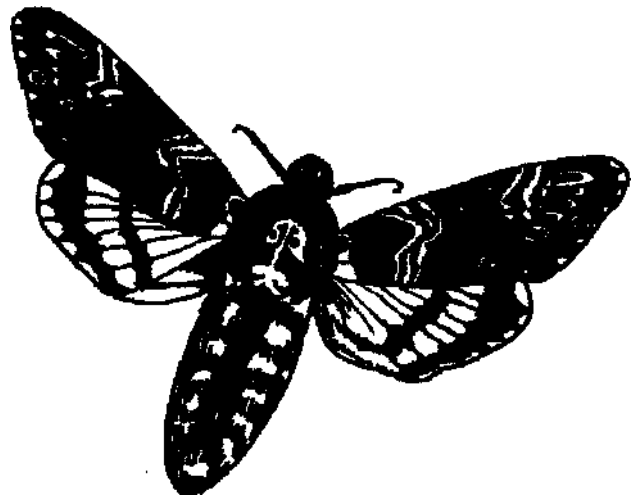
Parasol Parade

Atta, the leaf-cutting ants, are also called Parasol Ants, because they cut out leaves and carry them about like tiny parasols. These, however, are not intended as sunshades, but are used as a compost heap on which the ants grow a kind of fungus. This fungus is the only food that they eat. There are special gardeners in the nest, who are experts at fungus growing. The gardeners never leave the nest or do any other work, except looking after the fungus plots, which look like bits of brown sponge. The job of collecting the leaves for manure is done by the other workers, who march out every day in search of suitable plants. When one is found the ant cuts out a semicircular piece very neatly, and holding it like a parasol returns to the nest and makes it over to the gardeners. Sometimes an ant may not go hunting at all, but may steal the leaf of a returning worker and run back to the nest. The workers seem ashamed to reach the nest empty-handed. If an ant does not have a suitable leaf, it will pick up even a piece of paper from the wayside and carry it to the nest!



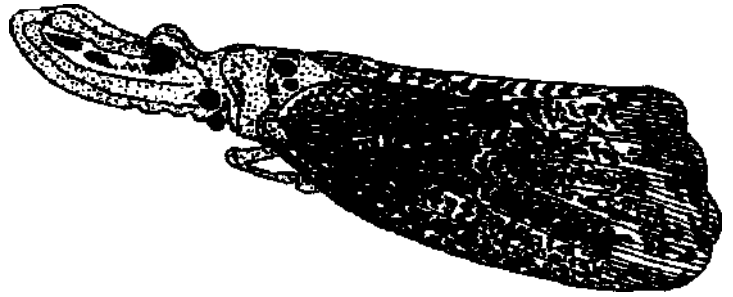
The Death's Head Moth

The likeness of a skull and crossbones on its broad thorax, giant-size eyes that shine brightly in the darkness, and a shrill squeak are the features which have made the Death's Head Moth unpopular, for its very presence is supposed to be a sign of impending trouble and bad luck. Actually this handsome moth does no harm to human beings though it does steal honey from beehives. The shrill squeak of the Death's Head is like that of the Queen Bee, and the moth is said to make clever use of this fact. When it approaches a hive it squeaks deliberately to trick the guards into thinking that the queen calls, and when they go in to find what she wants, the moth helps himself to honey without any hindrance.



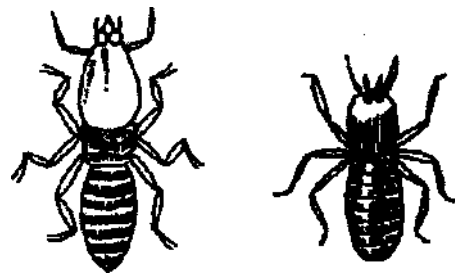
Laternaria

The *Laternaria* was mistakenly named “Lanternfly” for it is neither luminous nor is it a fly. This large plant feeding bug from South America is also very aptly called “Alligator bug”. Projecting in front of its real head, the insect has a false “head”. This sham head has a striking resemblance to the head of an alligator—complete with a counterfeit mouth with a set of ivory white “teeth” a pair of false eyes and false nostrils, exactly like those of miniature alligators. The insect’s enemies, chancing on it suddenly, run off with great speed to escape from these apparent “baby alligators”.



Soldier Termites

Trinervitermes, the Snouted Harvester Termites, have odd-looking snouted soldiers which don’t have powerful jaws for fighting their enemies— but they have developed a more effective means of chemical warfare. They have a large head with a special frontal gland which secretes a sticky poisonous fluid. A group of soldiers always accompany workers of their colony when they go out foraging. The soldiers keep a vigilant watch and promptly go into action shooting fine threads of the secretion at approaching enemies which soon beat a hasty retreat.



Carpenter Bee

Xylocopa the Carpenter Bee is related to the honeybee, but unlike its cousin, lives alone. A large and beautiful insect, the mother carpenter bee bores a tunnel in wood with her strong jaws. She then gathers some pollen and mixing it with nectar makes a small ball of 'bee-bread'. On this ball she lays an egg. She then makes a partition by shredding wood from the sides of the tunnel and gluing the chips together with her saliva. She makes several such cells, each with a little beebread and an egg. The larvae which hatch out live on the beebread. In about two months, they become fully grown and bite their way out of the tunnel.



Hermit at Home

Eupagurus, the Hermit Crab, has to struggle not only for food but for residence as well. As he does not produce a shell he tucks himself into an empty snail shell. He examines the shell carefully for size and comfort before taking up residence. As he grows, however he has to find a bigger home, for the old one becomes too tight!

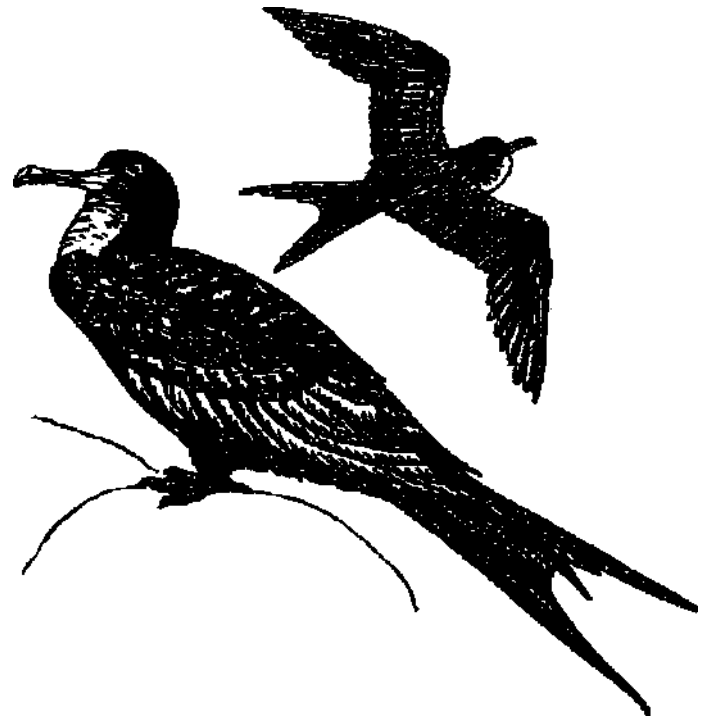
Some of the 'Hermits' solve this constant changing problem by planting anemones, called *Adamsia*, on the shell. After sometime these dissolve the shell, so that the hermit's housing problem is solved forever and he lives within a comfortable cloak of anemones! In return for a share in the crab's food and a care-free roving life, the anemones also warn off the crab's potential enemies by waving their stinging tentacles.



Frigate Birds

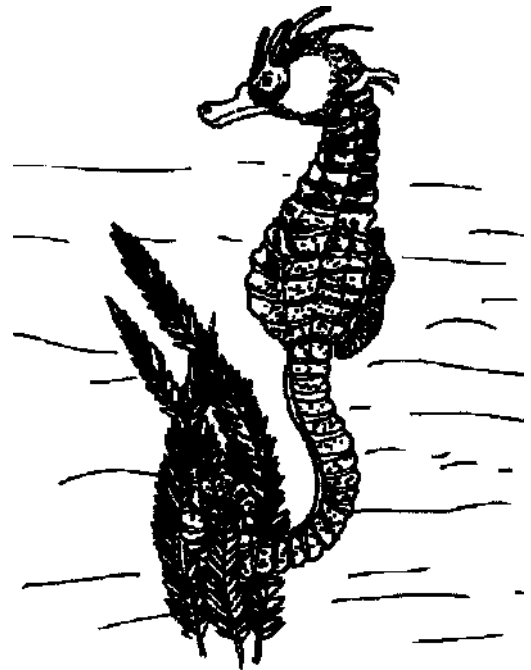
A wing-span of over seven feet, a black body with a green sheen on the back, a long forked tail, a strong hooked bill and an inflated brick coloured pouch below the throat, combine to make Frigate Birds a magnificent sight. The fastest among oceanic birds, they are great bullies and harass smaller birds into disgorging fish or other prey they have captured. The frightened bird drops the fish when threatened and the Frigate immediately swoops down to catch and swallow the booty before it strikes the water!

Oddly enough the Frigate bird's enormous powers of flight are of no use to it should it happen to alight on the surface of water, for it cannot take to the air again and starves to death.



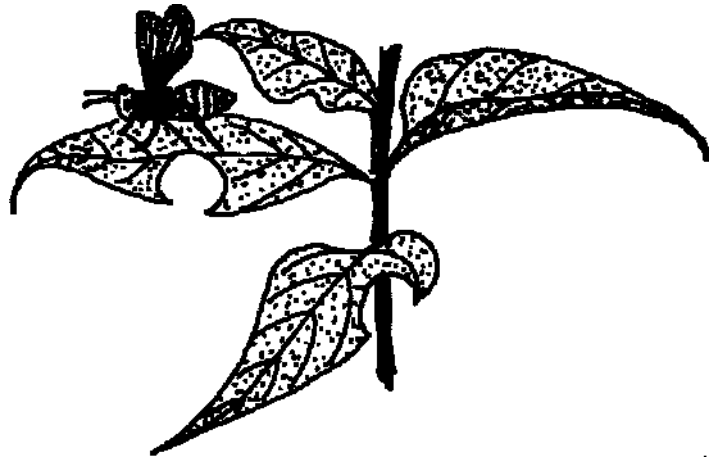
This Horsey keeps his Tail down

Hippocampus, the sea-horse is a fish. He looks like a tiny living chessman with a face very much like that of the horse. He seldom grows more than seven inches, swims upright slowly and rather laboriously and prefers to rest among sea-weeds holding on to them with his long curling tail, where it is almost impossible to see him, for his colour and shape blend with the weeds. The male is a devoted father. He has a pouch in his abdomen, in which he carefully carries about two hundred eggs laid by the female. After about forty days, the eggs hatch out and tiny miniature sea-horses pop out of the pouch and swim away.



Tailor-made Nest

The Leaf-cutter Bee is about the same size and shape as the honeybee, but it lives along in nests lined with bits of leaves and flower petals. The mother bee is an expert worker. Like a tiny dressmaker she cuts out with her jaws precise oval pieces of leaves or petals quickly. Gathering these up she flies to her burrow, tailors the piece into a tiny thimble and coves it with a circular leaf bit. A number of these thimbles are fixed overlapping one another. In each she lays an egg and a little ball of pollen. The young bees hatched out of these eggs feed on the pollen and find their way out, when fully developed.



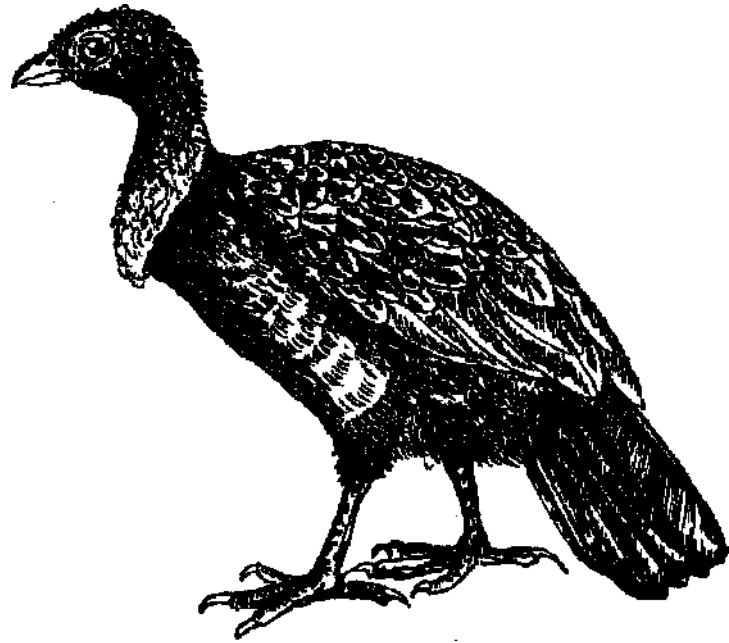
The Sea-Cucumber

Holothuria, the sea-cucumber, is clumsy looking. Shaped rather like cucumbers these creatures are found abundantly hi mud-flats creeping about the ocean floor. Related to the starfish and the sea-urchins, they have developed a very unmannerly but extremely effective defensive trick. When an enemy approaches, the sea-cucumber first throws out some slime threads to entangle the enemy. But should this fail, the animal simply ejects all its internal organs. While the enemy is making a meal of these ejected organs, the sea-cucumber retires to a safe place and simply grows a new set!



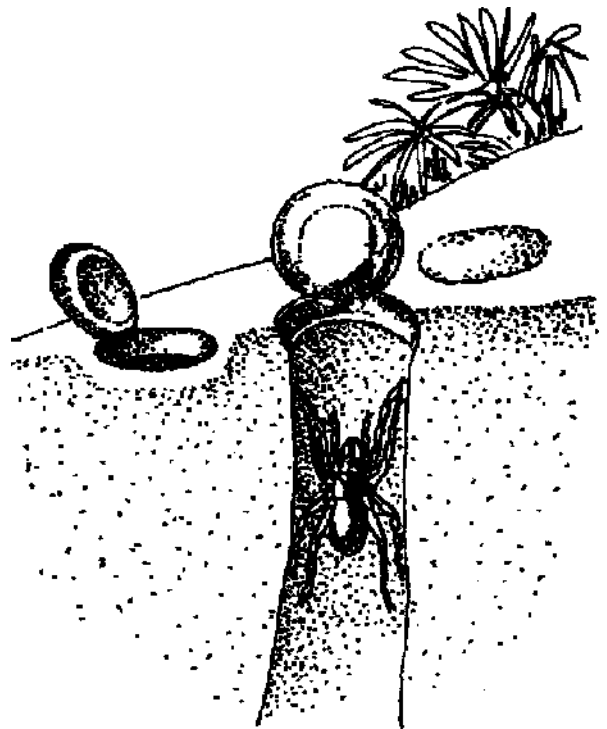
Community Incubator

Megapodes, the Brush Turkeys of Australia are short winged birds having large feet with powerful claws. These birds do not brood their eggs individually as other birds do. Instead they use the heat of the sun and the warmth given out by rotting vegetation to incubate the eggs. They build a sort of community incubator by kicking up fallen leaves, sticks and all kinds of litter. Some of these rubbish heaps are over fifteen feet high and nearly fifty feet in diameter. Inside this conical mound the eggs are laid and a couple of birds stand by to look after the heap. The temperature of the mound is tested from time to time by the cock thrusting his neck into the mound and he regulates the temperature either by adding or removing rubbish. The young eventually find their way out of the mound and fly off almost immediately for, unlike the young birds, which have no feathers at birth these have a complete set!



Trap Door Spider

The Trap-Door Spider weaves no elaborate web but lives in a special 'nest' somewhat like a miniature rabbit burrow. The spider digs a hole *in* the earth, with its jaws, about a foot or so in length and lines the inside walls with fine silk. Next it makes a door with alternating layers of silk and soil, which is hinged to the mouth of the burrow, fitting it tightly like a cork. The top of the door is carefully camouflaged with grass, sand etc. These spiders are nocturnal hunters. A small web is made close by and as soon as an insect is caught in the web, the spider carries it to the burrow and closing the door, retires to enjoy its dinner!



Fighting-Fish

Betta pugnax, the Siamese Fighting-Fish, does not get his name for nothing. In the breeding season, he gets extremely pugnacious and will attack not only rivals, but even his own reflection in a glass. When belligerent the very colour of his body changes from a drab greyish green to an iridescent blue or red. The fighting goes on till one of the fish reach exhaustion. These fish are often bred for fighting and large bets are taken on the results. Such fights are said to last for hours on end sometimes through a day and a night.

Though he is a ferocious fighter. Betta is a devoted father. He builds a nest out of bubbles in which he puts the eggs laid by his wife. He then stands guard over it till these are hatched.



The Cuttlefish

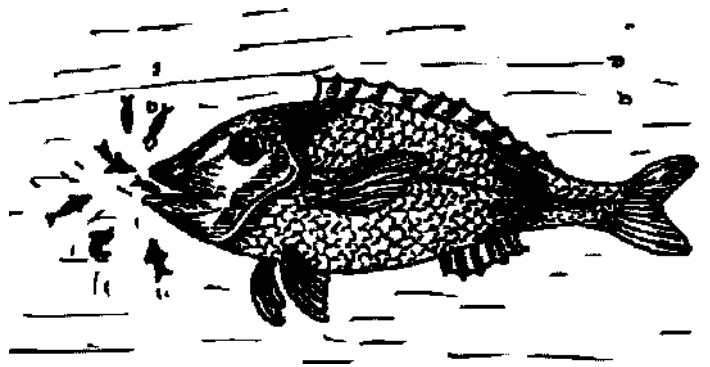
Jet propulsion and smoke-screen technique are nothing new to Sepia—the cuttlefish. These ten-armed marine animals have been making use of these for a long time now. Water is taken into the body and, when Sepia is excited, it is suddenly expelled in a jet through a tube called the siphon situated at the base of the head. The force of ejection thrusts the animal in the opposite direction at great speed.

While thus jetting away from the danger zone in a hurry Sepia also discharges a black inky liquid from a special gland in its body. The ink spreads, mixing with the water, and provides a very effective smoke-screen to confuse the enemy while Sepia speeds away to safety.



Paternal Mouthful

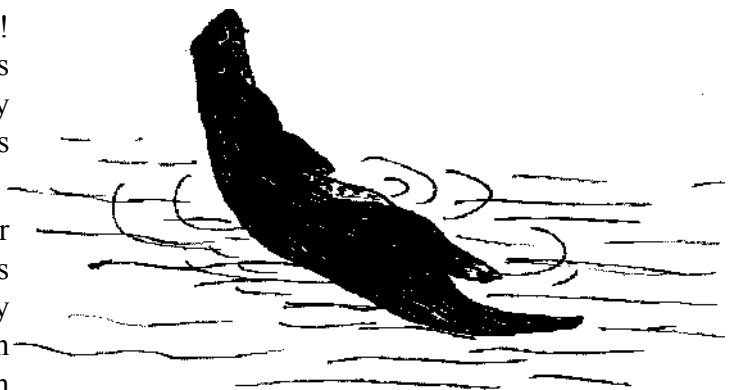
Among certain fish, the father takes on the duty of protecting the eggs and looking after them till they are hatched. *Tilapia* accomplishes this job by taking the eggs into his large mouth and holding them there for a week or more till they are hatched. During this period, of course, he cannot eat anything and though he is starving he never swallows the eggs. Even after they are hatched the young fish spend first few nights inside and then quite some days afterwards they come out learning to care of themselves but rush back into their fathers mouth at the least sign of danger.



Hibernating Fish

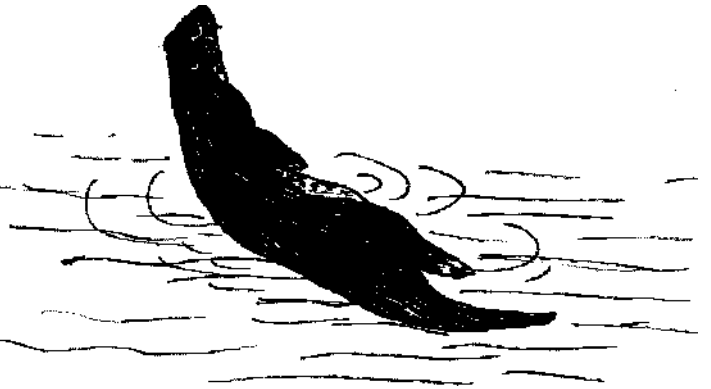
Protopterus, the African Lung-fish, is the only fish which can live out of water for as long as four years! When the streams and ponds dry up in summer it burrows into the mud at a depth of a foot or so, and makes a cosy little bedroom of mud and mucus it secretes. Then it curls up for a nice long sleep, which lasts all summer.

Unlike other hibernators *Protopterus* during its summer sleep, does not use stored fat for nourishment but utilizes its own muscle tissue. Thus an encysted fish not only loses weight but actually becomes smaller in size! When the rains come and wash away the walls of its bedroom the fish comes out and soon regains its former weight and length.



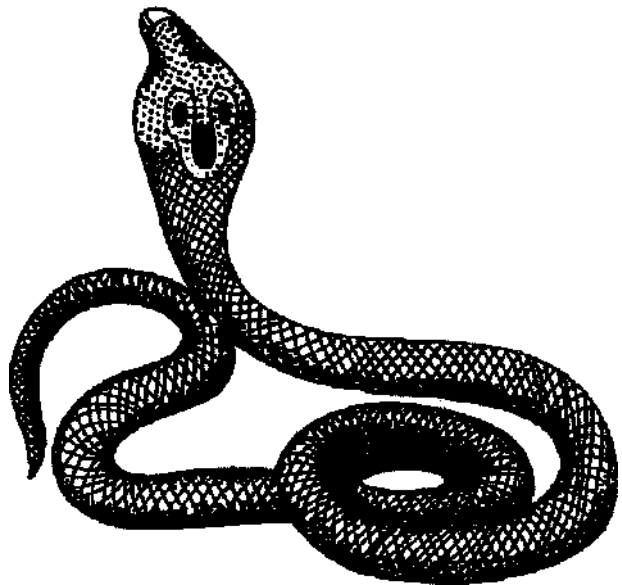
The Sea Otter

One of the most amusing marine animals is the Sea Otter. About four to five feet in length, these beautifully-furred animals have the habit of idly swimming about on their backs with their hands folded on their chests, propelling the body with their webbed hind limbs and the tail. If the light is too bright they put their hands over their eyes to shut off the glare and doze peacefully. The Sea Otter eats fish, oysters and other sea animals but he likes the spiny sea-urchin best. Swimming, on his back, he uses his chest as a dining table. If the prey has a particularly tough shell, the otter dives to the sea bottom and gets a flat stone. Then on his back once again, he puts the stone on his chest and cracks the shell open by hitting it against the stone!



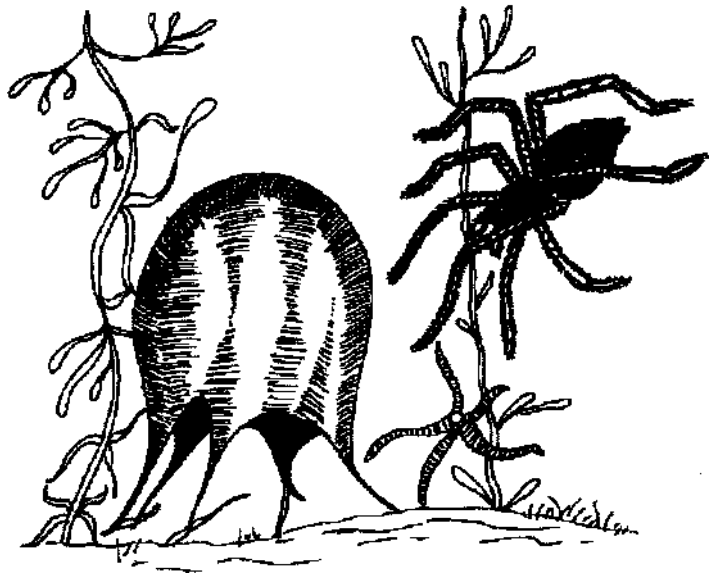
The Spitting Cobra

Sepedon haemachaetes, the keel-scaled spitting cobra of Africa is called “Spoewslang” by the Boers, because of its habit of spitting poison at its enemies. Also called Ringhals these dingy black snakes with a white ring across the throat are amongst the smallest cobras being only about four feet or so in length. At the least provocation the poison glands are compressed and the venom is ejected with considerable force out of specially designed fangs. The snake rears directing the head upwards so that the poison jets are aimed at the eyes. So accurate is the aim that even at a distance of six feet or more they seldom miss the target. The poison is said to be virulent and to cause great pain and fever.



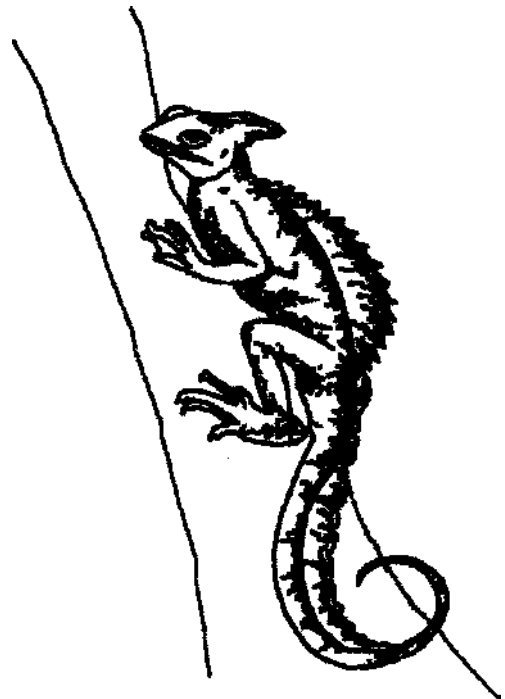
Air Conditioned

Argyroneta aquatica—the water-spider—is a remarkable creature. Though it lives in water it needs atmospheric air to breathe. To keep a steady supply of air available the spider constructs a special water proof ‘house’ of silk under water. This tent-like structure is filled with air by the spider which makes several trips to the surface of the water gathers small globules of air, dives to the tent house and releases them there. The tent is inflated and becomes bell shaped. Inside this tent the spider and its children live quite comfortably though completely surrounded by water!



He's more for Water than Fire

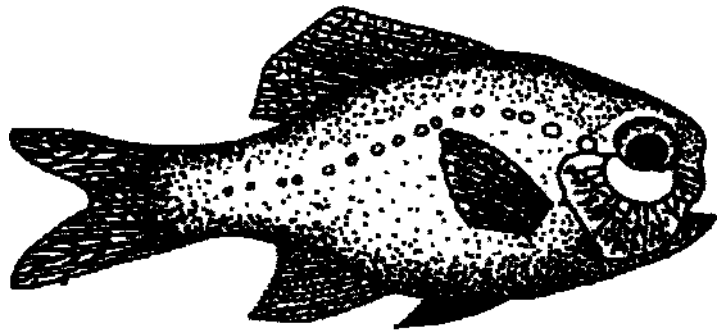
Why the Basilisk lizards of South America were named after the legendary fire breathing monsters, which could frighten people just by looking at them is not known. These light coloured lizards are completely harmless. They have the peculiar habit of rising on their hind legs when in a hurry and running along—not only on land but on the surface of water as well! In Mexico they are called *Passorios*, which means crossers of rivers. This is because the Basilisk lizards like to rest on branches overhanging rivers and at the slightest alarm drop on to the water and run away at great speed!



Sea Lights

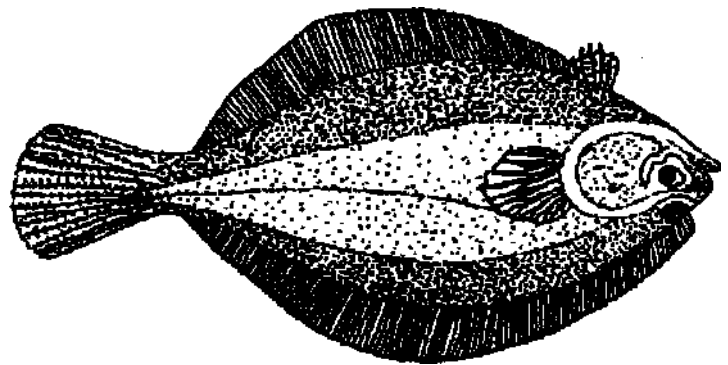
Photoblepharon, the fire-fly fish, is so called because it swims about flashing light like some huge aquatic fire-fly. These little fish are only about four inches in length and are found among coral reefs in the Banda Sea. They carry under each eye a special light organ which is bigger than the eye itself. This “torch-light” shines with a bright light given out by a special kind of luminous bacteria which live in the light organ. The bacteria are fed by the fish and in return they provide light, which the fish can “switch” on or off through a moveable flap covering the torch.

People of Banda Sea Isles have found an excellent use for these “torch-lights”. They make good bait for night fishing!



Meet the Flounder

The Flounder lives mainly on the sea bottom—the flat part of its body on the ground and both its eyes staring up. The odd thing about the flounder is that its body is so flattened that the fish is actually lying on its left side. When the eggs hatch the young flounders have symmetrical bodies, normal eyes on either side, like all other young fish, and they swim on the surface of the water. After some time the body begins to flatten and one eye starts to migrate to the top of the head and then over to the other side. The fish now sinks to the bottom. Another interesting thing about the Flounder is its ability to change colour according to its background. Normally it is greyish olive, marbled with brown. But the colour may change according to the background. If you put the flounder on a chess-board, it will try—quite successfully too—to change its colour to conform with the black and white squares.



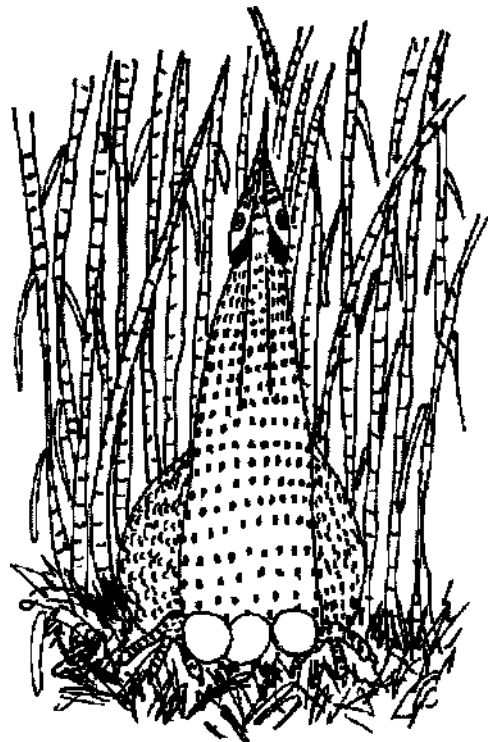
Skunk Defence

The Skunk's weapon of defence is perhaps the most effective in the animal world. When disturbed he discharges extremely pungent and malodorous fluid at the intruder to distances of eight to ten feet. The amber coloured liquid squirted from special glands at the base of the tail, causes great pain and even temporary blindness if it gets into the eyes. The stench lasts for months so that clothes once soiled are practically useless. To the credit of the skunk it must be said that he gives fair warning before he inflicts this punishment, by stamping its foot, hissing etc. Skunks make charming pets, if descended.



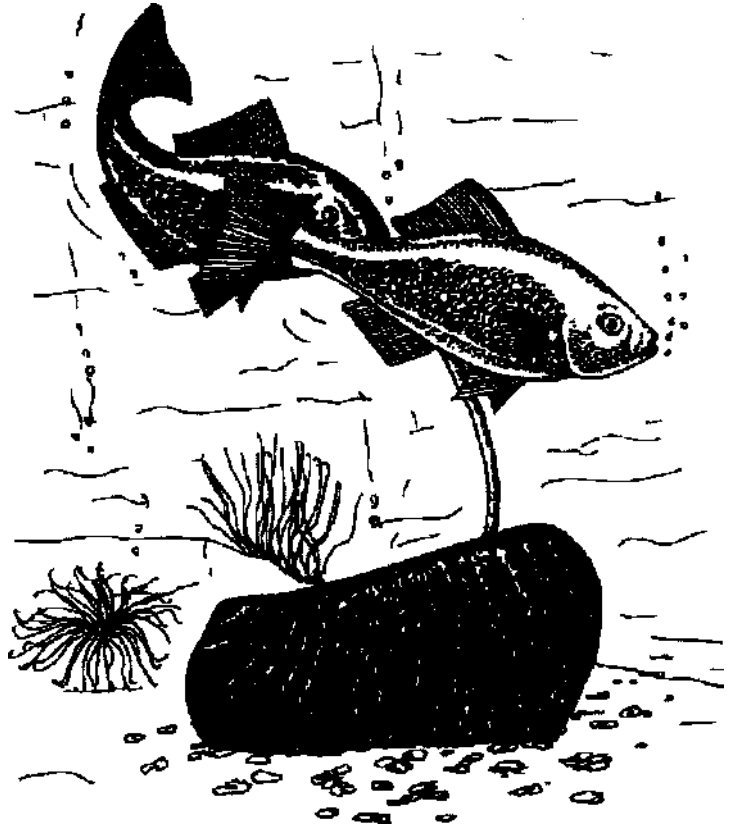
Expert at Camouflage

Betaurus, the bittern, is master of the art of camouflage. A relative of the heron, it lives in marshes, looking for frogs and fish concealed by the rushes. The body is coloured like the reeds among which it lives. When hawks and other predators approach, the bird 'freezes' with its body stiff and upright, neck stretched back, and head pointing upwards. The dark stripes, running down the neckfeathers, help the motionless bird to merge harmoniously with the perpendicular reeds and provide excellent camouflage. If the reeds start swaying in the breeze, the bittern also sways from side to side in the same manner! The eyes are so arranged that the bird can see clearly from under the tilted beak!



Mutual Aid

Rhodeus, the bitterling, is a small fish found in Central European rivers. During the breeding season, the female bitterling develops a special organ formed of a long tube with a smaller structure at the base. She introduces her eggs by means of this organ into the gill chambers of the fresh-water mussel. The eggs develop inside the mussel's gill cavity and hatch out in about four weeks' time. The mussel, however, does not provide this safe nursery service for nothing. When the young bitterlings are ready to leave, the mussel sheds its own eggs and the young mussels fasten on to the fish which carry them far and wide.



Terror from the Deep

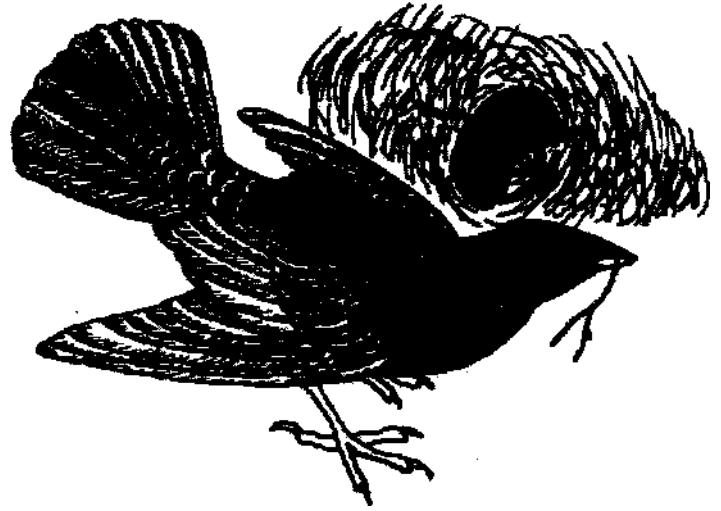
Phronima, a cousin of the prawn lives in the deeper regions of the sea. These small creatures have beautifully transparent bodies which belie their violent habits. *Phronima* females, who come up during the breeding season heartlessly devour the brilliantly phosphorescent *Pyrosoma* (the name means fire body). *Pyrosoma* is a colonial animal consisting of a large number of individuals attached together. The *Phronima* females, eating individuals one by one, will clean up an entire *Pyrosoma* colony till nothing is left but the barrel-shaped bag of skin to which the animals were attached. Even this is not wasted. *Phronima* uses it as a cosy resting place for herself and a nest to rear her brood. She even swims about pushing the barrel full of young—for all the world like a mother wheeling her babies in a pram!



Interior Decorators

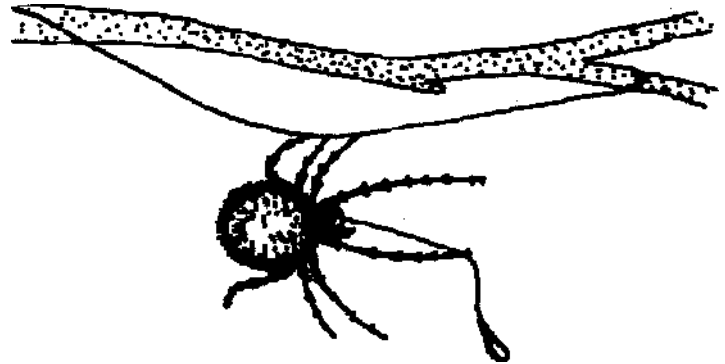
All the eight kinds of Australian Bower Birds are great builders. They build special bowers which are places for courting and playing. Some of these structures are quite large and elaborate and the birds take a great deal of trouble to decorate these bowers, collecting shells, pieces of glass, brightly coloured flowers, feathers etc.

The Satin Bower Bird goes one step further and actually paints the walls of the bower—using a frayed piece of bark as brush! For paint it uses powdered charcoal mixed with its saliva or the juice of blue berries. Blue is its favourite colour, probably because it matches its own blue eyes, and even in decorating the bower, the bird prefers to choose blue fruit, flowers, feathers and even blue paper bits!



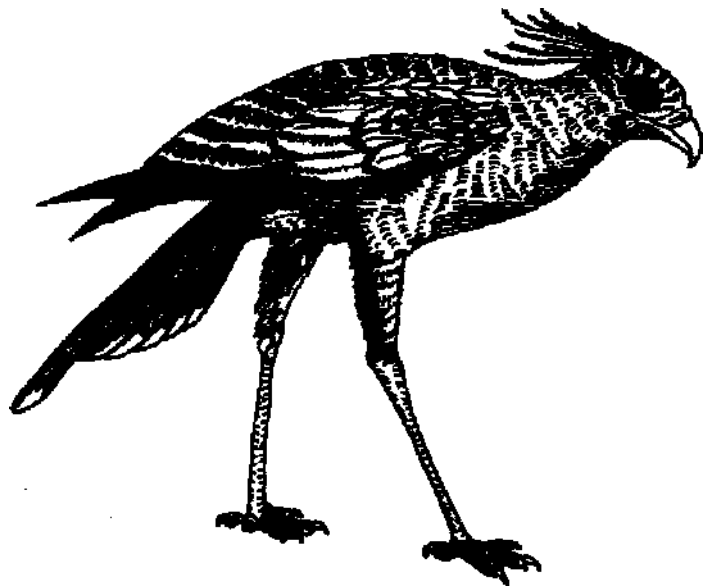
Moth Trapper

Dicrostichus magnificus of Australia is a really good-looking spider, with a rare beauty and delicacy of colour. Fairly large in size, the body is a lovely cream with an intricate network of lines and dots with colours ranging from primrose yellow to salmon pink. She is very choosy about her food, and feeds only on a particular type of moth—that too only the males! To catch these she uses a line about an inch and a half in length with a viscid globule at the end. Holding this in her foreleg she waits for her victims. These soon arrive, probably drawn by the scent of the female moth that the spider gives out! When the moth is near, the spider whirls the globule which strikes the moth and holds it fast. She then kills the struggling insect and starts dinner.



Secretary Bird

Tall and slim, with long legs and dressed in a business-like grey and black. The Secretary Bird is a very secretarial looking bird indeed! Only antique touch is the stroke of plumes projecting from back of its head—very much like the quill pens sticking out behind the ears of secretaries of olden days! In the open veldts of Africa the Secretary Bird keeps down vermin, like rats, insects etc and is famous for its ability in dealing with snakes. The striking power of its legs is devastating and the bird stamps on the snake with such incredible swiftness that even the most alert reptiles seldom get a chance to strike back. In some parts of Africa ranchers tame these birds and keep them for the destruction of pests, particularly snakes.



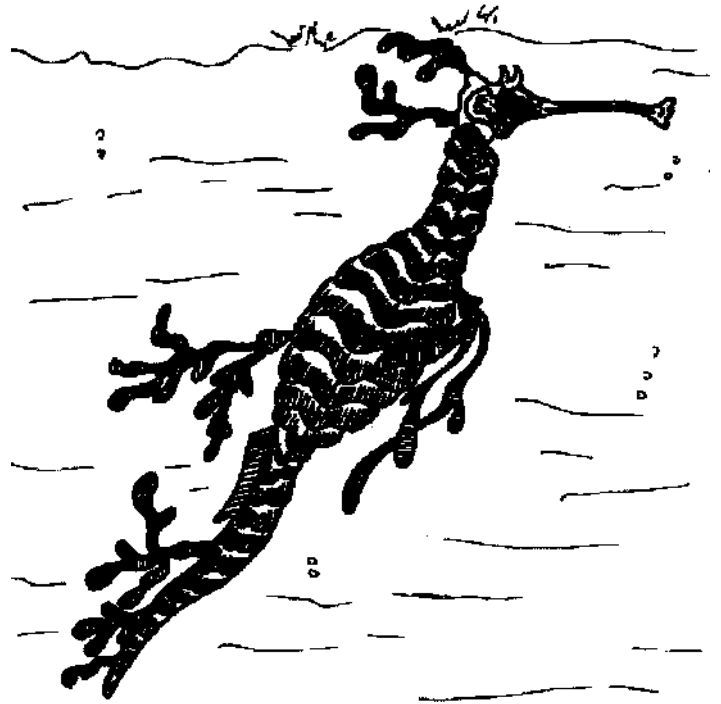
In Reverse

Pseudis paradoxa, the paradoxical frog, is a very remarkable frog indeed! While in all other cases, small-sized tadpoles grow into larger adult frogs, in *Pseudis*, the opposite happens! The tadpole here reaches nearly a foot in length and when it starts changing into the adult form, it shrinks, growing smaller and smaller! By the time it becomes a froglet, it is just an inch and a half in length.



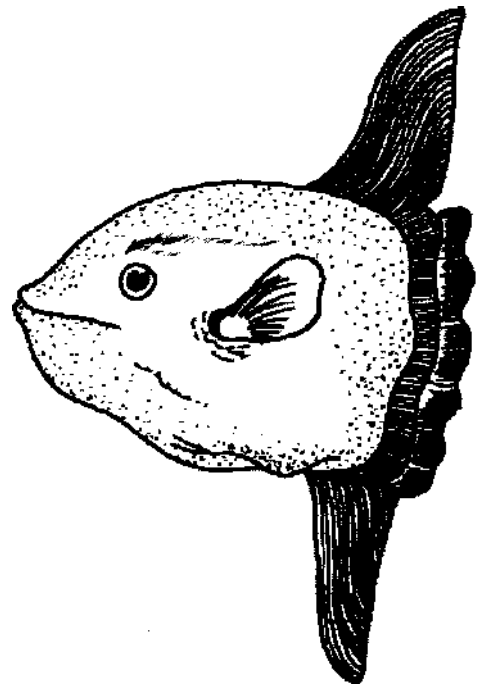
Camouflaged Dragon

Phycodorus eques, the Leafy Sea-dragon of South Australia does indeed look like some kind of dragon dressed up in rags. But this foot-long relative of the sea-horse is no fire-breathing monster. He is a harmless fish having to depend on camouflage to protect himself from enemies. He has his head, body and tail covered with extensive leaf-like growths of skin, which stream about on the water so that it is almost impossible to make out the fish from the sea-weeds among which he lives.



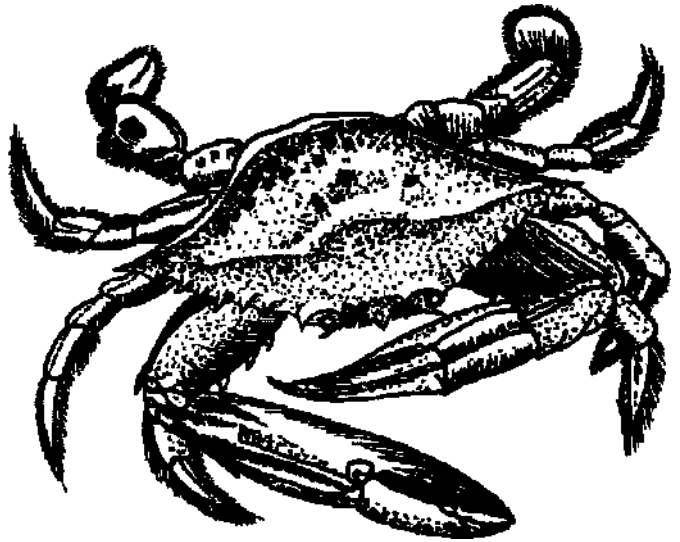
Queer Fish

Mola mola, the Ocean Sun-fish, is aptly called “mill wheel” for he is practically round, looking as though all head and the rear part of body has been cut off! He comes up to bask in the sun, and will lie motionless on the water’s surface not budging even if you prod him with your oar. Among the largest fish, he sometimes attains a length of fourteen feet and may weigh well over a ton. But the young fry that come out of the tiny eggs are so small and microscopic that it is a wonder that they can grow so big later.



Uca the Fiddler

Uca, the Fiddler Crab is a grotesque little animal. Light brown in colour mottled with dark brown and purple, he has eyes at the end of long slender stalks, and one claw—usually the right enormously enlarged. The female, however, has both her claws the same size. The male *Uca* loves to sit at the entrance of his twelve inch burrow and wave his large claw as though he is playing a fiddle! This is to attract the attention of any passing female crab. If any female stops, *Uca* will lead her into his house with elaborate gestures, and if she is not very enthusiastic, he is not above giving her an ungentle prod or two!



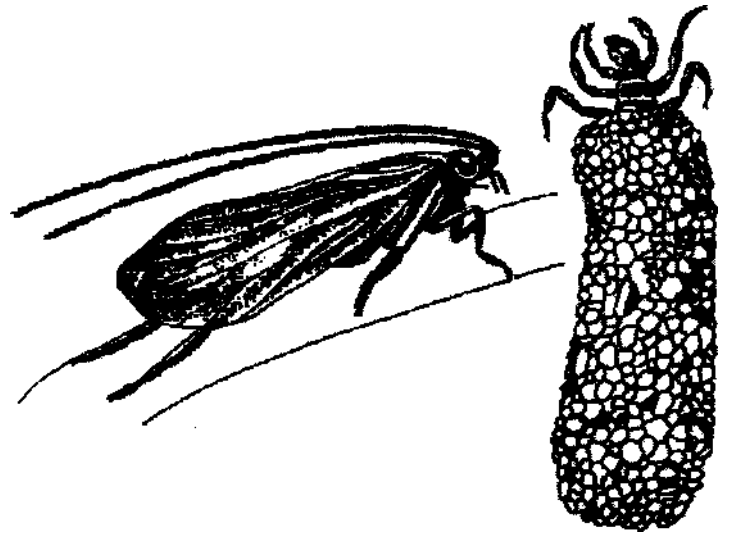
Beating the Intruder

The American Cow Bird does not bother to bring up her own children. Like our cuckoo, she lays her eggs in the nest of some other bird—often in the nests of warblers called *Dendroica*. Most of the warblers do not find anything amiss. They feed and raise the Cow Bird's young. But some seem to realize the Cow Bird's trickery. Rather than rear an alien they simply roof over the nest sealing off all the eggs. Then on top they start all over again, lay another batch of eggs and bring up their children without bothering about intruders.



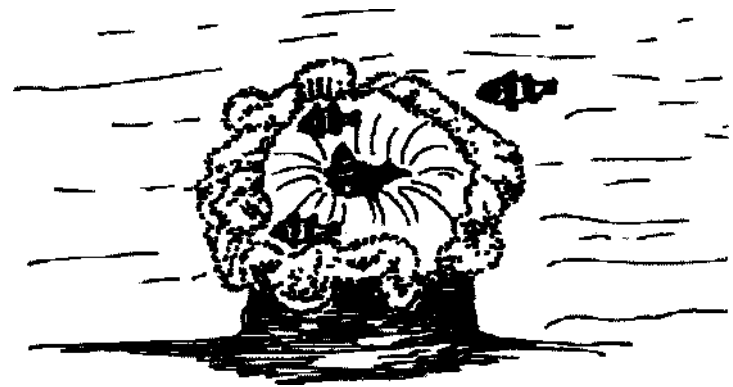
Gold Diggers

Some of the Caddis-fly larvae are said to actually build houses with bits of gold. These are the young of small moth-like insects, which lay their eggs in water. The larvae that hatch out build portable homes to protect their soft bodies. They first spin a tube like cocoon and stick to it all kinds of stuff like sand particles, tiny sticks, bits of weeds, empty shells and (where it is available) even fragments of gold! As it crawls the larva drags this case about with a pair of hooks. Before going to sleep as a pupa it closes the mouth of the tube with a silken grate to keep intruders out. When it wakes up it crawls to the surface splits its skin and emerges out as a winged Caddis-fly. This creature has but a few hours to live for its mouth is so weak that it cannot eat at all.



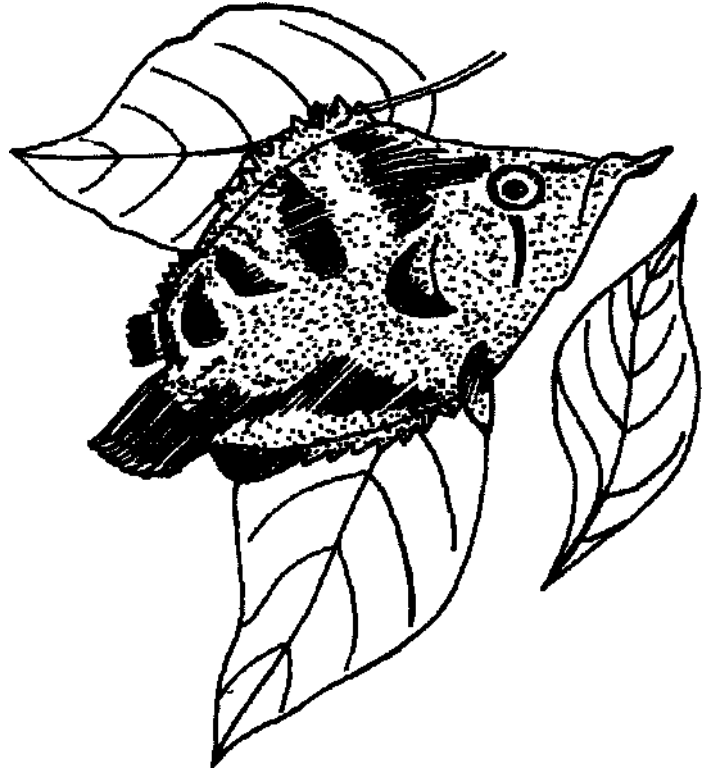
Damsels and the Anemone

The South Sea Damsel Fish make a habit of nestling among the tentacles of the large sea-anemones found in the coral reefs. Unaffected by the poisonous stinging cells of the anemone, which can paralyse much larger creatures, they swim unconcernedly in and out among the deadly tentacles. Some even carry bits of food to the host, while others are said to actually clean the mouth of the anemone! Each kind of Damsel Fish chooses its own type of anemone and one species— *Amphiprion percula*—monopolise their anemone and the surrounding area for themselves. During the breeding season they lay their eggs at the base of the anemone and the male fish rubs the tentacles and pushes them down so that they cover the eggs and protect them.



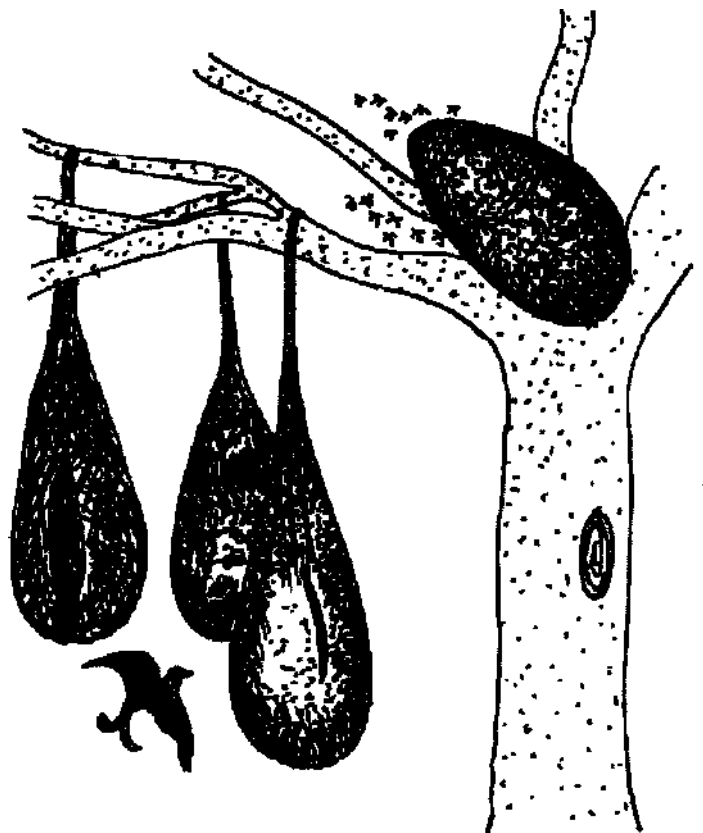
Something Fishy about this Leaf!

Monocirrhus, the Leaf fish of South America is a fresh-water fish about four inches in length. Its compressed body is not only leaf-shaped but is also brown with all the markings and mottling of a dead leaf. To complete the picture the fish has a barbel on its chin exactly like the leaf's stalk. The fish drifts along in the water lazily like a wind-blown leaf till it is close to some smaller fish. Then with a swift dash it opens its great mouth and engulfs its prey, which has no time even to wonder at the sudden transformation of a 'deadleaf' into a living fish!



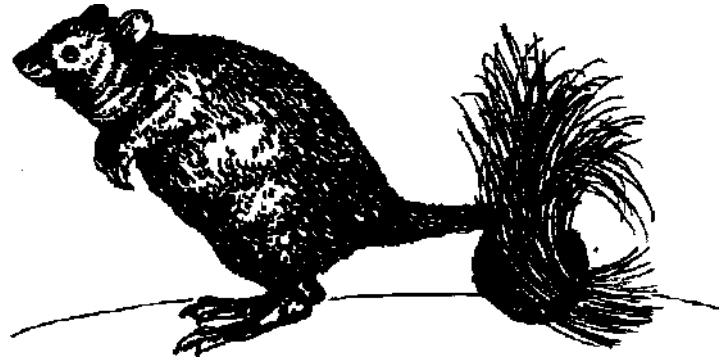
Home Guards!

Looking after their eggs and young ones is a great problem for the Tropical Orioles of South America because giant pandas, coati and a whole lot of other animals love oriole eggs for breakfast. It is no use hanging the sac-like nests high up in the branches of the great Ceiba trees for many of these enemies are expert climbers. So the clever orioles provide themselves with a police force for protection by living in trees in which a kind of tropical wasps build their nests. To get to the birds nests the enemy has to go past the wasps and these will allow no such right of way. No animal which has been stung by the angry wasps wants to try for oriole eggs a second time!



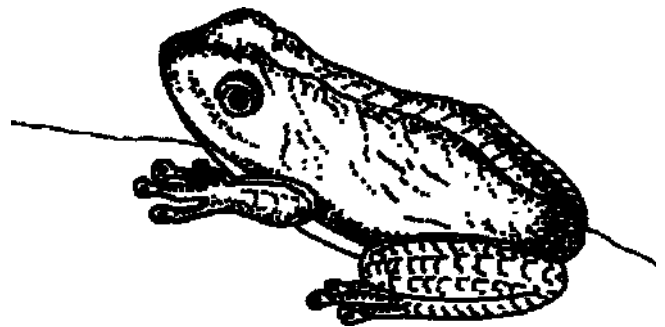
Miniature Kangaroo

Dipodomys, the Kangaroo Rat resembles a rat only in its size. This pretty foot-long animal is like a tiny Kangaroo and like a Kangaroo it hops about or sits up on its hind legs, in the sandy desert plains where it lives, snakes are its worst enemies. But the Kangaroo Rat, tiny though it is, is more than a match for any snake. It kicks sand into the eyes of the approaching enemy, as it takes off and is safely away in a series of six-foot leaps! Another very interesting thing about the Kangaroo Rat is that it seems to be able to live without drinking even a drop of water!



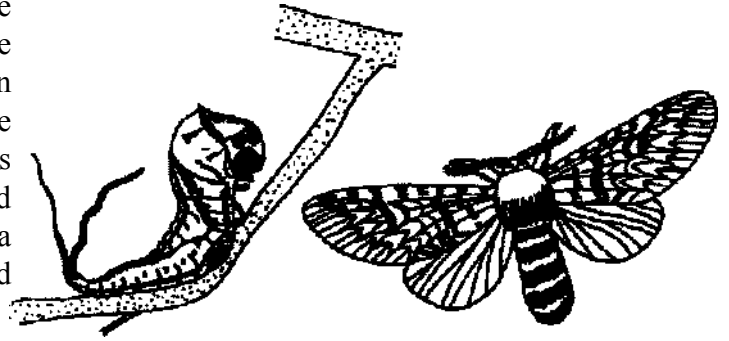
Private Apartment

Hyloscirtus resinificatrix, the Amazonian tree frog does not lay its eggs in ponds as do so many others. It builds its own private pool to bring up its family. First it chooses a hollow in a tree trunk situated in such a way as to catch rain water. Next the frog gets beeswax from the hives of some stingless bees and rubs the wax on all sides of the hollow, so that it becomes a watertight bowl. When this gets filled with rain water, the frog lays its eggs! And in this bowl the tadpoles grow into tiny froglets. They do not have to worry about finding food, for they carry a special load of food in their tails which they use as they grow!



Masked Avenger

The wily Ichneumon which lays its eggs in the bodies of other insects does not always get away with it. The Puss Moth caterpillar has two rose-pink pads at the base of its tail with which it whips the approaching Ichneumon and sends it tumbling towards the head end. There the wasp is confronted with a terrifying mask with enormous staring eyes. As if it is not bad enough to be whipped and scared out of its wits, the dazed wasp is subjected to a shower of formic acid which makes it unconscious and sometimes even kills it!



The Assassin

Bristling with hair, the Assassin Fly with its powerful legs, large prominent eyes and sharp piercing proboscis, is certainly well dressed for its role—that of a highway man among insects. Even bees and wasps with their powerful stings are no match for the terrible Assassin. Extremely swift of flight, the Assassin swoops down on its victim from its hide-out and holding it with its strong legs, thrusts the paralysing proboscis in. Instantly the victim stops struggling and the Assassin flies to a quiet spot to suck it dry.



Defence Tactic

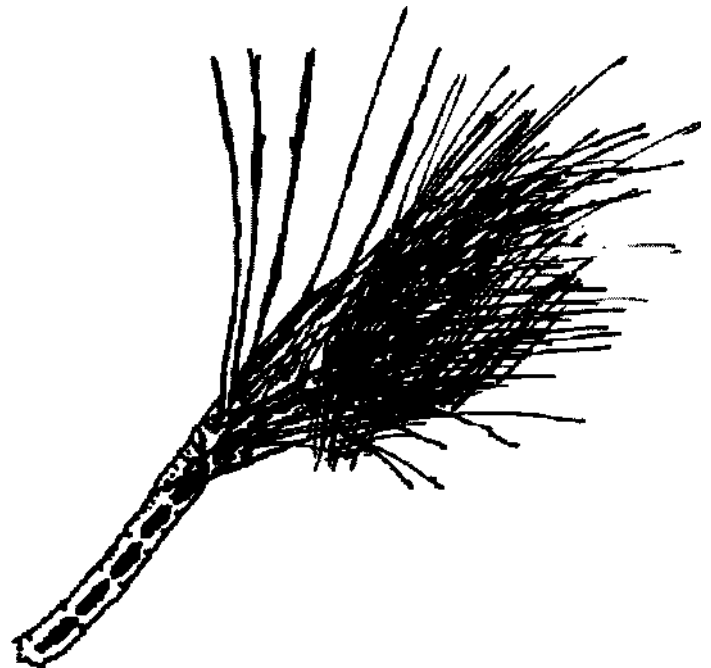
Many ground-nesting birds have developed very special and effective defence tricks. When for instance, a prowling dog or fox comes near the nest with eggs or young, the mother bird deliberately comes out and pretends to be injured in order to draw the enemy away from the nest. She will flutter about as though a wing or leg is broken or paralysed right in front of the pursuing fox, but always out of reach—and lead the hunter on and on. When at last she decides that the distance is safe enough, she will suddenly rise up and fly strongly away with out the slightest trace of injury leaving the pursuer bewildered!



Faithful Followers

“Follow the leader” is not just a game with the Pine Processionary Caterpillars. It is a way of life. From their spacious silken shelter, they sally forth at night to browse on pine needles. These are no casual outings. They proceed in single file each head touching the rear of the caterpillar in front. The line is continuous with no empty spaces in between—like an orderly procession, hence the name. The group is led by a pilot caterpillar which trails a silken thread and the rest follow this guide and by adding their own thread to it form a silken band which serves as a link between them when they disperse to eat. When they have had supper, they find their way back to their shelter by following the silken road.

If the marching caterpillars were made to form a circle, they would go on playing “follow the leader” without a thought of breaking away on their own. They may starve, get chilled with cold but would still continue to march doggedly round and round—not merely for hours but for days.



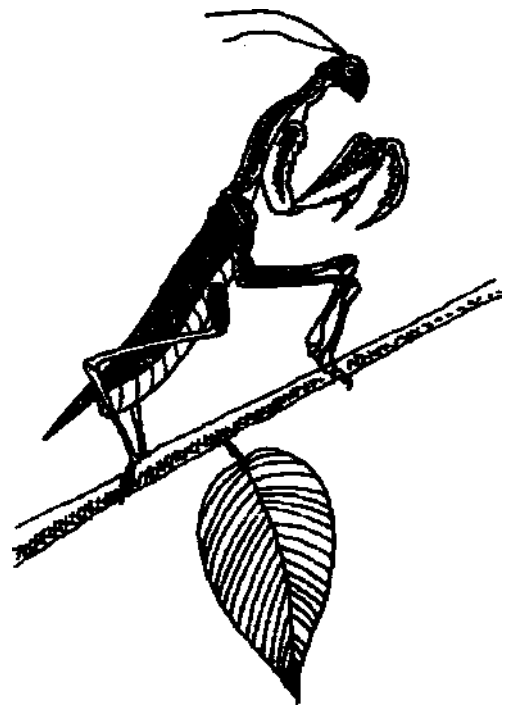
Weighty Worm

Megascoktides aiistralis is certainly a mouthful for an earthworm! But these are no ordinary creatures. Found in Australia, these six to eleven foot long giants live in burrows with volcano shaped openings. Though they can be easily located by the gurgling sound they make when they move underground, pulling them out of their burrow is a job requiring enormous patience and persistence. The Kookaburra—a kind of king-fisher is the only bird that has mastered the technique. Seizing a bit of a worm, the bird sits back to wait. As the tiring worm weakens and loses its grip, the bird gives a tug and thus inch by inch eases the giant out. Now the bird is stuck with it, because the worm is so big and heavy (some weighing over a pound and a half) that the Kookaburra cannot carry it away!



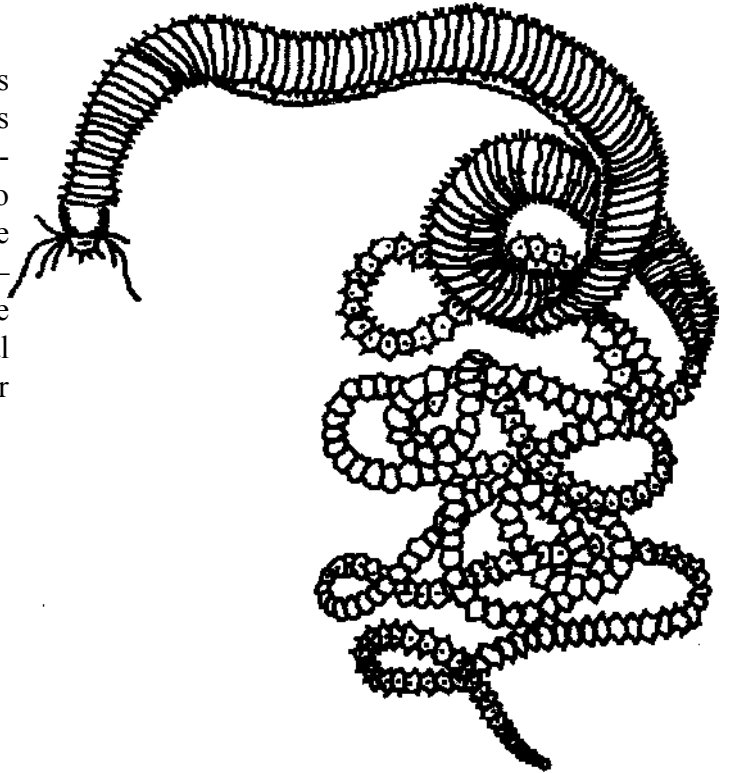
Not Really so Saintly!

Despite its name of Praying Mantis, there is nothing whatsoever saintly about this creature. A terrible cannibal, it will not hesitate about devouring its own husband as wedding breakfast! Sitting quiet and motionless among leaves from which it is almost indistinguishable, the mantis is not meditating but waiting for victims, who soon realize that the innocent looking legs so prayerfully postured are murderous weapons with a fatal clasp!



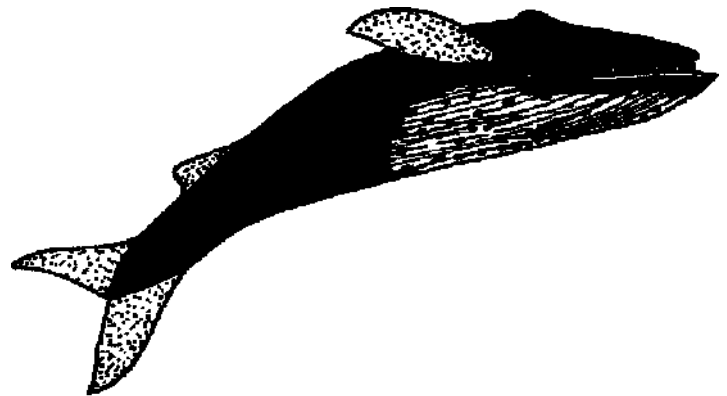
Palolo Worm

The posterior part of the palolo worm changes its colour and shape during the breeding season and fills with sex cells. Exactly at dawn, one week after a full-moon night in November, this part breaks off and rises to the surface of the sea to release the eggs and sperms. The people of the nearby islands—Samoa and Fiji Isles—who eagerly look forward to this, joyfully scoop up the millions of wriggling worms from the sea. The traditional feast to celebrate the event is indeed a great affair, for this delicacy is obtainable only on one day of the year!



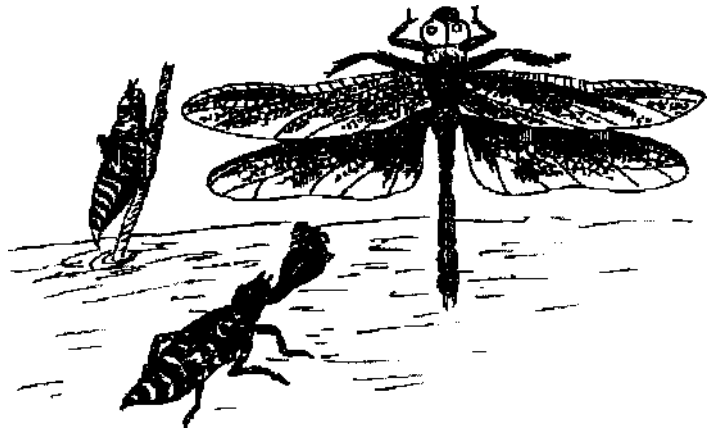
Blue Whale

The Blue Whale—it is of a slate-blue colour—is not only the largest whale, but the largest of all animals. Fortunately this hundred to hundred twenty feet long giant has its home in the sea. Otherwise, since it has no legs, it would not be able to carry its 120-ton body about on land. Yet it eats practically the smallest animals in the sea. Hanging from its upper jaw are horny plates called baleens, which seive off the small shrimps and other microscopic animals from the water the whale gulps. This “Krill” is swallowed while the filtered water flows out again. Of course it takes tons of “Krill” to keep the whale going.



Transformation

A veritable ugly duckling transformation is that of the Dragonfly. Its eggs are laid in water and the “nymphs” that hatch out are ugly brownish creatures with short bodies. Voracious eaters, they are among the most feared under-water tyrants. Folded under the head is a pincer-like ‘mask’ which shoots out in a lightning flash to grasp any prey unwittingly wandering near. When fully grown the nymph climbs up a grass blade out of water, splits its skin and pushes its body out through the aperture. Out comes a beautiful Dragonfly wings and all! It waits only for the wings to dry before taking off gracefully.



Termite Tenements

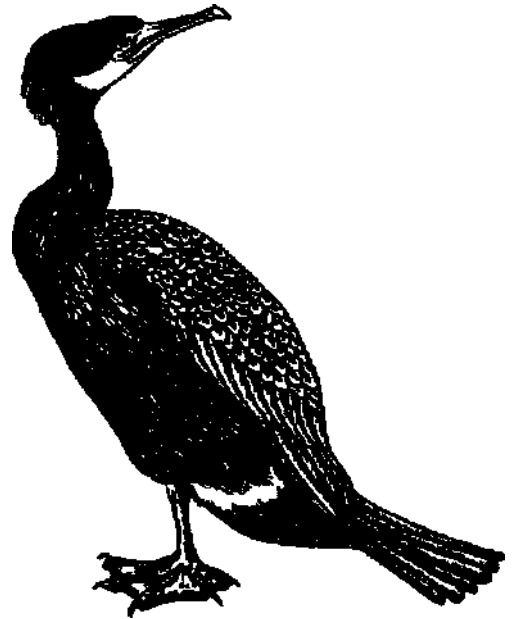
The greatest builders among animals—including man—are the tiny termites. Some of the termite mounds in Africa are over twenty-five feet high. Considering the size of the insect, this is an achievement equal to our erecting a building about ten thousand feet high. The mounds are not only tall but are so strong that they can be broken only with a crowbar or an axe.

Oddly enough, some of the Australian termites build their homes pointing exactly north-south, so that the mounds serve as a compass.



Revenue Earners

In the rainless islands off the coast of Peru, millions of Peruvian Cormorants or Guanays produce annually more than hundred thousand tons of fertilizer valued at about thirty-five million rupees. The entire deposit in the island is estimated to be worth more than five thousand crores. From time to time the “guano” is dug up and exported. No wonder, the birds are regarded as the most valuable birds in the world and are strictly protected by the government, which is well aware that no other industry will have such big earnings with practically no expenditure at all.



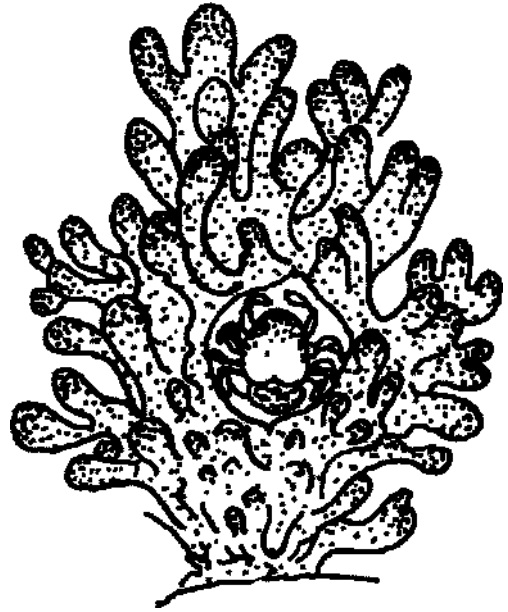
Their Colour Runs

The Turacos of the African forests are the only birds in the world which are not guaranteed colour fast! These are very graceful birds with beautiful green plumage, set off by an attractive red on the wings. The deep rich red colour is said to be produced by a pigment not found in any other bird. But if the wings are washed or if there is a heavy shower of rain, the brilliant red dissolves and the water becomes coloured!



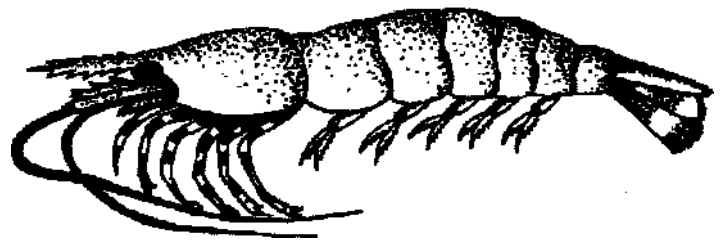
All by Herself

Solitary confinement for life is the lot of *Hapalocarcinus*, a tiny crab found in the Great Barrier Reef. Oddly enough she condemns herself. While very young, she chooses her position between two coral branches and sets up a water current. This affects the coral's growth and the branches form a round cage around the crab. Inside this snug room the female spends her life securely feeding on tiny food particles which come in with sea water through the holes in the prison walls.



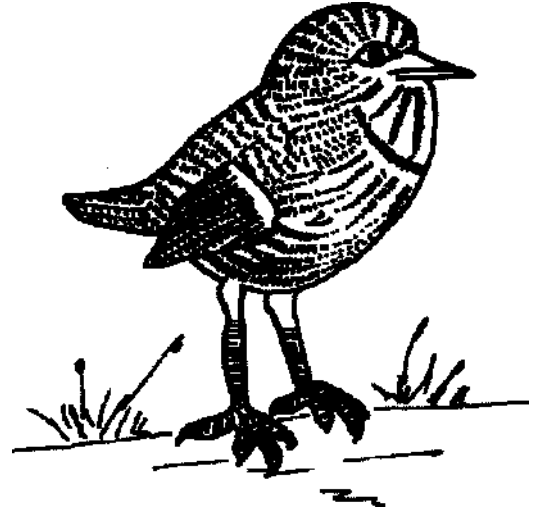
Colourful Prawn

The Aesop Prawns—so called because of their “hunch backs”—are remarkable for changing their colour according to their environment. During the day those among green weeds are green in colour but when they move to brown weeds or red they quickly become brown or red to match with the back ground. At night all of them—whatever their colour during the day turn a lovely transparent blue and again in the morning they all take on then-old colours.



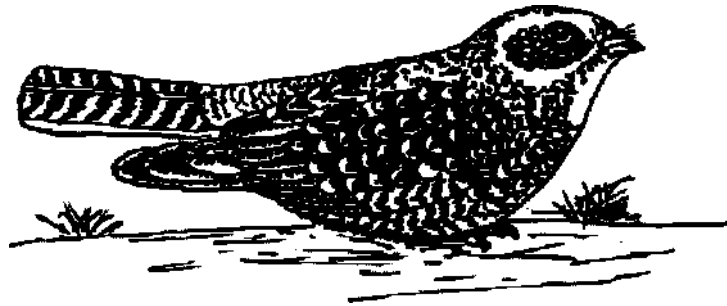
Ant Pittas

The 'Ant' Pittas are not so called because they feed on ants, but because they use ants to flush their prey out for them. These shy little birds living in the South American forests prey on spiders and other small insects. When the 'Army Ants' are on the move foraging in these jungles all kinds of insects in the area simply rush away in panic too terrorised to be careful about lesser enemies. The Ant Pittas appear on the scene just at this moment to gobble up the fleeing horde.



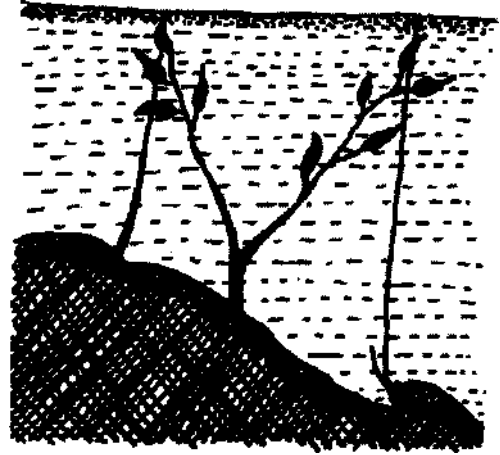
Suspended Animation

The American Poor-will has the distinction of being the only bird in the world known to hibernate. When winter comes this small grey bird searches for a cosy dark hole in the rock and tucking itself into this "bedroom" settles down for a nice long sleep. The bird seems to be almost dead. There is a drop of 30-40 degrees in body temperature. Respiratory and heart movements stop. But, with the approach of the warm spring season, the apparently dead Poor-will comes to life again and flies away.



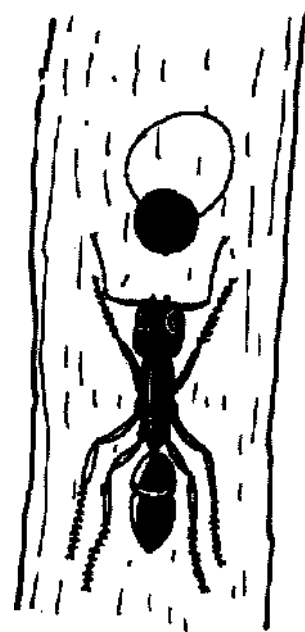
Breathing Device

For insects that live in water, breathing atmospheric air becomes a fairly serious problem. Some manage by coming up for air now and again. Others capture bubbles of air and carry them along. The Drone-fly larva has solved the problem by developing a kind of telescopic air tube in the tail. This air-tube reaches up from the bottom in shallow water and as the larva moves deeper down, the tube stretches, so that air supply is not cut off.



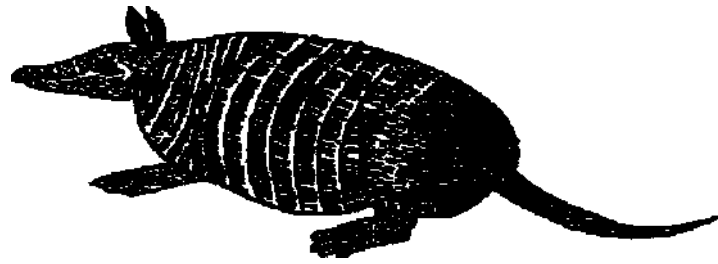
Security Plug

Security measures are very strict in the nest of the Colobopsis ants. First cousins of the Carpenter ants, these insects live in holes excavated in a particular plant. There are different kinds of ants in the nest each with a special function. The most peculiar of the lot are the 'guards' which have square plug-like heads. When one of these is on duty at the entrance there is no question of anyone slipping in or out without the sentry's knowledge, for the opening is closed by the stopper shaped head of the sentry. Anyone wanting to come in has to 'knock' on this living door and if the sentry is satisfied with the ant's bonafides, will let him in; and anyone who has to leave also has to be similarly 'cleared'.



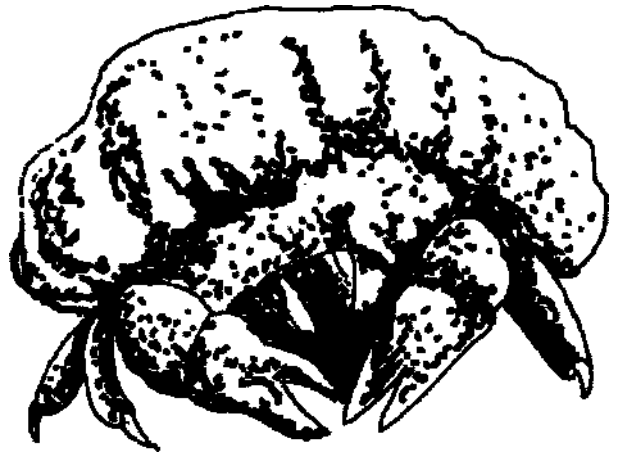
Amphibious Tank

The nine-banded Armadillo is nature's amphibious tank. Its entire body is encased in an armour of very heavy and sturdy plates. Despite this heavier-than water equipment the armadillo manages to cross rivers without the least trouble. As it enters water, it takes air into its intestinal tract and puffs itself like a balloon to float to the opposite bank and gets going on the other side.



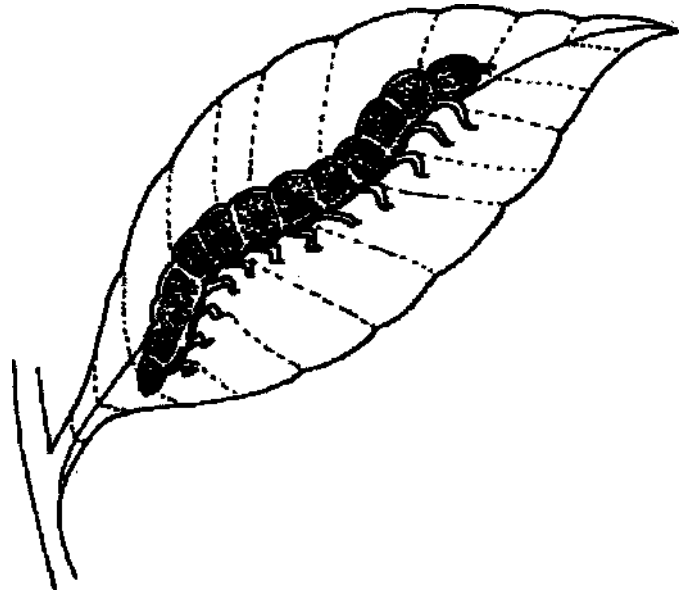
Armed to the Teeth

Dromia, the Sponge Crab is fond of wearing a protective coat of armour. It has the habit of cutting a piece of sponge and fixing it on its back so that it fits exactly. If there is no sponge, it will use seaweeds, sea-squirts, rags, etc.—in short anything that can be cut. But whatever the material be, he does a very neat job of cutting and moulding it exactly to the correct shape. If we remove the sponge from his back and put it along with other pieces of sponge *Dromia* is clever enough to select his own sponge again!



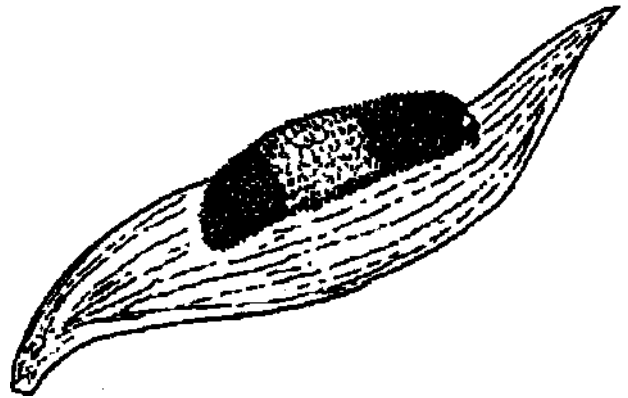
Railway Worm

The four-inch long Railway Worm is neither a worm nor has it anything to do with railways. It is a luminous insect found in North America. The peculiar thing is that the parts of the animal's body which glow are arranged rather like the lights of a train. Along the sides of the body are a number of green and white "compartment windows". On the head are two large yellow "head lights". At the end of the tail is a red "lamp" which serves as the rear light of the "train".



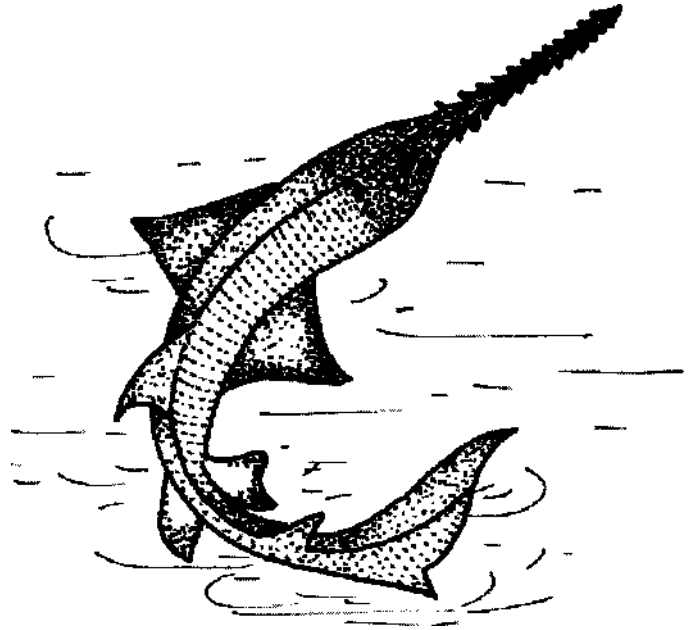
Weather Prophet

More accurate than many meteorological forecasts are the predictions "made" by the hairy-looking caterpillars of the Tiger Moth—*Isia isabella*. All her "Wolly Bear" cousins also are known to have this ability to forecast weather, especially winter weather. Not having any instruments, they make use of their reddish brown mid-band which varies in width from year to year. The wider the band, the milder the winter. A narrow band means a long and very cold winter.



The Sawfish

If any creature is literally armed to the teeth it is the formidable *Pristidae*, a giant of a fish sometimes attaining between 15 and 20 feet in length. The most remarkable thing about it, however is the elongation of its snout into a flat bony sword, armed on each side with about 20 sharp teeth. Not many stand a chance against this creature because a single swipe of his powerful snout could cut them in half. Getting in among a shoal of fish, he slashes out right and left cutting the others to pieces which he devours at leisure.



Drowning Fish

That there is a fish that actually drowns if kept under water is hard to believe, yet *Arapaima gigas* does just that, for it is an air breather and cannot respire in water! Found in the Amazon Basin in South America, it is the largest fresh-water fish known—some reaching fifteen feet and weighing over four hundred pounds. Its cylindrical body is covered with scales olive-green *in* front, gradually becoming more and more red towards the tail, which itself is quite red!



Racket Tails

Cousins of the king-fishers, the lovely and graceful Motmots of South America often have peculiar racket-tipped tails. This is no accident but the result of assiduous trimming by the young birds which contort themselves into weird positions to tear off the feathers with their beaks till only nude shaft remains to link the “racket” to the rest of the tail. No one knows how this habit started or of what special use a racket-shaped tail is to the bird.



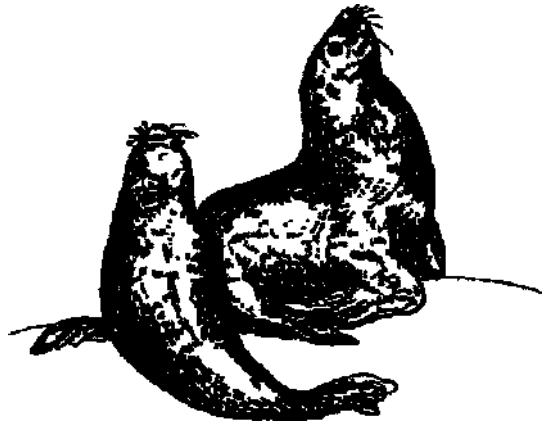
Haymaker!

An animal that literally makes hay while the sun shines is Pika. These tiny cousins of the rabbits are sturdy little mountaineers living near the summits of bleak mountain ridges. Knowing that food can become a very real problem during the lean cold winter the pika gathers green vegetation and grass during the warmer months and spreads it out on the rocks to dry in the sun. When the hay is ready it is methodically bundled and stored in the rock crevices of the den. So the little Pika does not go hungry even if the whole place is snow-bound in winter. Snug in his room he has only to reach out to get some hay from his fully stocked larder.



The Sea Lion

The Californian sea lions are not even related to lions. They are a kind of seal. They are fairly big animals, the males being about 8 feet long and over 600 lbs in weight. The remarkable thing about them is their ability to learn tricks. Being highly intelligent they can be easily trained and are often seen in the circuses of western countries. In the shows, the sea lion does various tricks like balancing a ball, a row of trumpets and will even swing and dance to music!



The Great Ant-Eater

Nobody knows why the Great Ant-eater is called “Ant bear” for there is nothing bear-like about this odd looking animal. Eight feet long and about two feet high, it has a narrow head, a body covered with dark grey hair, and an enormous brush-like tail that sweeps the ground. During the day, the animal uses its tail as a blanket to cover itself, when it curls up to sleep in some safe spot. The Ant-eater feeds on ants and termites. It tears down the anthills with its strong claws and when the ants run out, it licks them up with its long sticky tongue.



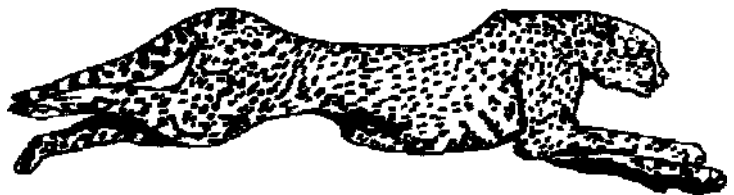
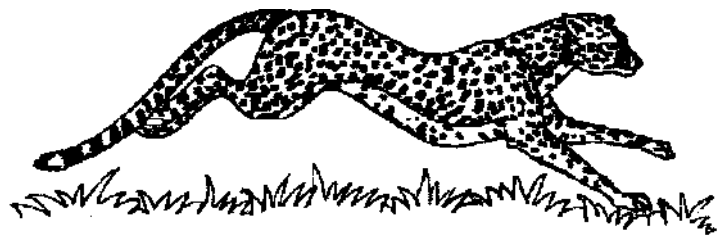
Flying Fox

The Flying Fox is not a fox that flies, but a bat that has a face like that of a fox. It is the biggest bat on earth and has a wingspread that can go up to five feet. Though it looks terrifying, it does not attack any animal. Its chief food is fruit. Hundreds of them together spend the day hanging upside down from the same tree and at sundown they all fly out to orchards to eat the ripe fruit. They are disliked because they cause a lot of damage to fruit plantations.



The Hunting Leopard

The Cheetah is the fastest land animal on earth. It can run at the rate of 70 miles an hour, but it cannot keep up this speed for long. After about 500 yards it will slow down. About 4 to 5 feet in length and 2 to 3 feet in height, the cheetah has a slender body with solid black spots. The legs are long and have claws which cannot be drawn back, unlike those of other cats. In the olden days cheetahs used to be common in India and were used to hunt antelopes and gazelles. That is how it got the name “hunting leopard”. But now this beautiful animal has completely disappeared from our country.



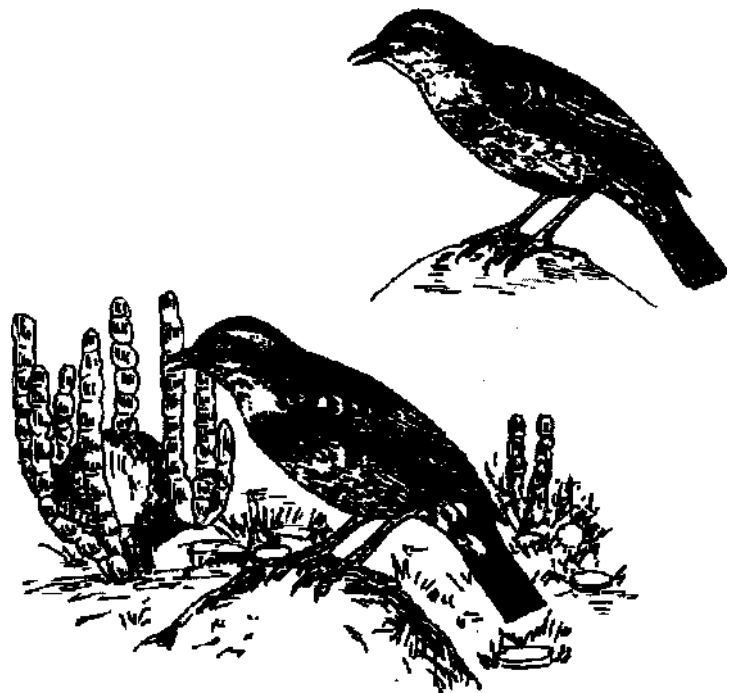
The Strange Platypus

The Duckbill Platypus is one of the strangest looking animals in the world. It has a body somewhat like that of an otter, a tail like that of a beaver, claws like a dog, and webbed feet and bill like that of a duck! Like a bird it lays eggs, but when the babies hatch out, they are suckled by the mother, like other mammals. Greyish brown in colour, this shy little animal lives in rivers and creeks in Australia. Feeding on tadpoles worms and small fishes. In the bank of the stream it makes its burrow, where it goes for a rest.



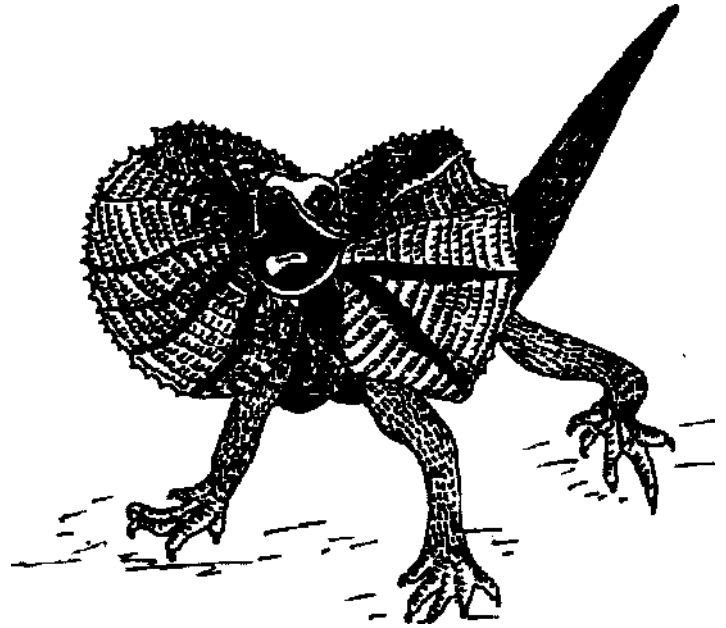
Comfortable Ovens

The Oven Birds of the American tropics are unquestionably the greatest masons among birds, justly famous for the adobe houses they build. Their unusual oven-like nests are huge globular structures built entirely of mud, grass and twigs. The entrance is at the side leading by a passageway into a spacious chamber. The nest becomes baked by the sun till it is as hard as brick. Completing one of these elaborate structures takes months of toil, but the oven bird does not seem to mind. It builds a new nest every year.



Fearful Frill

A creature that relies on pure bluff to escape from pursuing enemies is *Chlamydosaurus*, the Frilled Lizard of Australia. This has a very colourful frill hanging like a cape on its shoulder. When alarmed it takes to its heels, running on its hind legs, But when cornered, it turns and erects its collar like an Elizabethan ruff, opens its mouth wide and makes a savage hissing noise. The result is a terrible sight, the greenish-yellow red-splashed frill contrasting with the saffron yellow of the open mouth! This is enough to stop even determined enemies in their tracks. After the enemy has beaten a hasty retreat the lizard closes its collar like an umbrella and sedately ambles away.



Sleepyhead

The world appears topsyturvy to the sloth, because it always sees the world upside down! The slowest and most lethargic mammal in the world, it habitually hangs upside down by the hooked claws in its legs. It spends eighteen hours or more in a day sleeping peacefully and the rest of the time it spends slowly and sleepily munching leaves. Its shabby coat looks like a worn out door-mat, and has a kind of green alga growing in it. This provides excellent protection to the sloth, because its enemies pass it by without realising that the hanging bundle of green fur is a living animal.



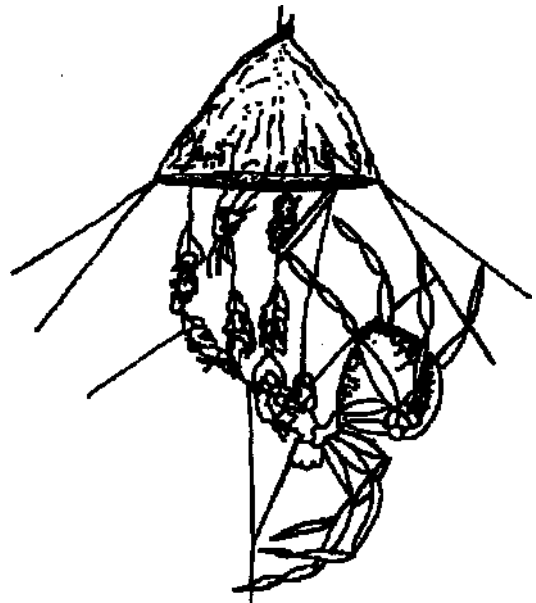
Selfish Fellow

The ball-rolling *Scarabaeus* is a selfish father. While he is willing to work industriously with his wife kneading and shaping the small balls—about the size of a pea—it is all for his own eating pleasure. He will retire with the pellet to a safe retreat to dine at leisure. When it comes to making provision for the children, he lets his wife do all the work. All by herself she moulds the ball, takes it to the burrow she has already excavated, and lays an egg in it. She may add other balls and eggs and sometimes she stays in the nursery to watch over the brood. The male gives her no help in all this exhausting work, though he is ready enough to assist her, if it is his own dinner!



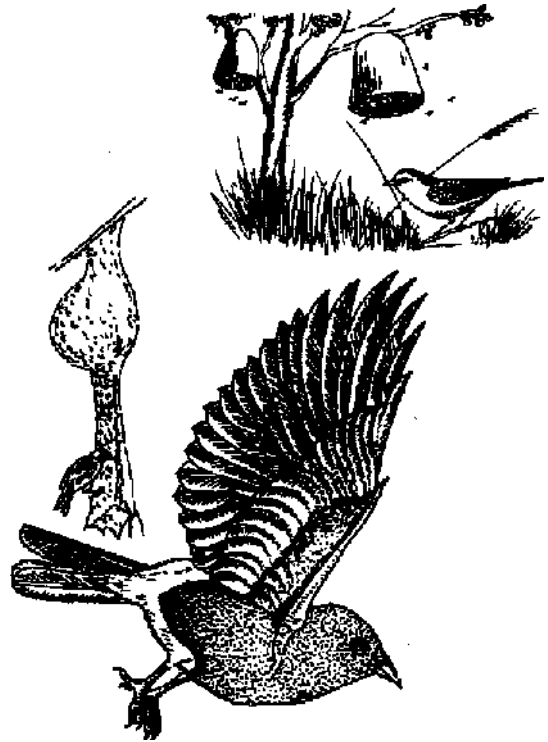
Feeding Time

Theridion is among the very few spiders which look after their young. She feed her newly emerged babies, by disgorging drops of fluid from her mouth. As she hangs down on a few silken threads, the young ones struggle and push their sisters and brothers in a mad scramble to get at the drops. Later they change to solid food and share with their mother the insects she catches.



Birds' Co-operatives

The sociable Weaver Birds of South Africa do not care to live in separate -nests by themselves, they prefer 'apartment houses'. In a fantastic cooperative effort, thirty or more pairs of birds pool their efforts to build a huge edifice, using cartloads of straw and grass. Shaped like a hut roof this enormous structure, built in the branches of an acacia tree may be ten feet or more in height and six to eight feet in diameter. Underneath, each pair has its own 'flat'—a separate nesting chamber.



Big Bill!

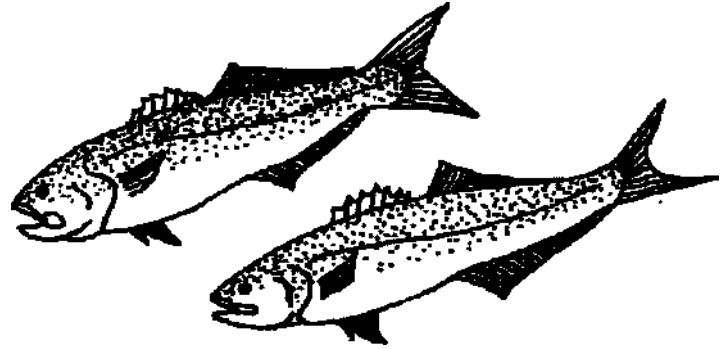
The Arabic name for Balaeniceps—the Shoe-bill is Abumarkub, which means the father of a shoe. This extraordinary name is very apt because the bird's enormous beak looks exactly like a shoe. Found in the swamps of the White Nile, the bird stands five feet or more and resembles the common heron in colouration. But why a swamp bird should have this unique type of beak and that too of such enormous size is a mystery!



Sea Murderers

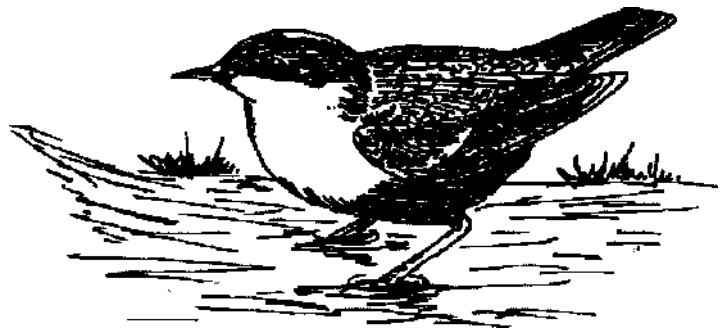
The prize for ferocity among fish goes to the Blue Fish. Though quite ordinary *in* appearance, these silvery blue creatures are really the deadliest villains of the fish-world, for they kill not only for eating, but for the sheer joy of killing.

Like a pack of wolves they go in pursuit of schools of other fish, destroying everything before them, leaving the sea behind stained with blood for miles around, with injured and maimed fish hi millions floating about. They seem to go mad once the killing begins, for even when full they will disgorge what they have eaten and start all over again.



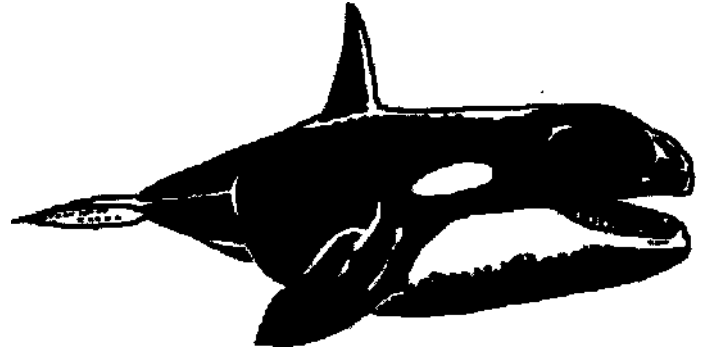
What a Bird!

Alone among the perching birds the Dipper has the ability to swim and dive under water with ease. Found in the mountain streams up to an altitude of 11,000 feet or more, the little thrush-like bird delights in the presence of roaring waters. It walks along the bottom of the stream leisurely, looking for water insects to eat. This is remarkable because these birds do not have any special modification in structure for an aquatic life. Only their plumage is very dense and oily and the feathers are so closely packed that the bird takes a temperature of 50 degree C, nonchalantly in its stride.



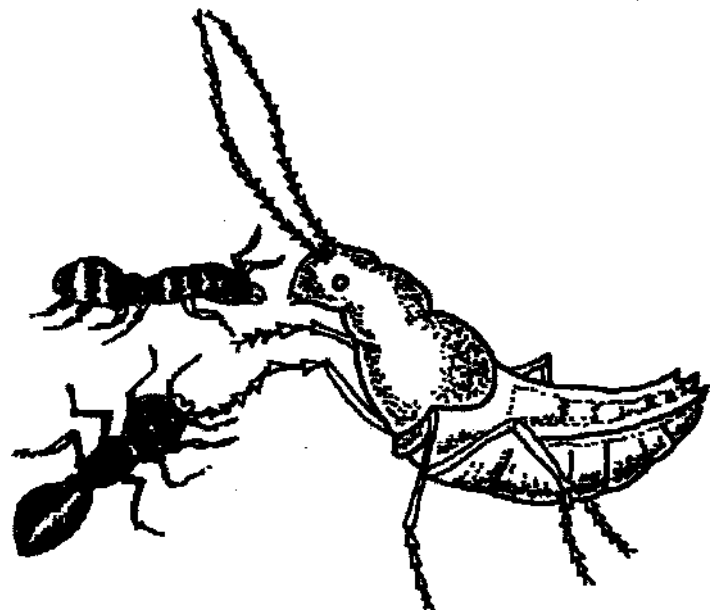
Deep Sea Gangsters

The killer whales are aptly named for they are the most ferocious killers of the sea. Travelling in a pack, ten or more of these black and white dolphins will surround a large whale and attack it from all sides. Finally when the whale is tired out they will tear it to pieces. An idea of the killers' voracious appetite can be had by the fact that, in the stomach of one twenty-one foot killer whale were found fourteen seals and 13 porpoises!



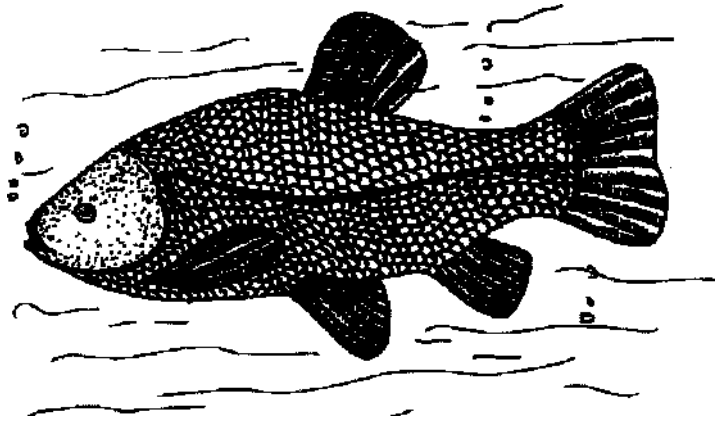
Bewitching Beetles

No guest can ask for a better life than the *Atemeles*—the large beetles that live in some ant colonies. The hosts dote on them, let them pillage the colony's stores and gorge upon the ant eggs and larvae! Not only that—the ants industriously look after the eggs and young ones of the intruder—all for the pleasure of sniffing the delicious aroma of the guests and lapping the sweet liquid they give out. If there are a number of beetles in a colony, the scent probably goes to the head of the ants. They no longer bother about doing their normal work, but simply sniff and lick themselves to ruin!



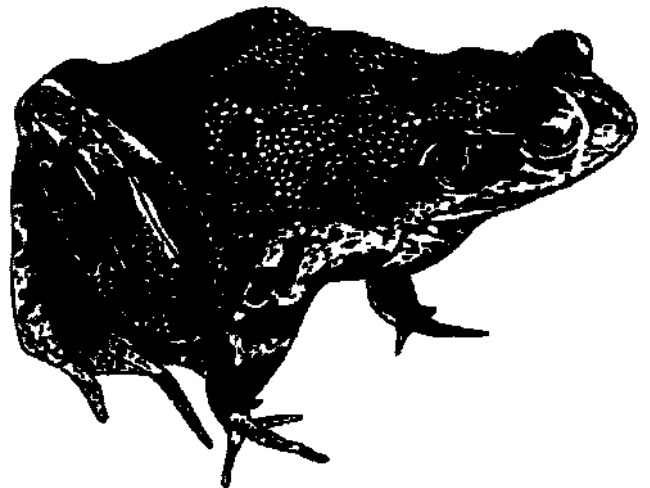
Dr. Piscine

Truly a fish with a healing touch is the “Doctor” fish. It has long been believed that sick or wounded fish were cured by the touch of this fish. Other fishes have been seen rubbing themselves against the “doctor’s” body and the thick slime covering it was supposed to do the healing. Though this idea is now discredited no explanation has been given for the behaviour of the “patients” and perhaps people may have second thoughts.



Giant Toad of South America

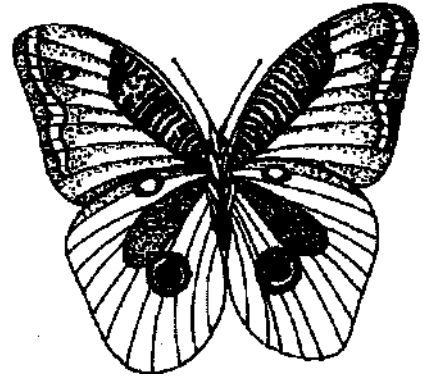
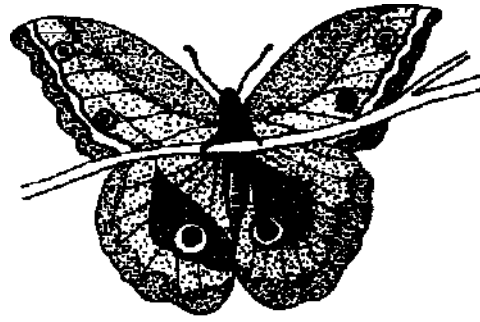
Agua, the giant toad of South America (nearly three quarters of a foot in length and a kilogram in weight), has a unique way of discouraging enemies from attacking it. It has two large poison sacs on either side of the neck. When an enemy attacks, the toad doesn’t try to escape but offers its neck. The ignorant enemy takes a bite and dies immediately from the poison.



Escaping From Enemies

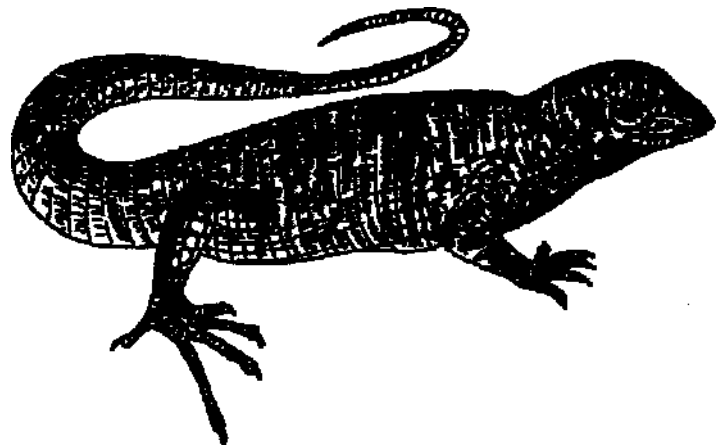
Escaping from their many enemies is a great problem for insects. Each group has developed its own method of dealing with the problem.

The Caligo butterfly has on the underside of its wings two big spots which look like the eyes of an owl. When an enemy approaches, the butterfly suddenly exhibits these spots. Startled by the sudden appearance of an 'owl', where it thought there was a butterfly, the enemy retreats hastily.



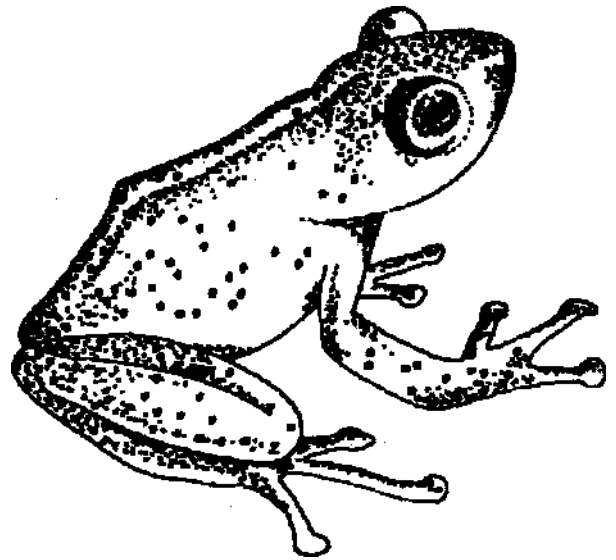
Feigning Death

Shamming dead is a fairly common trick adopted by many animals to escape danger. They simply drop down as though already dead so that the enemy won't bother about them. The peculiar thing is that many of the animals assume special poses during their temporary 'death'. The most ridiculous of them all is that of *Varanus exanthematicus*, the West African Monitor. This odd animal when it senses the approaching enemy, will lie down on its back and place one hind foot in its mouth and will hold this pose till it is sure that the danger is over and then only resume its normal posture.



The Glass Frog

The Glass Frog is not a frog made of glass but a real living tree frog found in South America. The underside of the body is so transparent, that we can see the heart, and other organs inside, as also the blood vessels, the bones nerves etc. The upper part of the body however is opaque, and light green in colour. How this glass like underside helps the frog is a mystery.



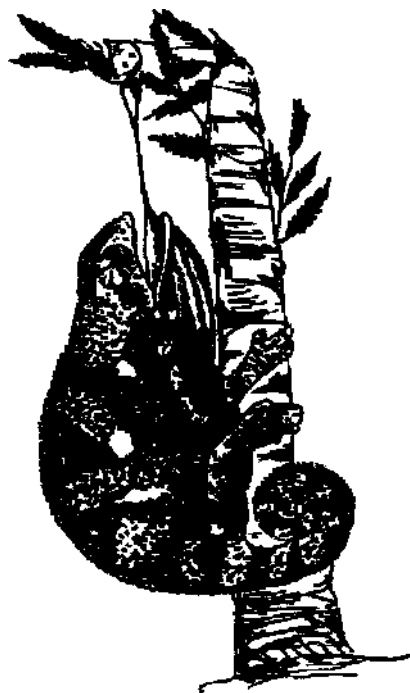
Bird of the Church

The Bell Bird is so called because its call note is like the tolling of a church bell and the ringing can be heard distinctly three miles away! After tolling the bells four or five times, the bird is silent for a few minutes and then begins again. That does not end its association with the church! The bird has a curious ornament on its head, which normally lies flat like a deflated balloon, but when filled with air, stands up like a tiny church spire!



Got You!

The chameleon's famous colour changes are not due to environment, as is commonly believed, but due to emotions and temperature. Its reactions are very much like ours—it becomes pale with fright, and dark with anger! In the dark it is a beautiful cream, but exposure to sun will make it a dull black! Another interesting feature of the chameleon is the turret-mounted eye which can be rotated independently, so that while one eye is searching for insects on the branches above, the other keeps a lookout for enemies down below: Only when the tongue shoots out to catch prey, both the eyes concentrate on the victim, probably to gauge the distance and direction better. The target is rarely missed.



Biggest Bill

One wonders how the Toucan keeps its balance with a beak almost as long as its body. Actually, the bill though it looks enormous, is very light, being made of bony fibres which give strength without weight. So there is no difficulty except when the bird goes to bed. Then it has to take time arranging its huge bill on the top of the back and covering the brilliant colours with the fan-like tail feathers. Of what possible use such a bright fantastic beak is to the bird, no one has been able to find out.



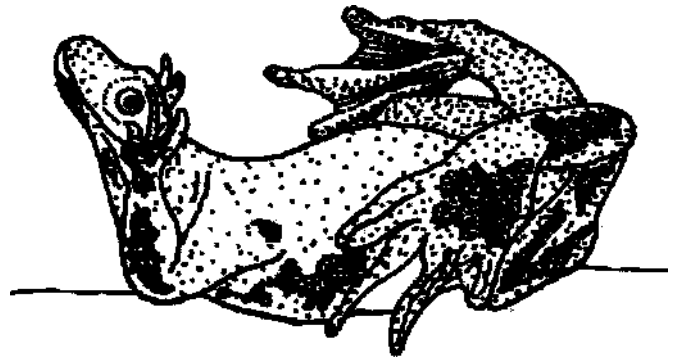
Helpful Husband

The female Huia would have to starve to death, if it were not for her husband. Because the hu-hu grubs which form her main food live inside logs and the poor “girl” has a long and elegant bill which is no good at all to chisel wood. Fortunately her husband has a stout conical beak, which is just the thing for the job. He chips away the wood and exposes the grubs. Immediately the female inserts her slender bill and digs the grub out. The couple share the food and go hunting again in happy cooperation.



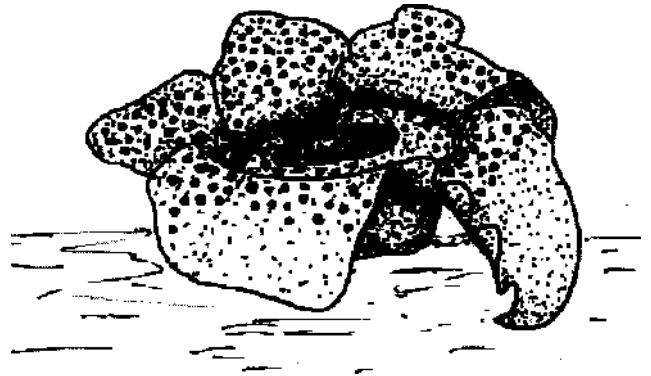
A Bellyful

The Fire-bellied Toad is so called because it has a vivid red under-surface, though its back is drab in colour. It has very poisonous skin secretions. When it is swimming in water the red colour warns its enemies, which leave it well alone. But on land, the colouration is hidden and so if the toad is disturbed, it either rolls over on its back or lifts up its front legs to display the bright red colour in warning!



Floral Giant

The biggest flower in the world is that of *Rafflesia*, a plant parasite on the roots of fig and other trees. There are no leaves or stem on it—only the flower which is often three to five feet across and nearly twenty pounds in weight! The enormous petals are a brilliant scarlet with vivid red spots. In the centre of the flower is a white bowl large enough to hold two gallons of water or even more. Large and pretty though it is, this incredible flower has the smell of putrid meat!



The Aye-Aye

The Aye-Aye is a small cat like lemur with a very thin wire-like middle finger on each hand. This sensitive finger is used to tap trees to locate the grubs inside, and also spooning out water and other liquids into its mouth. When the animal finds an egg, it cuts off the top and flips the contents into its mouth with the help of this finger. Though the Aye-Aye does this very fast indeed, it does not spill even a single drop!



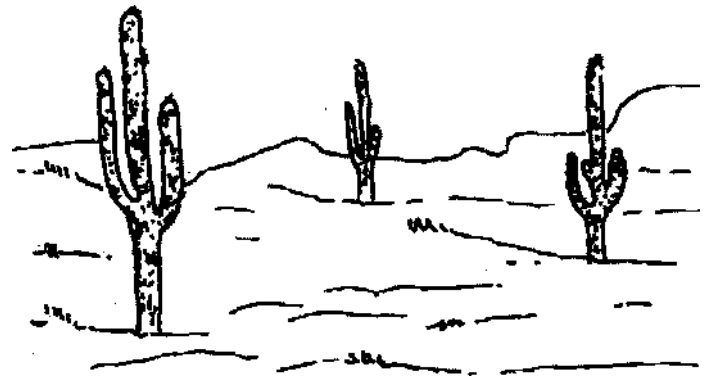
Insect Eater

Nepenthes is plant that eats insects! It is called the pitcher plant because its leaves are in the form of tiny pitchers. Each pitcher is about six to ten inches in height and has a lid at the top. Inside the pitcher is liquid. Insects attracted by the colour of the pitcher alight on the rim of the mouth. That is their downfall, they lose their foothold, topple into the fluid below and are drowned. The plant then proceeds to have its meal!



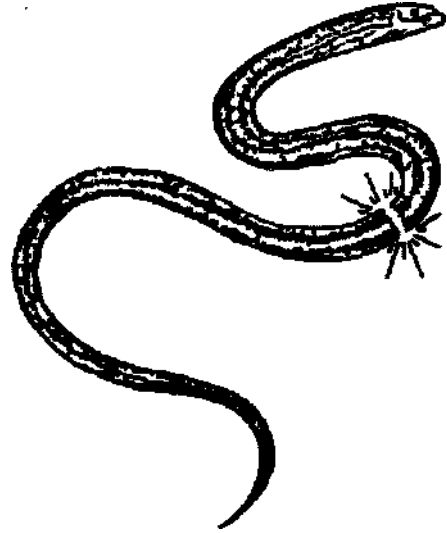
Having a Drink

Saguaro is a giant cactus common in the Arizona desert. The plant is very peculiar in that it becomes thin or fat according to the season. Throughout the dry summer months it looks lean and gaunt with its ribs sticking out, but when the rains come, it takes in enormous amounts of water and swells out! This fantastic plant beats even the camel, when it comes to ‘drinking’ water. While a camel can normally take-in about fifteen gallons of water at a time and can go on for eight days without another drink, the Saguaro sucks in a ton of water at a time and can do without another drink for the next four years!



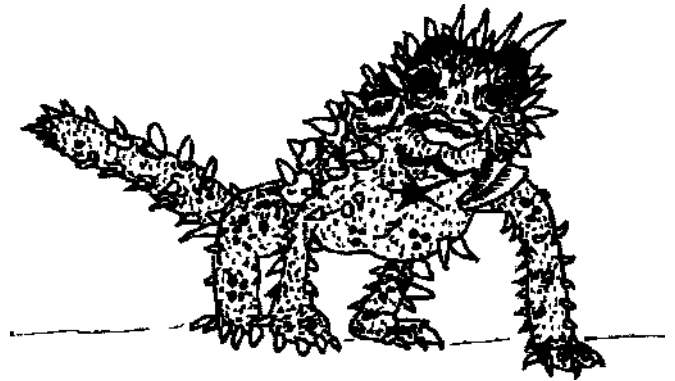
Glass Snake

The Glass Snake is not a Snake at all. Though snake-like in appearance, it is a limbless lizard. There is a widespread belief that its body can be broken into a number of pieces and they will unite together again! This is a myth. Its long tail however, does break into bits at the slightest disturbance and since the tail is very long—several times as long as the body—it is easy to see how the mistaken notion arose. While the enemy is distracted by the squirming bits of tail, the lizard escapes. The tail, of course, cannot rejoin the body, but a new tail arises in its place!



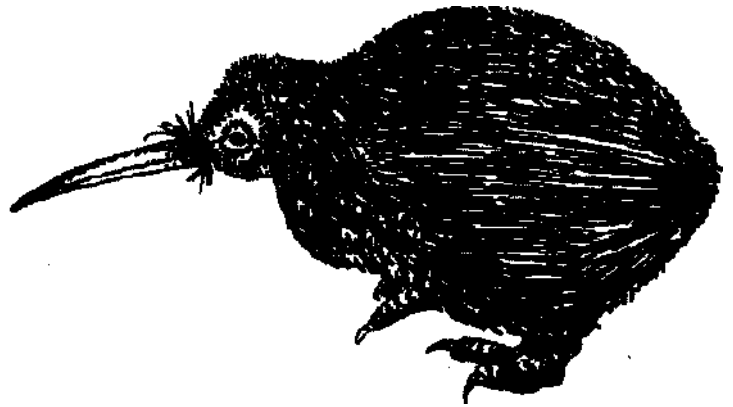
Not Such A Horror

Moloch horridus, the thorny lizard found in the sandy deserts of Australia, is for some unknown reason called the 'Mountain Devil'. They are harmless little animals, (actually refusing to bite!) eating only ants and that too of only one species, the *Iridomyrmex*. The Moloch 'drinks' with its skins! If you put a Moloch in a saucer of water, it absorb the water like a piece of blotting paper!



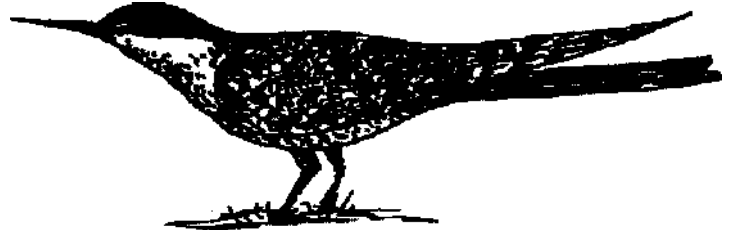
K-Wee

The smallest among the flightless birds, the Kiwi gets its name from its shrill courting cry “K-Weee”. A little larger than the domestic hen, these birds from New Zealand lay enormous eggs—nearly a quarter as big as the mother herself! The Kiwi has a long and sensitive bill. Its sense of smell is so acute that it can locate worms deep in the ground. This is a blessing, for even baby Kiwis have huge appetites: it seems they need nearly a thousand worms per day—each one of them!



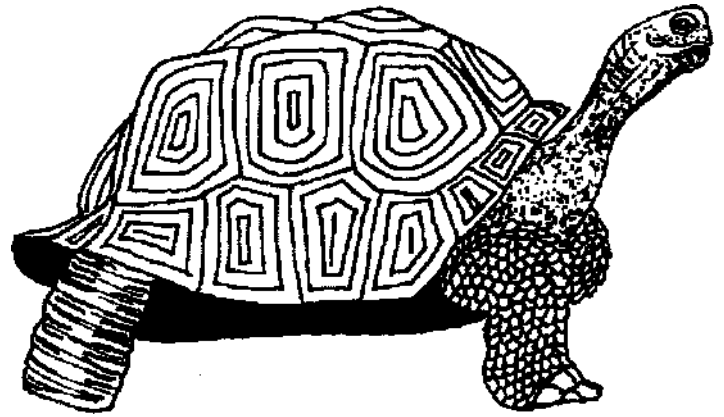
Champion Traveller

Sterna paradisaea, the Arctic tern, is the greatest traveller among the birds. This champion migrator goes on a 22,000-mile round trip every year. It leaves its breeding grounds near the Arctic Ocean in late summer and flies to its wintering grounds near Antarctica. After enjoying another four months of almost continuous daylight, it flies back home—from one end of the world to the other, 11,000 miles each way!



Heavy-Weight Champs

The Giant Tortoises of Galapagos Islands are the bulkiest of living reptiles. Some of these giants weigh more than a quarter of a ton and have shells as big as bath-tubs. They start out in life, however, looking like the common pet tortoise and it takes them 50 to 100 years to reach adult size. For all their bulk, these creatures can travel more than a fifth of a mile in an hour—not very slow going considering the weight they have to haul!



Seeing the Sea

The most wonderful thing about the sea is that it is there at all. None of the other planets in our solar system appear to have any oceans. ‘Ocean’ would be a more appropriate name for our earth because 70.8 percent of its surface is covered by the seas.

The sea contains 330 million cubic miles of water. If the entire surface of the earth were completely smooth, like a ball, it would not be seen at all. The sea-water would cover this enormous globe to a depth of about two and a quarter miles.

Sea water was fresh and sweet to begin with and became saline only by the addition of salt brought by rivers. And now there is so much salt in the seas that if we take it all out, it will weigh 40,000,000,000,000 tons. You can spread it out on all the dry land available on earth to a height of five hundred feet.

Even valuable metals are found in the sea. There are 38 pound of gold in every cubic mile of sea water.

Wronging the Fish

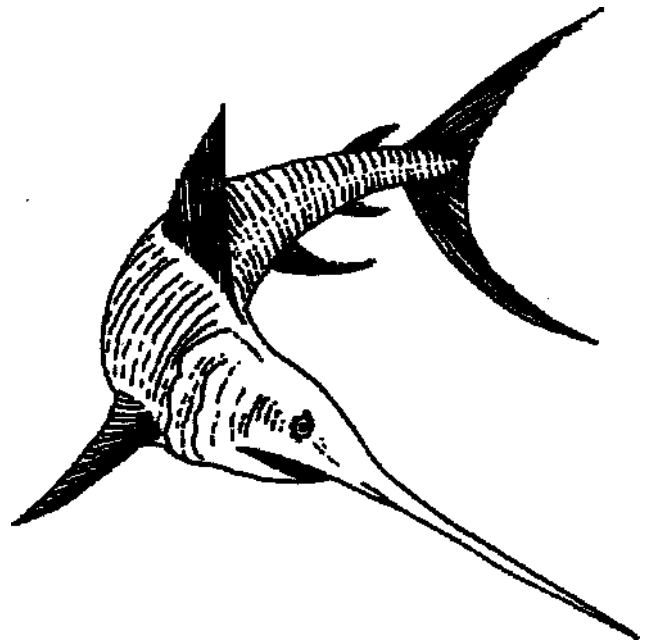
The expression to 'drink like a fish' is wrong, because fish do not drink. It is true that they open and close their mouths constantly as though they are drinking the water they swim in but this is only a breathing movement. In fact, the throat of the fish is kept closed by special muscles to prevent water getting into the stomach. Only solid food is allowed to go through.

'Fish out of water' to express uneasiness is another expression that is not quite correct, for some fish are perfectly happy out of water. The little mud-skippers for example, skip about freely on land chasing insects for food. They can jump from stone to stone and sometimes they play chasing each other around in the mud.

The climbing perch is another who seems to prefer to stay out of water. In fact, it would actually die of suffocation if kept under water for too long. This fish has become so accustomed to breathing atmospheric air that if it is not allowed to come up and breathe, it will die, even if there is plenty of oxygen in the water around it.

He Carries a Sword

Xiphias gladius, the sword fish, is a graceful looking creature with its snout prolonged into a narrow, flat dagger edged sword. The fish has no teeth, but uses its sword slashing right and left through a school of small fish, killing and maiming a great many of them. Then it eats the bits at leisure. The sword is a formidable defence weapon also. It is so strong that a charging sword-fish can drive it straight through the wood of a boat and kill the fisherman inside.



Striking Llama

The Llama, a relative of the camel, has long been domesticated in Peru. An excellent beast of burden, it can cover over twelve to fifteen miles a day, carrying a load of sixty to two hundred pounds, even in rough mountainous regions. Though normally well behaved the Llama may decide to go on strike suddenly. If it feels it has been given too heavy a load, it will sit down and refuse to budge despite entreaties, beatings or other methods of persuasion. If provoked too much, it will spit squarely in the face of the person who goads it!



Queer Fish

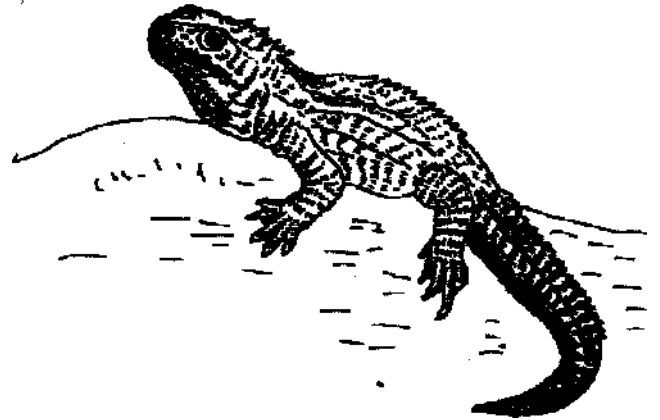
Ice-cream feels hot and steaming coffee feels freezing to you when you get a disease called ciguatera. Some of the fish off the West Indian islands cause this disease when eaten. When you have it, you get opposite sensations for hot and cold and you may lose your hair and nails! But what is very strange indeed is that the same fish, if caught and eaten in a nearby group of islands, are harmless. They appear to be poisonous only in a particular place.

You may not believe it but fish can catch colds. In fact, most fish cannot stand a sudden change of temperature and if the water becomes suddenly cold, they may even get inflammation of the lungs. They also get ear-aches, stomach upsets, skin troubles and a number of other diseases. Sometimes they even have epidemics, when large numbers of fish die.

But possibly you would consider the most amazing fish is the one that can live in a block of ice. The little Black Fish of Siberia, after being inside a solid block of ice for weeks on end, start going about their business and are perfectly normal, as soon as the ice melts. On the other hand, there are fish that love being in hot water! A kind of cichlids is found in the hot springs of Kenya where

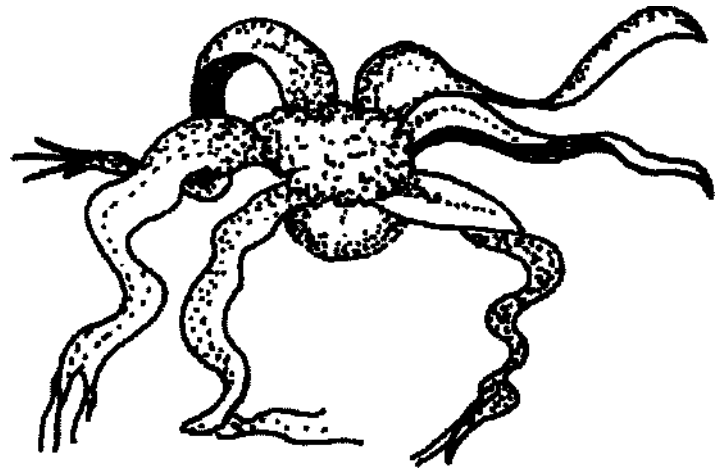
Sharing an Apartment

Tuatara is primitive lizard-like animal found in some of the islands near New Zealand. A burrow dweller, it shares its 'house' with a petrel. The bird helps in digging the burrow and in keeping it clean. Since the petrel is away all day and returns only at night when the lizard is starting out, the arrangement is very convenient for both partners. In case both happen to be 'in', the petrel keeps to the left side of the house, leaving the right half for the lizard's use!



Strange Growth

One of the strangest desert plants is the South African Welwitschia. It is said to live for a hundred years, but all this time its tiny stem which is only a few inches in height never grows any taller! From this stem arise huge leaves which continue to grow all the time. They become torn and withered at the tips, but are never shed! Of what special use such an arrangement of growth is, is not clear.



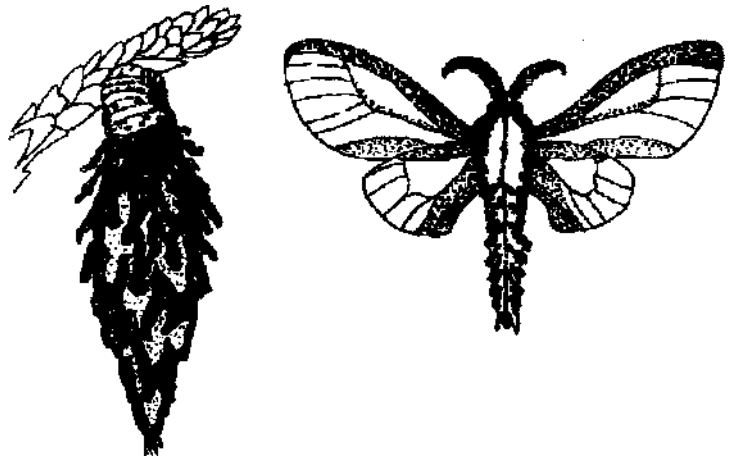
Reverse Process

Just as animals eat plants, there are some plants that eat animals—mostly insects. They use various methods for catching and killing their prey. One such is *Dionaea*. It is aptly called the Venus flytrap, because it uses its leaves as a trap to catch insects to eat. The leaf is in two halves and has sensitive hairs on it. When an insect alights on them, the two halves of the leaf close suddenly and the victim is killed by the acid secreted by special glands on the leaf and 'eaten'.



In the Bag

The bagworms are not worms at all, but the caterpillars of Psyche moths. These caterpillars as soon as they hatch out, build themselves small bag-like homes, with tiny twigs, leaves and of course silk;—hence the name ‘bagworm’. Each species has a different type of bag. The female is very odd indeed, without feelers, feet or wings. Probably because of this, she never ‘steps out’ of her home all her life. But the male flies off as soon as he come out of the pupa, evidently not relishing the idea of life imprisonment.



The Feeding Time

The Pelican’s pouch, which is its chief claim to fame, is not merely an odd ornament, but an efficient fish-net. The bird uses this distensible bag as a dip-net scooping up small fish and water. As the bird comes to the surface, the water runs out and the fish is swallowed.

The pouch is also the young pelican’s dinner bowl, for the mother feeds her young by regurgitating. At meal time the mother opens her mouth and burps, and a pint of ‘fish soup’ flows into the pouch. The baby pelican sticks its head into the cup and drinks up!



Philosophic Courting

With his spotless white front, black back and shoulders, the Adelie penguin looks like a dwarf dressed up in evening clothes. During the nesting season these charming flightless birds collect in thousands in Antarctic rookeries. The hens decorously wait for a proposal. The cock picks up a stone and lays it in front of her as a sort of offering. She may demurely accept the token or may get furious and start pecking him cruelly. The persistent male submits philosophically, shutting his eyes tightly till her fury is spent. As soon as she calms down, he walks up with great dignity to claim his bride.

Senecio the Slow Coach

Among plants, some grow very rapidly indeed Tendrils of some cucurbita, for example, may grow a millimeter a minute. On the other hand are terrible slow coaches like the Mountain Senecio of Kenya. This plant takes more than three years to grow a three-foot stem! Since it lives for about 200 years (compared to the cucurbita, which is an annual), it probably is not in such a great hurry.



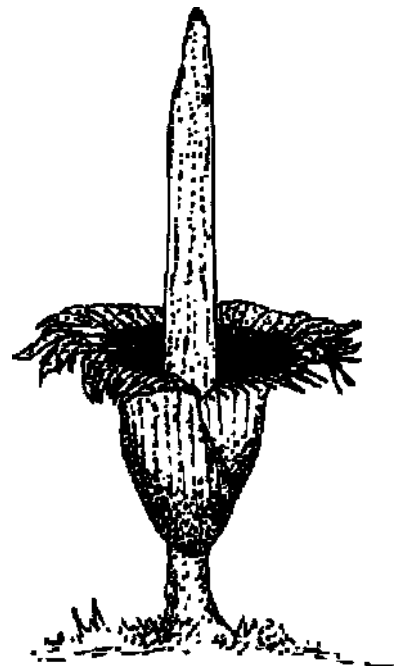
Marine Iguana

The Marine Iguanas may not actually breathe fire like the dragons of old sayings, but they can certainly squirt vapour from their nostrils when annoyed! Found only in the Galapagos Island, these three foot lizards look fierce and formidable. In reality however, these—the only seagoing lizards in the world—are harmless vegetarians, which lead a kind of perpetual holiday life. They spend their time swimming and sunbathing all day long, taking time off for a lunch of sea-weeds.



The Corpse Flower

Amorphophallus titanum of Sumatra has the largest inflorescence in the world. The bloom is shaped like an inverted bell, with a central spike nearly ten feet tall. The bell is about 15 ft. round and 4 ft. across. It has such an overpoweringly foul smell, like that of rotting flesh, that it is referred to as the Corpse Flower. While we find the smell nauseating, some carrion beetles are attracted by this stench and help to pollinate the flowers!



The Guacharo

The Guacharo of South America is the only bird in the world that lives in total darkness, for it lives in caves so deep and dark that it has to use a kind of sonar to find its way about. It is called the Oil Bird, because the young Guacharo is such a mass of fat that to locate the actual bird takes time! All this fat probably comes from the oily fruits of palms that the bird eats, roaming fifty miles or more at night to find ripe fruit. The Indians capture the young ones and melt down the 'Guacharo Butter'.



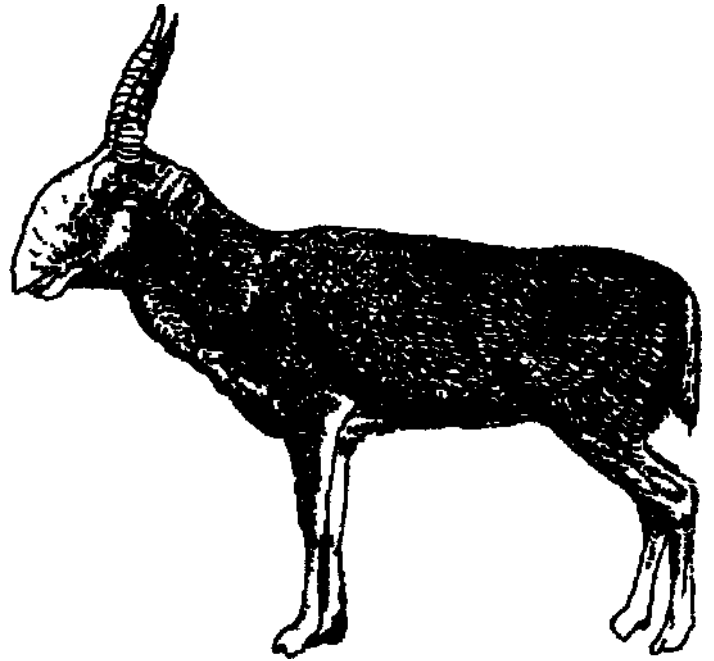
Galago

Galago, the Bush Baby has a cry that sounds very much like that of a human baby. These attractive little animals of the African forest are bouncy babies indeed, for they literally bounce along like an India rubber ball through the branches. They are so good at this that even at night they can take a twenty-foot jump and land without mishap on the next branch! Another peculiarity of the bush baby, is that his beautiful brown eyes cannot be turned about like ours. Since he can turn his head right round to look at things even directly behind him, he manages very well indeed.



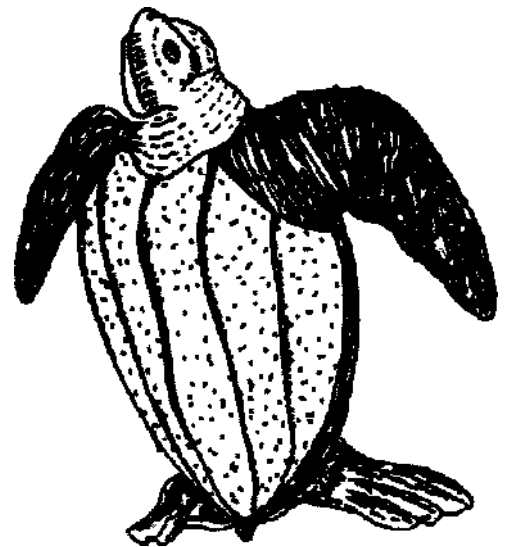
Saiga

Saiga tartarica is certainly a queer looking animal with none of the sleek elegance of other antelopes. It is stout with short legs and a swollen bulging nose, which looks like a miniature trunk is a very useful organ, filtering off the wind blown sand from the lungs. These are very hardy animals taking blistering summer and subzero winters in their stride, avoiding extreme conditions by moving to other places often travelling hundreds of miles in a week.



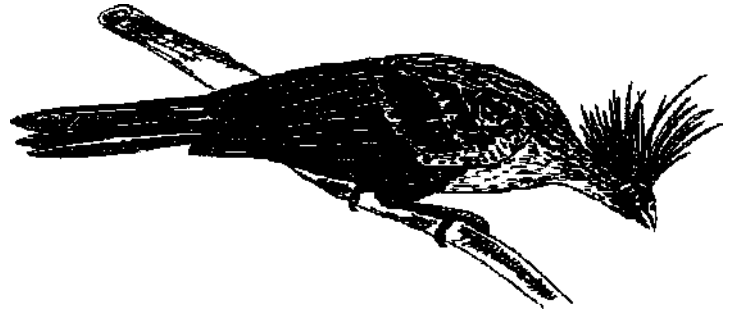
Dermachelys

Deremachelys, the leatherback turtle is the largest of all sea turtles. It may reach eight feet in length and weigh over a ton. It does not have the typical plates on the back but is covered by skin and looks like an overturned dinghy. The female comes ashore during the nesting season to dig a hole and lay her eggs. As soon as this job is done, she hurries back to sea, shedding “tears”. The tears are not due to sadness at leaving her precious egg behind. These animals cannot get fresh water at sea. So they use sea water extracting the excess salt by special gland near the eyes. This salt solution is got rid of by the “tears”!



Hoatzin

The Hoatzin of South America is an odd looking bird with eyelashes (a rare thing in birds) and an unpleasant smell which has earned it the name of “Stinking Pheseant”. Another of its peculiarities is that the crop—the bag in which its food is stored— is so huge that it takes up almost half the body space displacing the flying muscles. As a result, the Hoatzin is a poor flier and slinks about clumsily and slowly. The young crawl about busily with the help of the ‘claws’ in their wings. When alarmed they dive into water and swim efficiently away to safety!



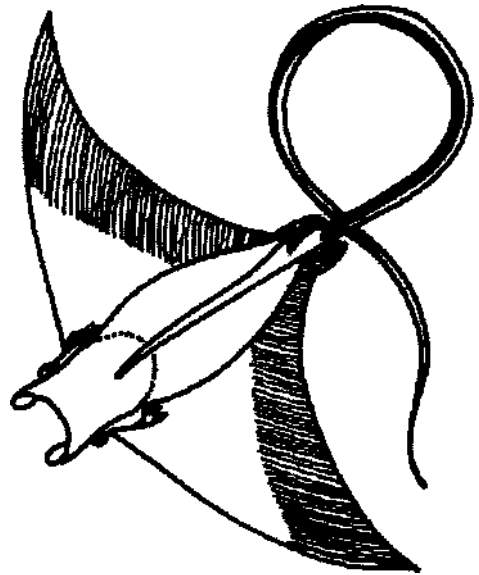
Bladderwort

The Bladderwort is a water plant, living on aquatic insects. There are special bladders on the plant. Each bladder is about one-eighth of an inch in diameter and has a trap door. When an insect touches this door, it opens invitingly. Once the insect is inside, the door swings back automatically imprisoning the insect with no hope of escape. The prisoner is then killed and eaten!



Manta Ray

Twenty feet across and about a ton and a half in weight, the Manta Ray with its huge pectoral fins, looks like a gigantic bat, as it lazily floats along flapping its 'wings'. For all its size and weight, it is a champion leaper, leaping a clear 15 feet out of the water, landing back with a noise that can be heard from miles away. Called the Devil Fish (because of the two horns at the front end of the body), it is greatly feared by divers, but the poor Manta is really a very gentle creature which eats nothing bigger than a herring!



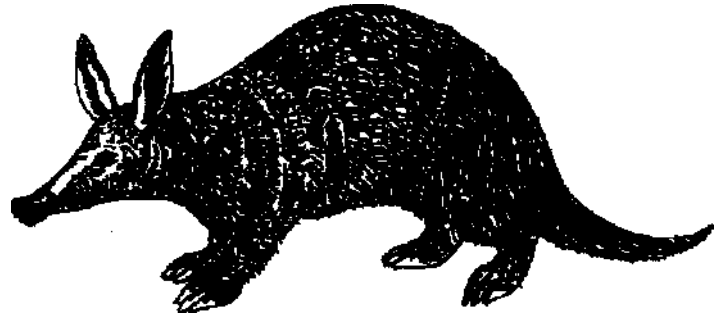
Procyon

Procyon, the racoon, isn't called *lotor* (washer) for nothing. This fetching little animal with a facemask and a ringed tail is so fastidious that he always washes his food before eating it. Even when offered perfectly clean fish or meat the animal picks it up in his delicate fingers and washes it thoroughly. He even washes sugar cubes, becoming very puzzled at the disappearance of the tid-bits!



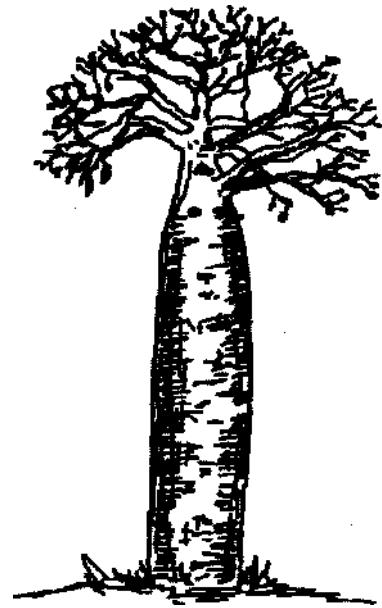
Aardvarks

The Aardvarks or 'Earth Pigs' of Africa are ugly animals with a plump body, pig-like face, a long snout and stout tapering tail. These ungainly creatures are experts at burrowing, digging away with amazing speed. When digging in a hurry, the Aardvark can send up a jet of earth two feet thick, shooting twelve feet into the air, and can disappear in a few moments! After sleeping away the whole day, the 'ant bear' lumbers out at night to look for ants and termites. Termite mounds sunbaked so hard that we need dynamite to blast them, offer no trouble at all to the Aardvark. As the powerful claws tear down the nest effortlessly, the termites pour out in panic and the eighteen inch sticky tongue goes into action with lightning speed licking up hundreds of termites at a time!



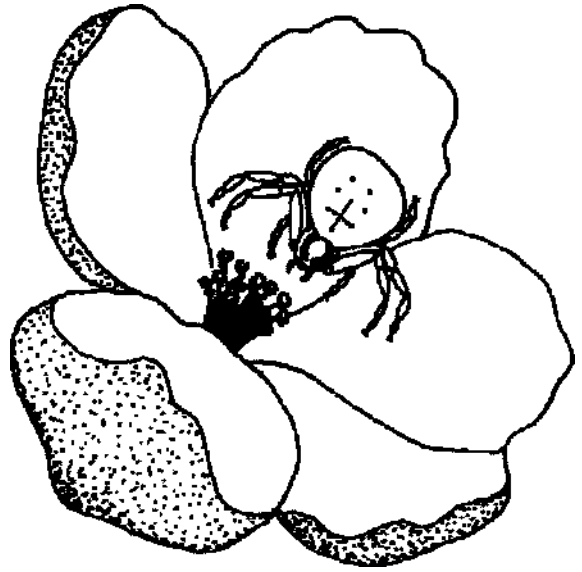
Baobabs

The Baobabs of Madagascar are weird looking trees. It looks as though someone stuck the trees into the ground upside down with the roots sticking out instead of the branches. In fact some of the natives of the area believe that they were planted thus by the devil himself! Some of these 'upside down' trees are huge with a girth of eighty feet or more, but the wood inside is very soft and pulpy. The stem has so much water that it can actually be wrung like a sopping rag! Another uncommon Baobab is Adansonia, whose large buds burst into bloom at midnight but wither away before noon next day!



Crab Spiders

Crab Spiders are so called because, like crabs, they can move sideways. Most of the Crab Spiders are hunters, but some find their prey by hiding in flowers. As soon as the spider takes up its position in the flower, the body turns the same colour as the petals. As a result, insects alighting to drink the nectar do not notice it, and so are easily caught and eaten! Besides assisting it in getting a steady food supply, the colour-changing ability help the spider escape the attention of its enemies also!



Draco

Draco, the only lizard to boast of the ability to fly, has 'wings' consisting of wide flaps of skin between its front and hind legs, supported by several elongated ribs. When not in use, the wings are folded against the body. The Draco does not flap its wings and really fly, but it is an expert glider. The body and upper part of the folded wing are a drab grey-brown, but when it is gliding with its wings outstretched, the under-surface is brilliantly coloured with splashes of red, orange and yellow. As soon as the animal alights this gay costume is folded away, and the creature blends with the inconspicuous grey-brown of the tree trunks. So sudden is this change, that the Draco seems to perform a vanishing trick!



Migrating Eels

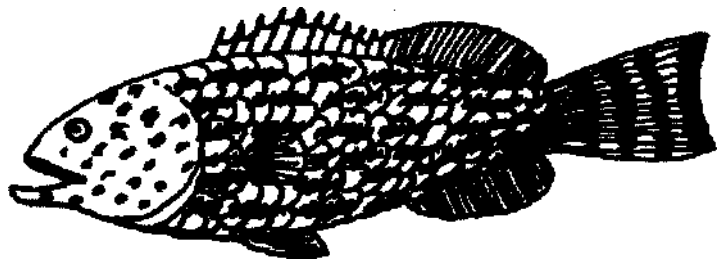
European Eels travel 3,000 miles across the Atlantic to lay their eggs at the particular area—the Sargossa Sea. And when the job is done, they die. The eggs hatch out in due course and the newly hatched out eels start drifting back to Europe. The journey takes them nearly three years; even so, they not only get go the ‘old country’ but have been known to ascend rivers and reach the particular fresh-water pond or lake in which their parents had lived!

The American Eels also spawn near about the same place. The newly hatched young of both types start their return journey together, but somewhere along the way the ‘American citizens’ turn towards their motherland, while the European residents continue onwards. How they find their way is a mystery, because neither has ever seen its ‘homeland’ before!



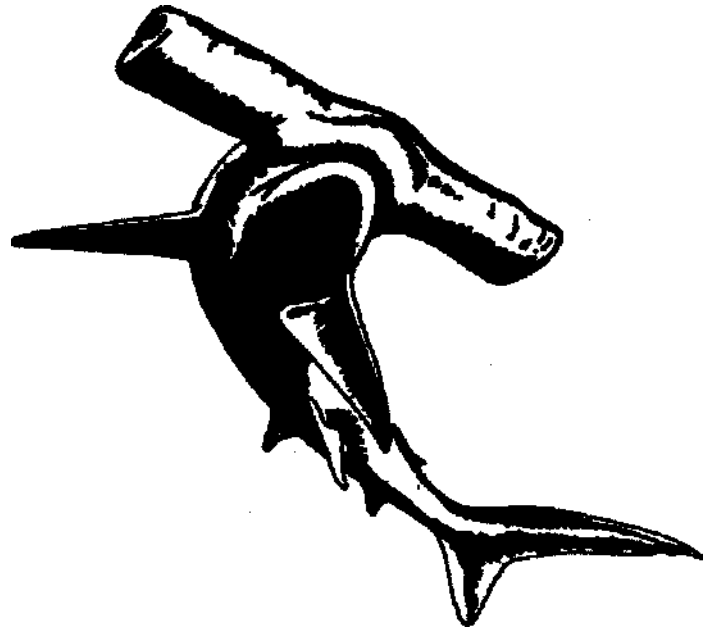
Groupers

Groupers are blessed with handsome livers and change their colour and markings as often as the mood takes them. No human quick-change artiste can beat the Groupers at the game. And they do it so quickly, it is fascinating to see the patterns and colours changing as we watch. It is startling too— to see a brown or yellow fish enter a pile of weeds and seconds later emerge as a white or scarlet specimen. So instantaneous are these changes that the Groupers are called the ‘Chameleons of the Sea’. Like the chameleons they actually turn dark with anger and pale with fright. But no one seems to know if they turn green with envy!



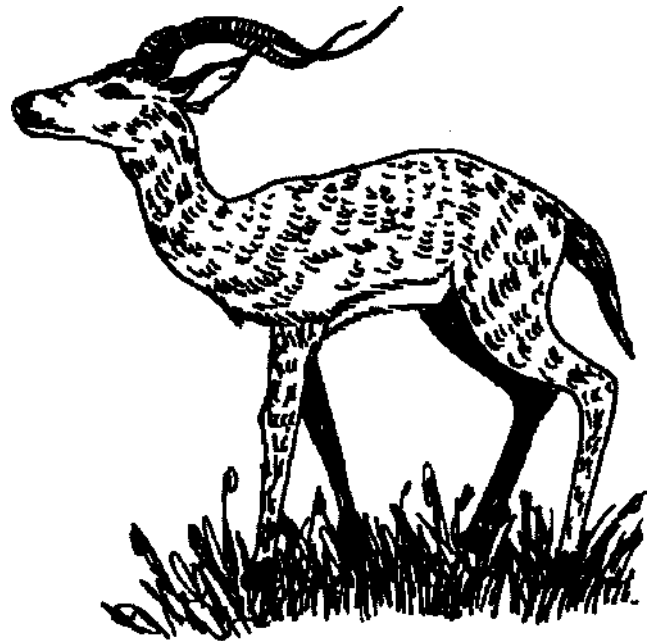
Hammerhead

Hammerhead, the odd-looking fish is certainly unique, for there is no other fish like it in the world. Its head is elongated on either side into lobes, so that it is shaped like an enormous double hammer. At the end of the lobes are the eyes. What special advantage there is in this peculiar arrangement is not clear. There must be some benefit, for the Hammerheads are aggressive hunters, biting and eating not only other formidable fishes, but attacking even men, so that some divers fear the Hammerhead more than all other sharks.



Impala

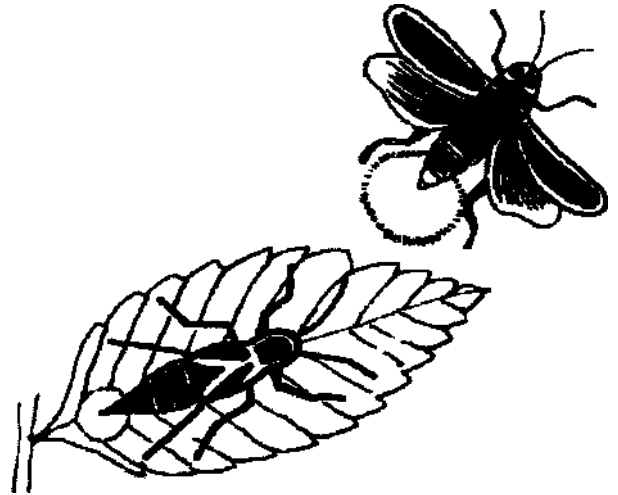
Impala of South and South Eastern Africa is the champion broad-jumper among animals. It is a handsome animal, about three feet tall, fox red in colour, with long slender legs. The long horns are lyre-shaped, sweeping backwards and upwards gracefully. When alarmed, the animal leaps high in the air and bounds off, leaping any obstacle in the way with effortless ease. Each leap may be 35 feet or more!



Torchbearers

Fireflies are neither flies nor do they have anything to do with fires. They are small beetles with light producing organs at the tip of their bodies. The lights are used by these insects to locate each other in the darkness. The male flitting about at night winks his lights every six seconds. Exactly two seconds after his signalling, the wingless female lurking in the bushes responds with her lights to indicate her position.

The most wonderful thing about this light is that it is 'cold'. In all our lights, nearly 95 per cent of the energy becomes heat and only the rest becomes light. But in fireflies practically no heat is produced.



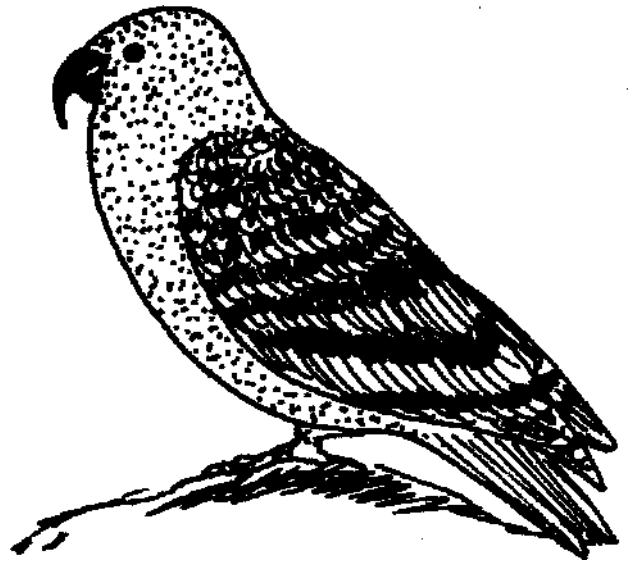
Jaculator

Jaculator is the specific name of a little fish in Malaya, which has a kind of built in 'water-pistol' in its mouth and uses this 'gun' to get food. Actually the 'Archer' (or 'shooters' as it is also called) shoots its prey by hitting them with a jet of water squirted forcefully from the mouth. It is an excellent shot and seldom misses—even up to a distance of four feet!



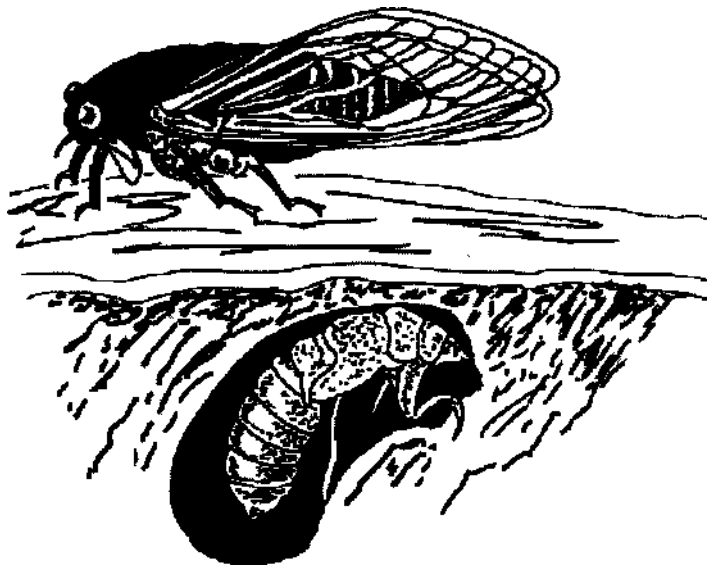
Kea

Kea is certainly a very very odd Parrot. Unlike many of its relatives, it does not live on nuts and fruits it is a meat eater! Found on the barren slopes of high snowy mountains in New Zealand, many of these birds were probably driven by hunger to eat sheep carcasses discarded near sheep stations. Some of them developed a taste for meat and started attacking live sheep! Landing on the sheep's back they tear out pieces of flesh with their formidable beaks. The poor sheep ultimately die of these wounds. Fortunately not all Keas are such pests. Many of them are still vegetarians!



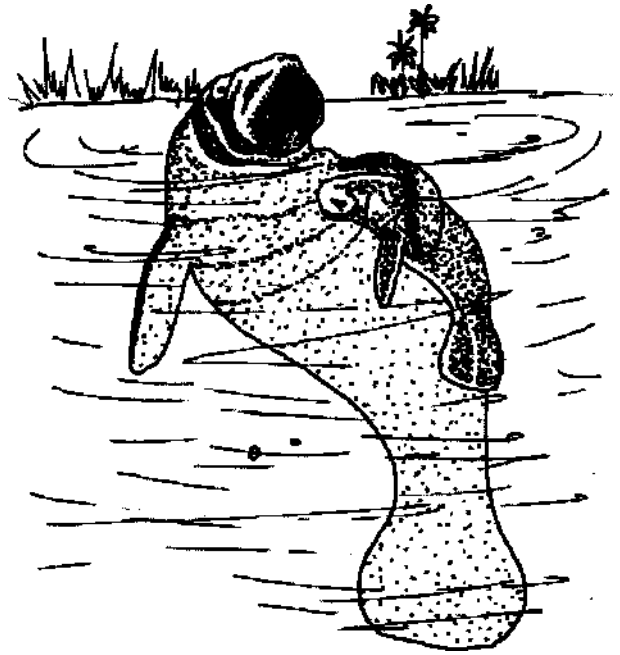
Seventeen Year Locust

The seventeen-year Locust is not a locust at all, but a Cicada! This odd insect, found only in the USA, takes seventeen years to grow into an adult, and the adult lives for only one week. During the week, the female Cicada lays her eggs on twigs. They hatch out into immature insects without wings and with stout digging legs. These 'nymphs' drop down, burrow into the soil, and live underground sucking juices from tree roots. At the end of 17 years, they dig their way up to the surface, and get on to a nearby bush. Then they shed their skin for the last time, to emerge as winged adults. Why there should be a seventeen-year 'childhood' for such a short-lived adult is a mystery!



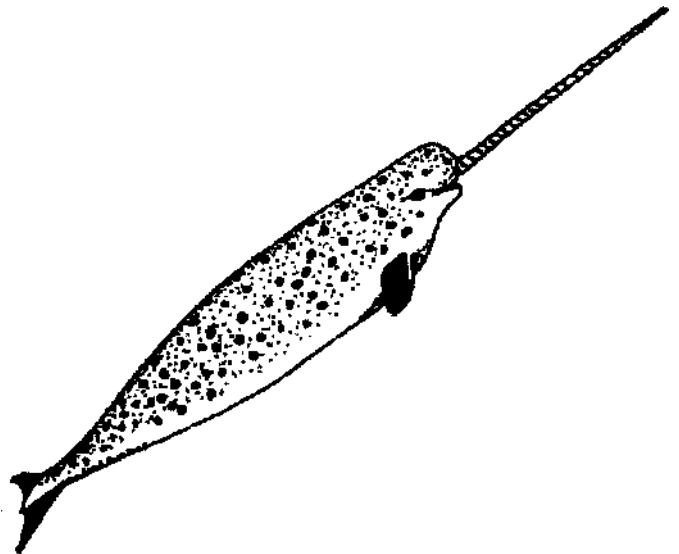
Manatees

Manatees are thought to have been the inspiration of the Mermaid yarns of sailors. Ten to 12 feet in length, and a ton in weight these slow, bald-headed creatures are far from attractive: a small, blunt head with bulbous lips divided down the middle, grey coloured body ending in broad, flat tail, hind limbs absent and front legs modified into flippers. They have a habit of standing upright half out of the water, holding their young in one flipper while suckling them. Probably this gave the impression of a human. Still, how anyone can mistake these ugly beasts for alluring maidens is a mystery!



Narwhal

Narwhal, found in the ice-bound waters of the Arctic, is unique among the whales in the possession of a tusk. It is also called the Sea Unicorn for the male sports a long spirally twisted ivory spear, jutting from the upper jaw. Actually this tusk is the upper incisor tooth, generally the left and occasionally right, which continues to grow till it reaches an impressive length. The spear may be 8 to 9 feet in a 15-ft whale. The function of this odd structure seems to be purely ornamental, for the Narwhal does not seem to make use of it either in attack or defence!



Ostrich

The African Ostrich is a champion in many respects. It is the largest among living birds, a full grown male standing eight feet tall and weighing 300 lb. It cannot fly but can run very fast indeed—keeping up a speed of 50 miles per hour for quite a distance. The sturdy legs can not only cover 15 ft in a stride, but can also kick with enough power to disable a horse.

Ostrich eggs are enormous too. A single egg can hold 12 to 18 hen's egg and takes 40 minutes to hard boil. The newly hatched ostrich chick is about the size of a domestic hen. In spite of all these distinctions the ostrich cannot swallow red hot coal as some people believe, nor does it bury its head in sand!



Potto

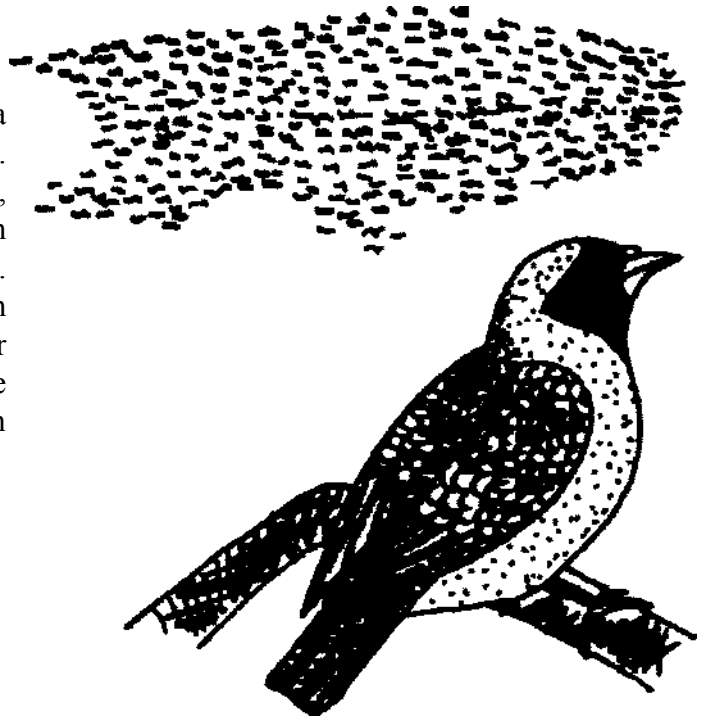
The Potto of Africa is unique among mammals in having part of its skeleton outside its skin. Many of its neck and back vertebrae have spines projecting outside forming a kind of ridge. This bony 'saw' is the Potto's defence weapon. When the enemy approaches the tiny potto waits till it is near and suddenly doubles up to put its head between its hind legs. As it bends, the ridge of sharp spines rip the enemy cruelly.

Another peculiarity of the Potto is that it has a terribly strong grip. The natives of the region are afraid of the potto and believe that it is not possible to loosen its grip, even in death. That is why they call it 'the animal that holds tight'.



Quelea

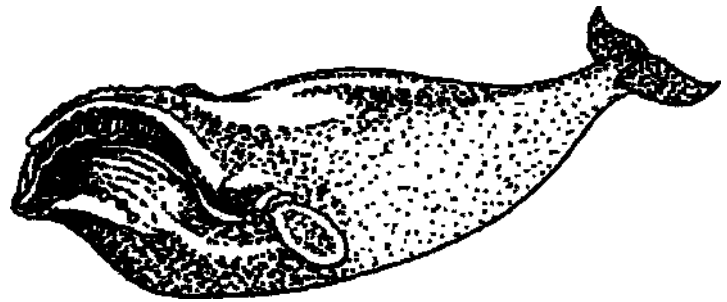
Quelea quelea, the red-billed weaver finch of Africa is, without doubt, the most destructive bird in the world. Flying in solid clouds three miles long and one mile wide, millions of these sparrow-like birds eat their way through crops of all kinds, leaving behind barren field and famine. Even dynamiting the trees they roost on hasn't had much effect on these devastating hordes, for sometimes their nesting sites cover hundreds of acres, with every single tree in the area occupied. Ten million nests in one such site is not uncommon!



Right Whale

Right Whales were so named by old-time whalers who considered them the only 'right' whales to catch, because they floated when dead (unlike other whales sank and were lost) and also yielded vast quantities of oil and valuable whale-bone.

A single arctic Right Whale for instance, yields about ninety barrels of oil and 1,700 lb of whalebone. This 60-ft giant has an enormous head and the biggest mouth of them all. Nine feet in width from corner to corner, the huge gaping mouth can easily hold an ox. Terrible though it looks, the poor creature can eat nothing larger than a herring!



Shrews

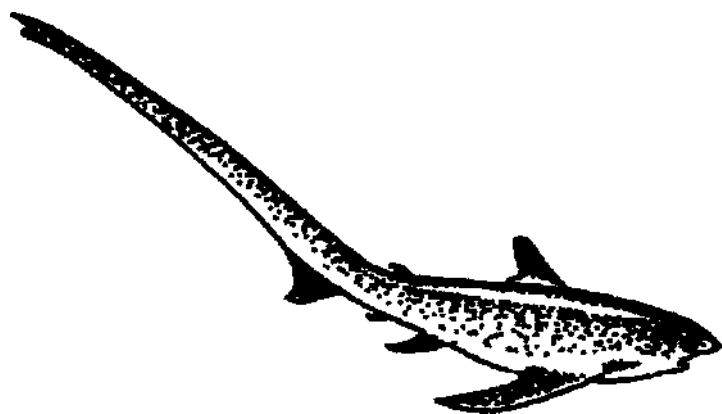
Shrews are among the smallest mammals in the world: the tiniest is less than two inches in length and weighs only 21½ grams. But all of them are fierce fighters and enormous eaters. Absolutely fearless, these terrible little savages will kill and eat animals twice their size.

Their life is one long, continuous search for food, and they will die if they go without food even for a few hours. For their appetite is astounding: a shrew eats the equivalent of its own weight every three hours. To match this performance, a boy weighing 100 lbs. will have to eat about 40 big loaves of bread every hour of the day, every day of his life!



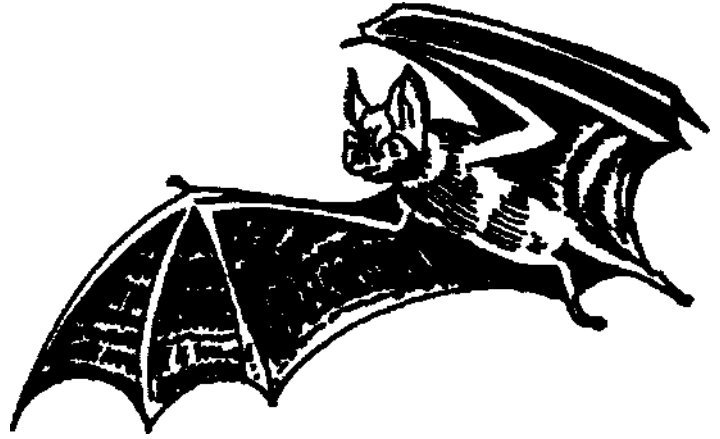
Thresher Sharks

Thresher sharks are graceful-looking creatures easily recognized by their slender scythe-shaped tails. Almost as long as the body, the tail is no mere ornament but a very efficient hunter's tool. It is used as a flail to herd together a school of fish, as the shark swims round and round the frightened fish in gradually decreasing circles. Finally, the thresher rushes in, lashing out with its tail and stunning everything within range. So powerful are the blows, that a single whack can knock even a big shark unconscious!



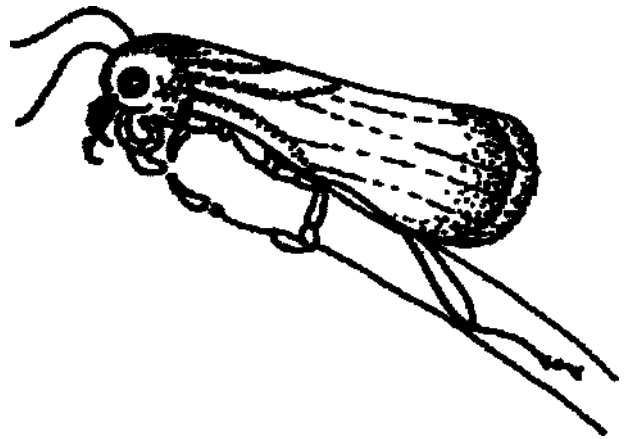
Vampire Bats

Vampire bats are the only blood-sucking creatures among the two thousand kinds of bats in the world. Found in South America these grisly creatures commonly attack domestic cattle, goats etc., tied out in the open. Even human beings sleeping out are not spared. The Vampire makes a painless cut with its razor sharp teeth and then quietly laps up the blood that flows out of the wound.



Yucca Moths

Yucca moths firmly believe that one good deed deserves another. These tiny moths are the only insects which can pollinate the flowers of the Yucca plant (hence the name). The female moth collects the pollen and carries it to the pistil of the Yucca flower. Then she lays her eggs near the future seeds so that her larvae will be able to feed on the seeds and grow. The Yucca finds this a fair enough arrangement because without the moth, there would be no seeds at all, and the larvae eat only some of the seeds.



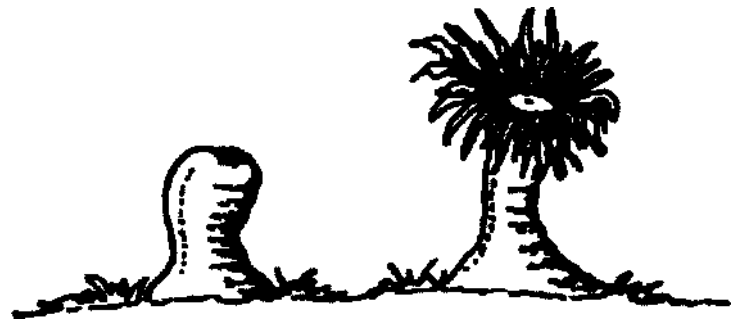
Zonures

Zonures are lizards which have an armour of large rough scales and regular plates on the head. The tail is covered by rings of enlarged spines. Only the belly has no protection. Different groups of Zonures use different tricks to prevent their enemies from getting at the unarmoured part. At the approach of a predator, the Armadillo Lizard, for instance, grasps its tail in its mouth and forms a circle so that the enemy is unable to pick it up.



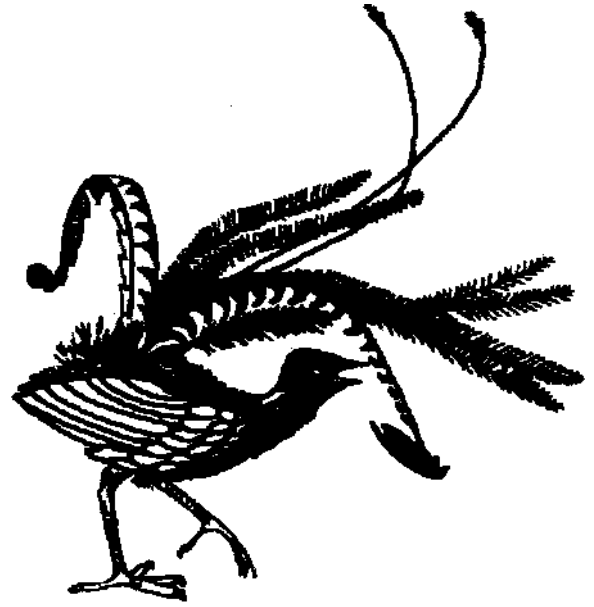
Sea Anemones

A truly Cinderella-like transformation is that of the Sea anemones. When the tide is out, these small shore animals look like leathery lumps. But as the tide comes in, they blossom into beautiful flower-like forms with brilliant colours, changing rock pools into veritable underwater gardens. This magical beauty has a purpose too: it serves to lure prey. Even as small fishes attracted by the rainbow colours, approach the ‘flowers’, the petal-like tentacles seize them, sting them and stuff them into the mouth of the anemone.



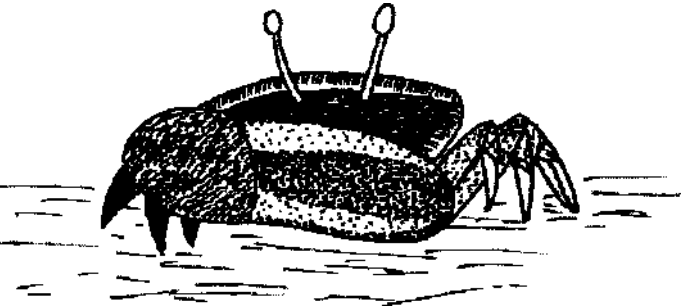
The Lyre Bird

The Lyre Bird of Australia has the most unusual tail among all living birds. At rest the tail looks drab, giving no hint of its spectacular beauty. But erect, it assumes the form of the ancient musical instrument—the lyre. The two outermost feathers curve out to form the frame. In between, forming the ‘strings’ is a shimmering tracery of delicate white feathers. During the breeding season, the cock prepares a playground, scraping stages. There he struts and pirouettes displaying his tail to the lady of his choice. No wonder, the hen bird which has no such magnificent ornament loses her heart to him!



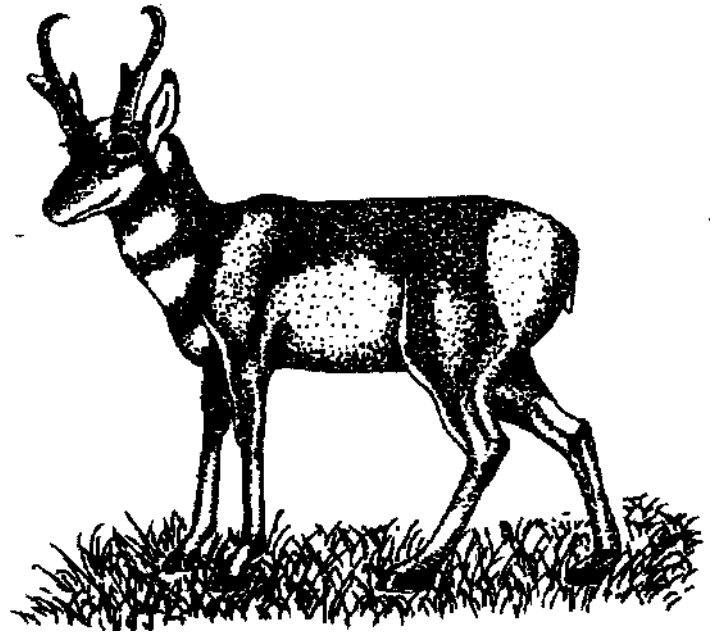
The Fiddler Crab

Uca, the fiddler Crab is no great violin maestro, though he spends most of his time sitting at the mouth of his burrow and moving his outsize claw as a fiddler moves his bow. All this claw waving is to attract the attention of passing female crabs. If one of them should stop to look at his attractive wedding finery, Uca leads her to his ‘quarters’ with more gestures. If she begins to have second thoughts however, Uca quite literally uses “strong arm tactics” to help her make up her mind!



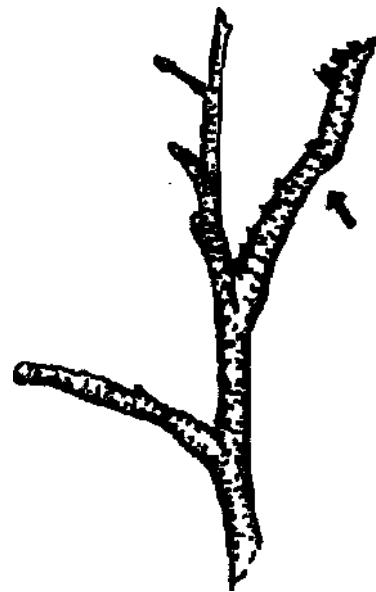
Pronghorn Antelope

All desert animals have to be fast runners, and the Pronghorn Antelope is perhaps the fleetest of them all. These champion runners can do 50 miles per hour for short spells and they can maintain a speed of 40 miles per hour for three quarters of an hour or more. One of them is known to have outdistanced a horse, even with one of its legs shot away. As the Pronghorn speeds away it becomes practically invisible, for its brown and creamy white colouration blends beautifully with that of the surrounding country!



Caterpillars

Caterpillars of many moths escape enemies by being dressed up like twigs and small branches of various plants. The body is not only coloured like the host plant but is also marked with leaf scars, dots and tiny bud-like outgrowths, while the pointed head and feet resemble the terminal bud. What is more, the caterpillar holds its body rigidly at the same angle as the twig it imitates and holds this pose for several hours on end! The resemblance is so perfect that even sharp eyed birds fail to recognise the animal.



Xylocopa

Xylocopa, the carpenter Bee, is not only an excellent worker in wood but a responsible mother as well. She tunnels through the solid wood of beams and rafters to a depth of nearly a foot and converts the space into a number of rooms by partitions made of shredded wood glued together with saliva. In each room she keeps a little 'bread' and lays an egg on it. The young bees when they hatch out live on the bread and finally bore their way out.



Walrus

Walrus, the ugly giants of the Arctic are among the laziest animals in the world. When hungry, they dive deep and dig up clams from the bottom of the sea. Fond of their sleep, they are terribly annoyed if they are disturbed. Since a large number of animals sleep close together, occasionally it happens that a walrus pokes another by accident. Immediately, the poked walrus rears up and jabs back in swift reprisal. Sometimes in his rage, he jabs the wrong neighbour and then of course, the victim proceeds to punish the offender. Soon the whole herd is completely awake!



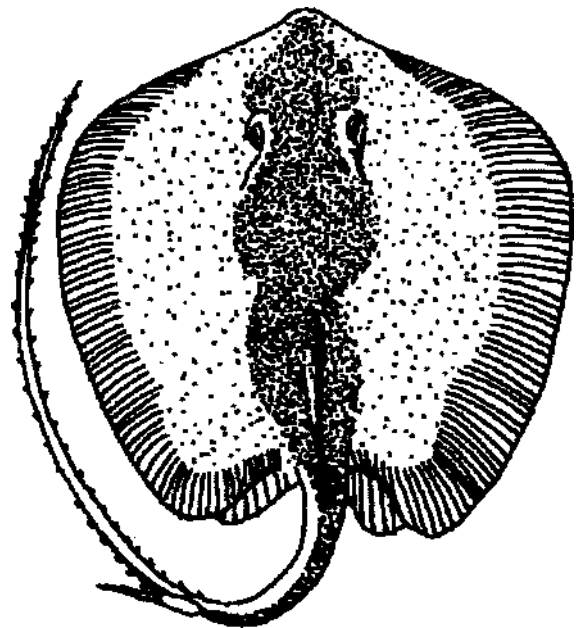
Bactrian Camel

To look at, the Bactrian Camel is very much like our camel. Only it has two humps and a coat of thick hair. But unlike our camels which can live in deserts with their scorching heat, Bactrian camels can't stand high temperatures and go away to spend their summers in the hills. Food is so scarce in the desolate Central Asian Plains with their icy winters that these odd creatures will eat with relish even the bitterest leaves, which other animals avoid like poison. They are very fond of salt, too, and drink a great deal of salt water from the lakes in the region. The humps are reservoirs of fat and when food becomes scarce, the camel simply lives off its hump!



Sting Rays

Sting Rays are so called because they possess one or more saw-edged spines on their slender whip-like tails. The spine is capable of inflicting a very unpleasant wound, and injecting a powerful poison into it. The sting causes severe pain, convulsions, and occasionally even death! Larger sting rays can drive the poison barb right through the arm or abdomen of a swimmer, in which case death is certain within a couple of hours. The Ray is never without its terrible weapon because as one barb wears out, a new one takes its place.



Cormorant

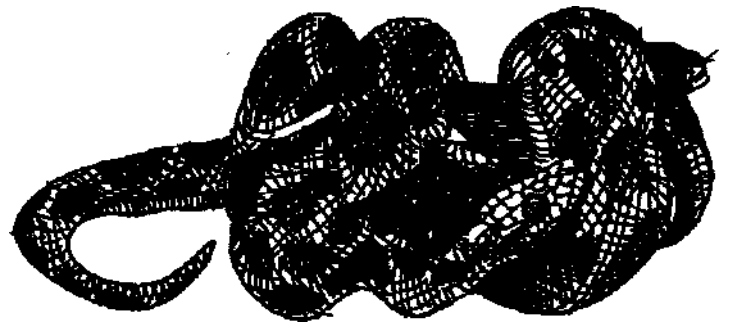
Though the cormorant is called the ‘Sea Crow’, it is not even remotely related to the crows. A cousin of the Pelican, this glistening black bird is an expert at diving and catching fish. So great is their skill that some fishermen in Japan and China make use of these birds to fish for them. The trained bird is taken out at dusk in the boat with a lantern at the side. The light attracts the fish and the bird dives for them. It can’t swallow the fish, because a narrow ring is placed around its neck to prevent it from doing just that! The fisherman pulls the bird back by the string tied to its leg and retrieves the fish. After a dozen or so fish are caught, the Cormorant is allowed to swallow one as reward. It seems a well trained *bird* can catch a hundred fish in an hour!



Pythons

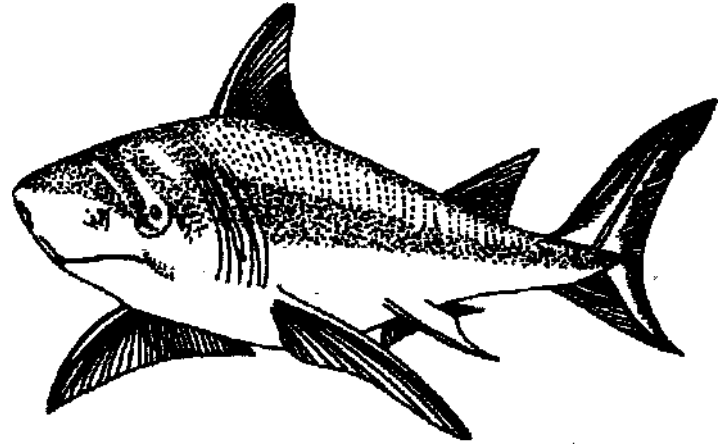
Going on a fast is nothing out of the ordinary for the pythons. They can go without food for months on end—sometimes even for a year or more. But when they do eat, these enormous snakes choose a really substantial meal like a pig or deer—even a leopard. Among the largest non-poisonous snakes in the world, the pythons often reach 25-30 ft. Having no poison, they kill their prey by coiling round the victim and squeezing till the animal dies of suffocation. Then the snake swallows the prey, however large it is—whole!

But, for all their giant size and unusual food capturing methods, pythons become very docile and make interesting pets!



Lazy Shark

One of the largest of living fishes, the sinister looking Basking Shark is second only to the Whale Shark in size. Though they look large enough to swallow an ox, these forty-foot giants of the sea eat only the tiniest floating animals, which are caught by a special filtering device in the mouth. They are lazy creatures and love to bask in the sun, lying motionless on the surface with their backs out of the water. It seems they are so gentle that some people have actually ridden on them!



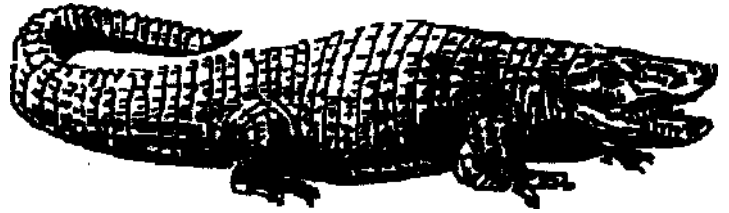
Sand Lover

Ammophila, the 'sand lover' is one of the very few insects that can use tools. A long and slender wasp, it has a black body with a jazzy blotch of red on the abdomen. For all its elegance, it is an efficient digger, excavating a sizable burrow in less than an hour. When the burrow is ready, the wasp stocks it with a large caterpillar and lays an egg on it. The insect then comes out of the burrow and blocks the entrance with a pebble. Finally picking up another stone in its jaw, Ammophila hammers the pebble in place and packs the soil tightly round it.



Loving Beast

One does not associate tender maternal feelings with an alligator, but female American alligator not only builds a huge mound of mud and vegetable debris in which to lay her eggs, but also stays near the nest guarding it with great ferocity. After about ten weeks, alerted by the squeaking cries of the newly hatched young ones, she tears the nest open and leads her 20 to 70 children into the water. Though the young alligators are vicious and ugly, the fond mother guards her darlings devotedly.



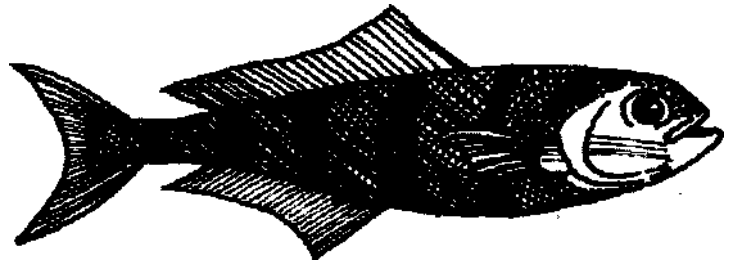
The Gardner Bower Bird

Like all the other Bower Birds of Australia, the Gardner Bower Bird also builds a special courting bower to win the heart of his bride. His bower is no simple structure but a two-foot high hut built at the base of a tree. The hut is so elaborately made that early explorers mistook them for children's playhouses! True to his name, the Gardner doesn't stop with the bower. He clears a space in front and prepares a lawn of moss decorated with bright flowers, berries etc. And with fussy care he removes all faded flowers off-and-on, replacing them with fresh ones!



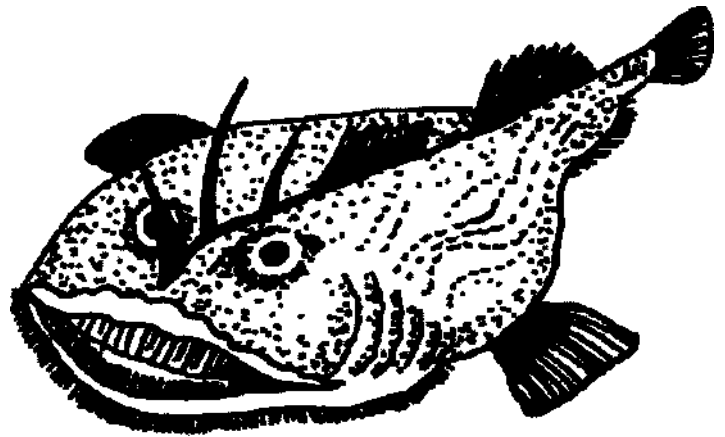
The Pilot Fish

The Pilot Fish was so named because it was supposed to pilot the shark to its food. A group of these gorgeous creatures with their emerald-green liveries and ultramarine stripes, swimming in formation just below and behind an enormous shark do look as though they are leading it to its meal. In reality, they are merely going along to feed on the scraps from the shark's dinner. Oddly enough, not only does the shark allow them to eat the crumbs "from his table", he never mistakes the accompanying pilots for food—even when desperately hungry.



The Fishing Frog

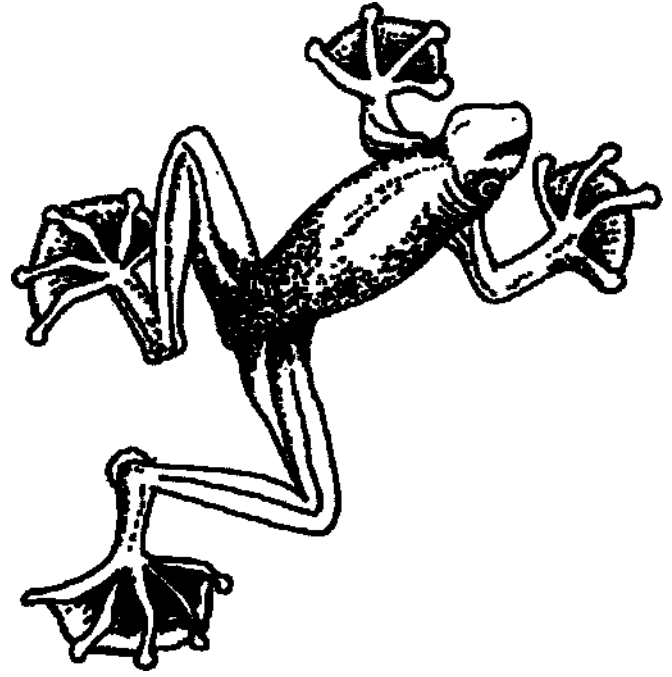
Lophius, the Fishing Frog is not a frog but a fish which angles for its prey. This ugly monster has a built-in line and bait on its head, which lures numerous fish into its cavernous mouth, with no chance at all of escape. Lying motionless, the five-foot glutton, with its tiny flaps of skin on the sides of the body, looks like a weed covered rock. If it fails to get a meal by angling, the fish rises from below to catch and eat up a goose or a duck swimming at the surface of the water!



The Poison Frogs

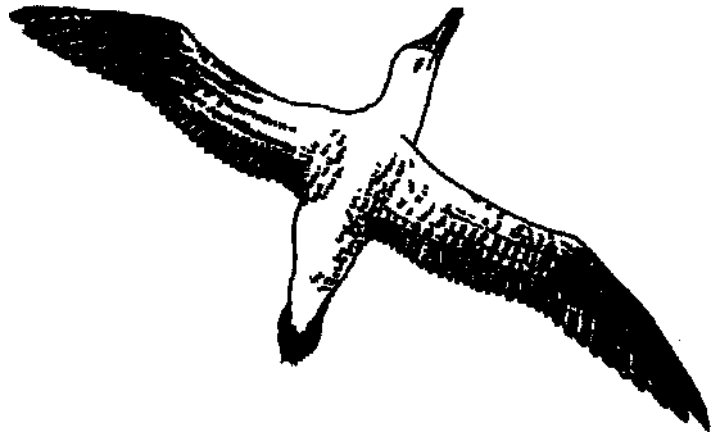
Dendrobates, the Poison Frogs of South America are brilliantly coloured creatures with contrasting patches of vivid green, red and yellow on a black background. The secretion of the skin is extremely venomous and knowing this, some of the Indian tribes dip the tips of their arrows and spears in the poison.

The male is a devoted parent and stays near the eggs which are laid on land. The emerging tadpoles attach themselves to the lips of their father. He carries them and drops them all off in a nearby pond where they develop further.



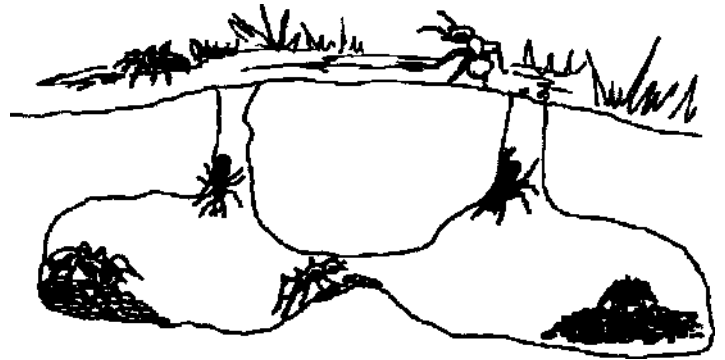
Wandering Albatross

With a wing spread of twelve feet, the wandering Albatross is not only the largest of living birds but a superb flying machine capable of circling the globe effortlessly. These magnificent black and white oceanic birds spend their entire life at sea, coming to land only to breed. The young birds do not touch land for the first two years. Gliding above the waves on almost motionless wings, the Albatross cruising covering more than 300 miles a day. These extraordinary birds even go to sleep on their wings at night, as casually as we sleep between the sheets.



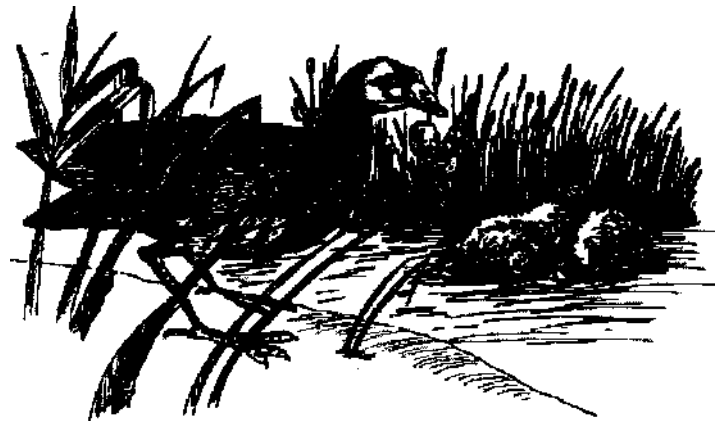
Harvester Ants

That some ants gather seeds and maintain granaries has been known since the time of King Solomon. The nests of these Harvester Ants are large and division of labour well marked. The foragers go forth in the morning like a well disciplined army. On their return, the booty is handed over to a group of ‘examiners’ who sort out the seeds in special rooms set apart for this purpose. The sorted grain is taken over by the ‘threshers’ who have powerful jaws to de-husk the seeds. The seeds are finally stored in a number of special granaries. If they happen to get wet, the whole lot is taken and dumped outside the nest!



The Moor Hen

The Moor Hen mother raises two batches of chicks in one season. When the second batch of eggs is laid, unlike other birds, she does not drive away her first born but builds a platform nearby for them to stay. The first batch of chicks repay this kindness by helping her with the house-keeping: gathering reeds and repairing the nest, so that it doesn't get flooded or float away. They baby-sit for her and help her to feed the young ones. One half-grown chick was actually seen to go and fetch his mother, when one of the ‘babies’ was cheeky!



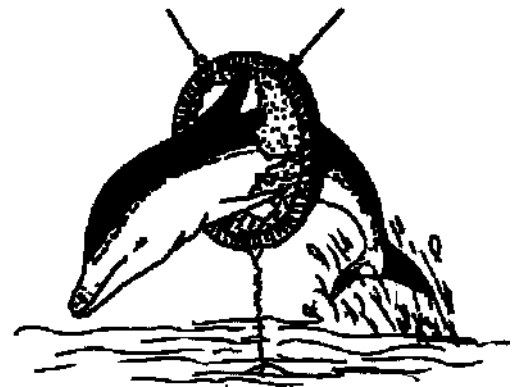
Walking Pin-Cushion

Tore' is certainly one of the best armed animals in the world. Confident in the power of his sharp quills, this walking pin-cushion has little to fear from any living creature. When danger threatens, he erects his spines and gives fair warning by rattling them. If the enemy does not have the sense to retreat, "Pore" turns and runs backwards with incredible swiftness, driving the quills deep into the enemies face or legs. No wonder even tigers and panthers are wary of attacking him.



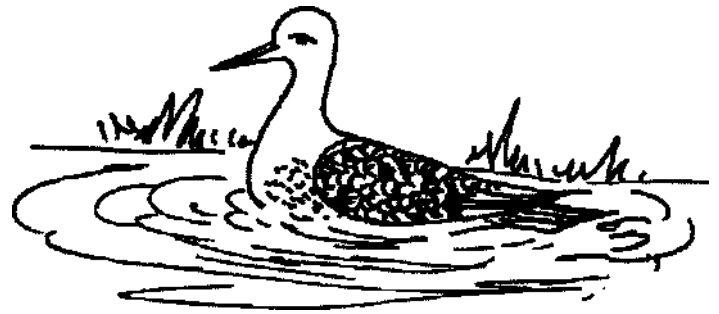
The Handsome Whale

The dolphin is not only the handsomest among the smaller whales, but the speediest as well. Its beaked nose and spectacle-like rings round the eyes give it a dignified professorial look, which is deceptive. It is a jolly sociable creature, always clowning about and leaping right out of the water in sheer good spirits. It is one of the most intelligent mammals, too, and has been trained to do a number of tricks like playing ball, hoisting flags, ringing bells, etc. One bright dolphin even jumped through a paper covered hoop while another pulled a surf-board giving rides to children!



The Hen-pecked Husband

Life at breeding time is not a jolly round of song and dance for the male Phalarope, because the quiet fellow is the most henpecked husband in the world of birds. The female is not only larger and more brightly coloured but also more domineering and has a louder voice. She pursues him relentlessly and does all the courting. But once he has accepted, it is she who selects the nesting site but he has to prepare the nest. After laying the eggs, she flies off gaily, leaving the poor male the entire responsibility of looking after the eggs and incubating them.



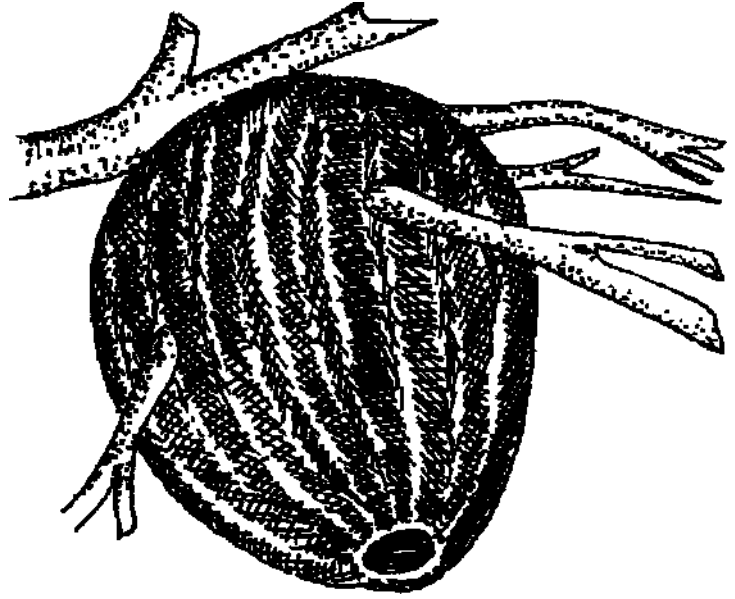
Prairie Dogs

Prairie dogs are not even related to the dogs. These fetching little burrow dwellers are a kind of ground squirrels found in Western USA. Living together in huge colonies, they form large underground towns. One such town was known to be 240 miles long and 100 miles broad and it had an estimated population of over 400 million animals. When they are out feeding, a sentry is always posted to look out for enemies. When he whistles the special alarm signal, every animal dives down the nearest opening and races to its own “house”.



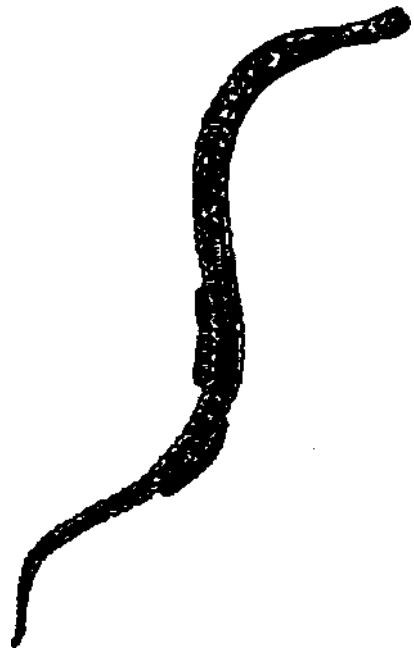
Hornet's Nest

The bald-faced Hornet makes its nest with a kind of papier-mache formed of wood particles chewed up with saliva. The finished nest is more or less spherical, and the outer wall not only protects the inner cells from rain, but also from heat and cold. Scientific studies have established that this wall, which is less than two inches thick, is as effective an insulator against heat and cold as a 16" brick wall. And it is very light, too—a cubic inch ordinary brick wall weighs almost 135 times as much as a cubic inch of 'wasp wall'.



Pipefishes

Pipefishes with their long pipe-like bodies, look very unlike their cousins—the sea horses. Resting upright among clumps of eel grass, these small fishes escape detection because their reedlike form and swaying movements resemble those of the long slender leaves closely. And since they are capable of changing colour to match their surroundings, they can become practically invisible. The male pipefish looks after the eggs, carrying them in a special pouch. The young ones, when fully-grown, wriggle their way out to freedom.



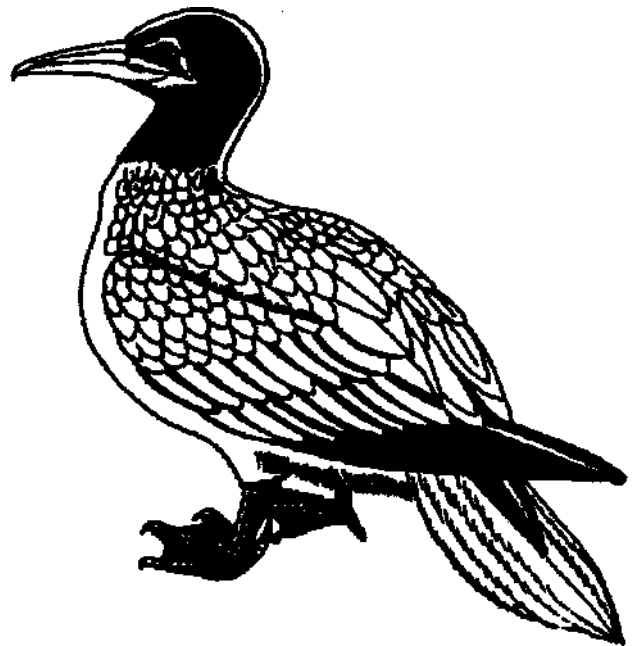
The Hairy Frog

The Hairy Frog of the Cameroons used to be famous as the only frog with “hair”. But the hair-like structures which cover the sides and back of the thighs are fine skin filaments which help breathing. While the male that lives in mountain streams has this hairy growth, the female, which lives on land and joins her husband only during the breeding season, has no growth at all.



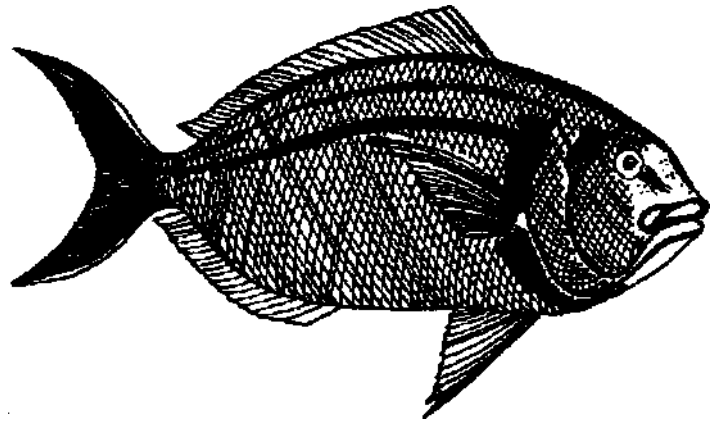
The Diving Gannet

A highly specialized diver, the Gannet has a shape practically tailored for the job. When it sights a fish, even from a height of a hundred feet, it closes its wings and descends like a bolt from the blue, sending up a spray of water a dozen feet high. The impact is said to stun fish as far as six feet below the surface. Fortunately, the bird itself is unharmed, because there is a spongy layer of air cells between the skin and the body, which acts as a cushion and protects the Gannet from shock as it enters the water.



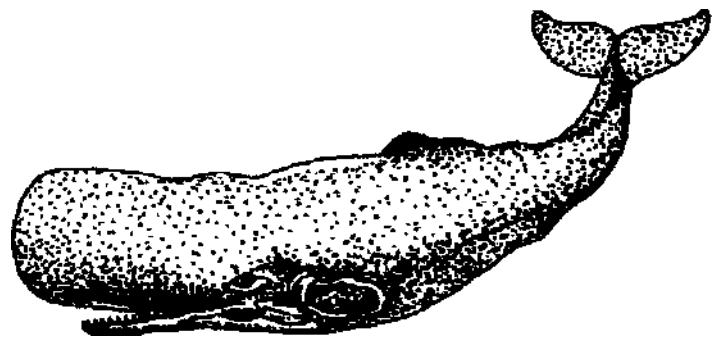
The Colourful Dorados

Dorados, the Dolphins, are not even related to the small whales of the same name, but are game fish found in all the tropical seas. When caught, these fish undergo quite remarkable colour changes. In its death throes, the Dorado changes from the beautiful green and gold to vivid blue, chalk white and finally a drab olive. In Roman times, the fish were kept in a glass vessel on the banquet table, so that the guests could watch the brilliant colour display of the dying Dorado. So esteemed were these fish for their taste that a single one is said to have cost a thousand rupees or more!



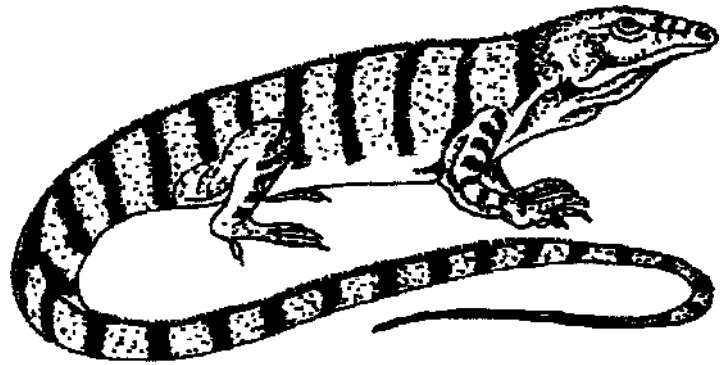
The Sperm Whale

The largest of the toothed whales, the Sperm Whale gets its name from spermaceti, a white oily substance stored in its head. A full-grown male is a massive creature, growing to sixty feet or more, while the female is barely half this size. The sperm Whale dives down 3,000 ft to hunt its favourite food—giant squid and cuttlefish—staying nearly an hour under water. It needs a lot of food to keep it going: almost a ton a day!



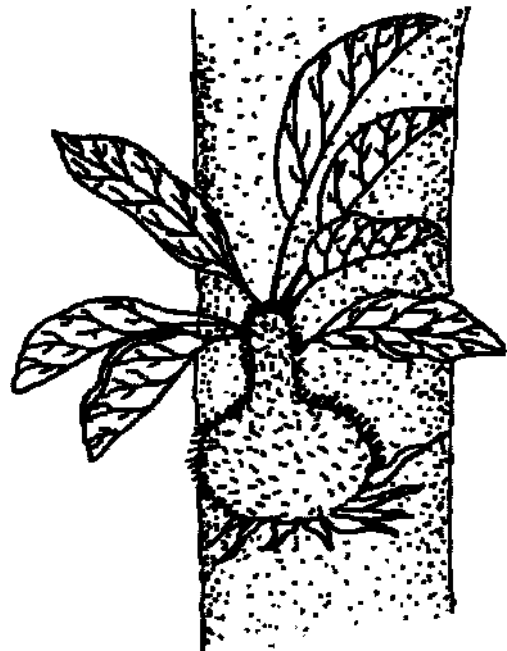
The Warrior Lizard

Varanus, the monitor, is a large lizard with a reputation for a tenacious grip that holds on for hours. It can run and swim with efficiency, but as a climber it is an expert. This has given rise to a number of legends about the animal. The most famous of them is about a Maratha soldier, who climbed the high wall of an enemy fort by tying a rope to a Varanus and climbing after it. No one seems to have verified this feat experimentally, but even today there are people in Maharashtra called Ghorpades—said to be the descendants of the hero, who won with the help of a Ghorpad or monitor!



A Dream House for Ants

Some kinds of ants do not have any housing problem at all. They live comfortably in ‘prefab’ homes, provided by certain plants afflicted with ‘myrmecophily’ or ant-liking. One such plant, *Hydrophytom*—a squat little shrub growing on tree branches—develops a round stem base: this is the house the plant builds for its guests, meeting every specification for an ideal ant home. The ants inspect this dream house, complete with galleries and cork lining and move in straightaway. In lieu of rent, the ants guard their host zealously giving vicious bites to any animal that tries to eat up the plant.



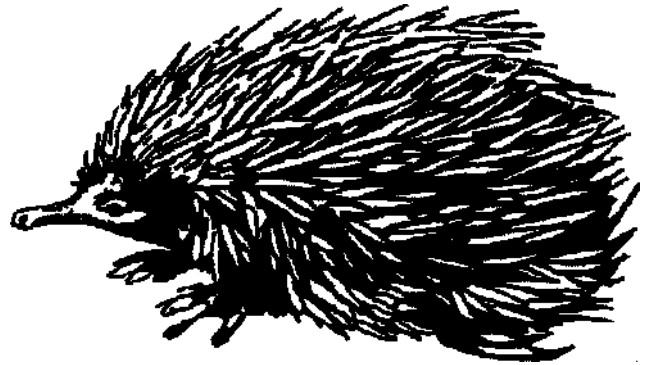
The Pangolin

Ambling along on its knuckles, the Pangolin looks like some kind of a giant animated pine cone, with the entire upper part of the body covered by overlapping scales. When danger threatens, the pangolin merely rolls up into a ball protecting the vulnerable underside which has no scales. After the enemy leaves, the animal unrolls itself quickly and trots off looking for ants and termites, which are its favourite food!



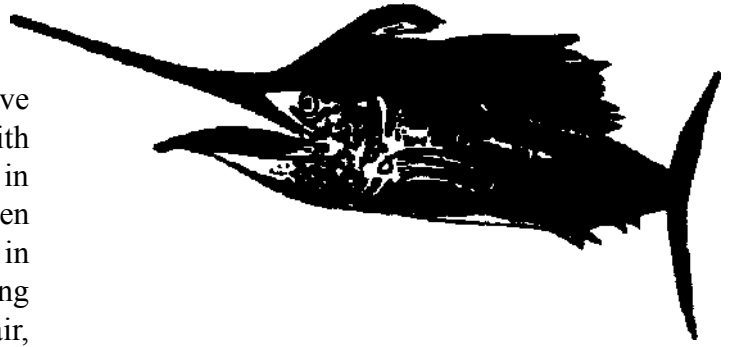
A Queer Mammal

One of the queerest mammals of the world is the Echidna of Australia. Though it looks somewhat like the porcupine, it is not even distantly related to that animal. It is very choosy about its food and will eat nothing but ants and termites. Its favourite defence trick is to dig itself into the ground, and once it has wedged itself in, only a crowbar can lever it out. The oddest thing about the Echidna is that it lays eggs like birds do and then carries them about in a pouch. When the babies hatch, the mother nurses them by forcibly squirting milk into their mouths!



The Sail Fish

At rest, the Sail Fishes given an entirely deceptive impression of being slow-coaches, drifting about with their huge dorsal fins projecting out of the water. But, in fact, they are among the fastest fishes in the world. When they get going, the “sail” folds away in a deep groove in the body and the fish shoots off at 50 mph. Considering that the resistance of water is about 800 times that of air, this is a truly fantastic achievement indeed!



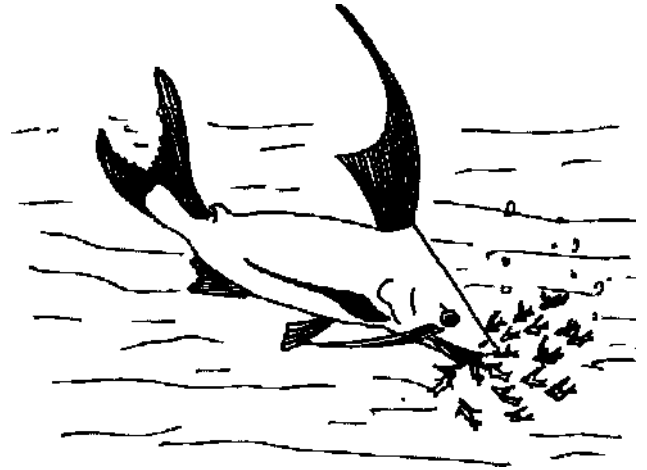
The Rat Kangaroo

Bettongia, the Rat Kangaroo, looks like a toy model of its huge cousin—the real Kangaroo. It has the same long rear legs, short front legs and a muscular tail—all suitably reduced, of course, to fit the rabbit sized creature. Unlike its cousin, however, the Rat Kangaroo builds a nest and it has the curious habit of using its tail to tie up its nesting material! Very comic it looks too, hopping along with a bundle of sticks in its tail! For all its cute looks and fetching ways, it is an aggressive brute and if two of them are shut up together they will fight savagely till one of them is killed.



The Catfish

The gaff-topsail catfish gets its name from its tall sail-like dorsal fin. This two-ft long fish is a mouth-breeder: he incubates the eggs—sometimes as many as fifty of them—in his mouth. Since his wife doesn't even take turns at the job, the poor fellow has to carry this burden for 65 days without eating. Naturally, he begins to look lean and hungry, but he does not break his fast till the eggs hatch. Even after that he carries the fry around in his mouth, cleans them and takes them out to feed. He knows his young so well, that if some other fry get among his children, he swallows only the intruders!



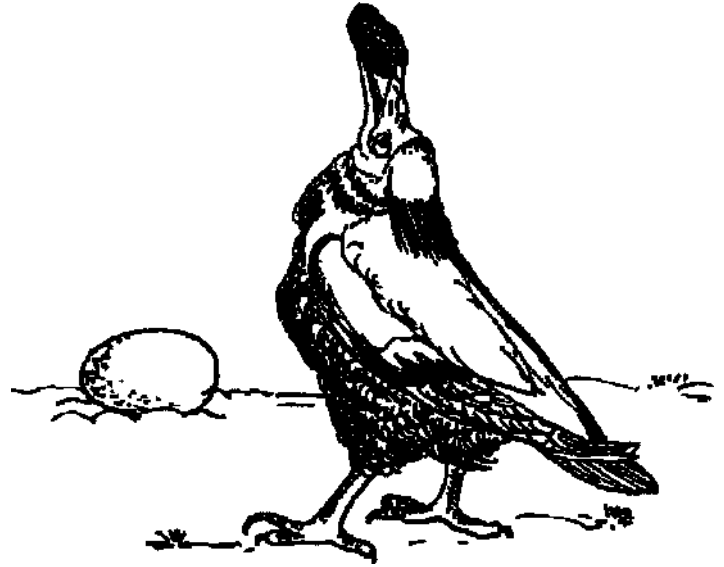
They're Active Hunters

All spiders do not spin webs and invite their victims to “walk into their parlours”. Some like the Tarantulas are active hunters, chasing and running down prey. What is even more surprising is that some Tarantulas have a leg-span of 10 inches which actually attack not small prey like flies and other insects, but fairly large animals like mice, lizards and even small birds!



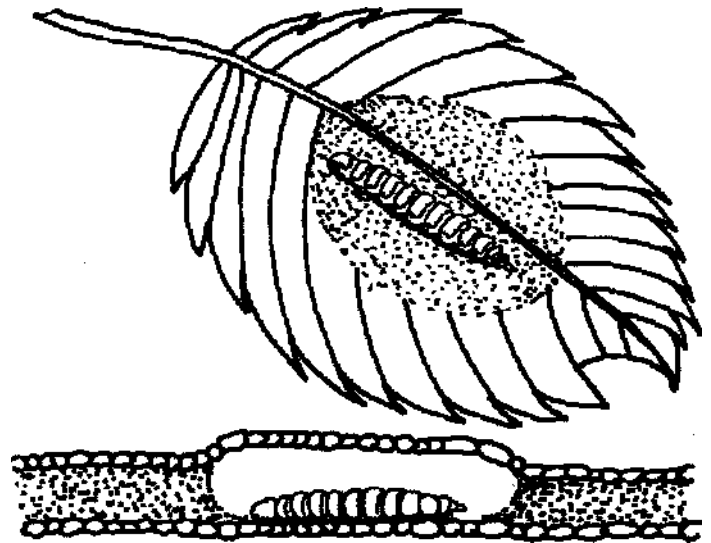
Weights Anyone?

Neophron is not only an expert bowler but champion weight-lifter as well. He has developed an excellent technique for breaking open the large ostrich eggs on which he feeds. Picking up a stone in his bill, the vulture moves back a few paces and hurls it at the egg. In case it misses, he tries again varying the pitch. Usually he manages to break the egg in less than two “overs”. He is very particular about his missiles, too. He searches all over the surrounding area up to a distance of 150 ft. till he finds a stone to his satisfaction. Some of his finds may weigh more than two pounds which is quite a load for the slender bill of a bird less than two feet in length.



The Leaf-Miners

It seems impossible that any animal can live between the upper and lower skins of a leaf, but that is exactly what the larvae of *Fenusa ulmi*, a kind of saw-fly do. The mother *Fenusa* lays her eggs only on elm leaves and on no other (some other types choose the oak). The larvae aptly called leaf-miners burrow inside and eat the tissue between the two surfaces. When fully grown they come out, drop down on the ground and after spending the winter in the topsoil emerge as saw-flies.



The Avenue Builders

The Bower birds of Australia are perhaps the most accomplished architects among birds. Just for courtship and playing, they build special 'bowers' of different types: platforms, may-poles and avenues. The avenue builders erect two closely parallel walls and decorate the floor with bleached bones, bits of glass, fresh flowers. The Regent Bower Bird actually paints the wall of his tunnel, using a mixture of charcoal and saliva of fruit juices as paint and a piece of bark or a wad of leaves as a brush. Master builder though he is, he does not help in building the nest for the children, but leaves that job entirely to his wife.



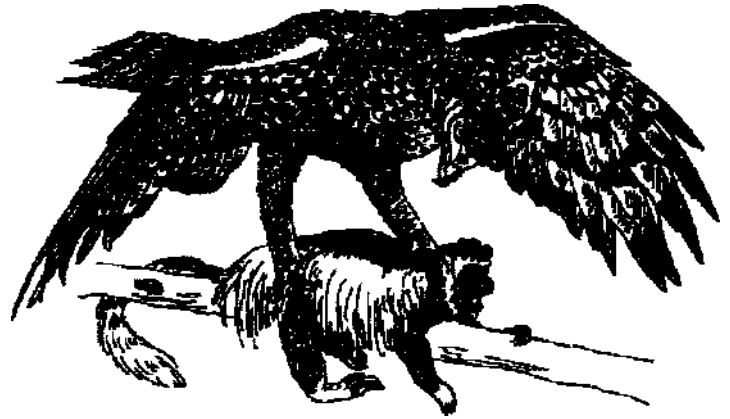
Light Haters

A cousin of the frogs and toads, the Olm is a very peculiar creature, indeed. Found only in the underground waters of huge caverns in Carniola, the Olm lives in complete darkness. About a foot in length, it has flattened wedge shaped snout, four tiny legs and no eyes at all! The only spot of colour is provided by three pairs of carmine red gills, which contrast vividly with the dead white of the body. The curious thing is, the Olm's skin is as sensitive to light as a photographic plate. If the animal is not kept in total darkness the skin develops grey patches and if exposed to direct light, it turns jet black!



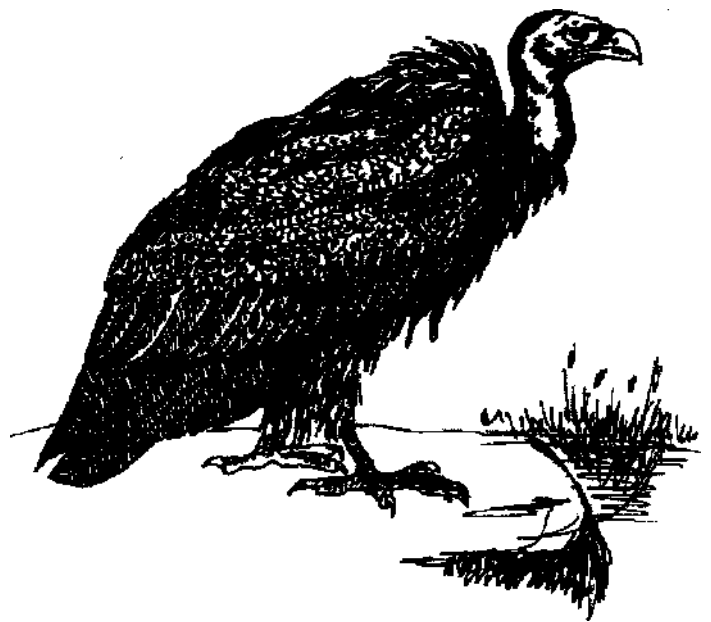
The Monkey Eating Eagle

One of the rarest birds of prey, the Monkey-eating Eagle justifies his name by doing just that: he subsists largely on the macaques found in the tropical forests of the Philippines. The monkeys, though strong and powerful, are no match for these spectacular birds with shaggy crests and bright blue eyes. The birds swoop down out of the blue and slash out with their immensely powerful claws, before the victim even realizes its danger.



The Bearded Vulture

Clad trimly in black and white, Lammergier, the bearded vulture is an impressive bird, 3 to 4 feet in length with long wings and a mask across the eyes. He wears two black bristly tufts hanging down on either side of the beak, which gives him a jaunty bearded look. Lammergier has a curious liking for tortoises and bones, both of which have to be broken open. He carries them to a good height and drops them on to rocks, flying down to feast off the shattered shells or bones. Lammergier means 'lamb killer' and many people even believe that he carries off little children! This is nonsense because the poor bird has such weak legs that he cannot even lift large prey, leave alone children!



The Sap Drinkers

Cousins of the common woodpeckers, the North American Sap Suckers are aptly named for they love to drink the sap of trees. For this purpose they drill rows of holes in apple, lime and other trees. Later they return to lap up the oozing sap and make a meal of small insects attracted by the sweet sap, thus providing themselves with both meat and drink at one sitting!



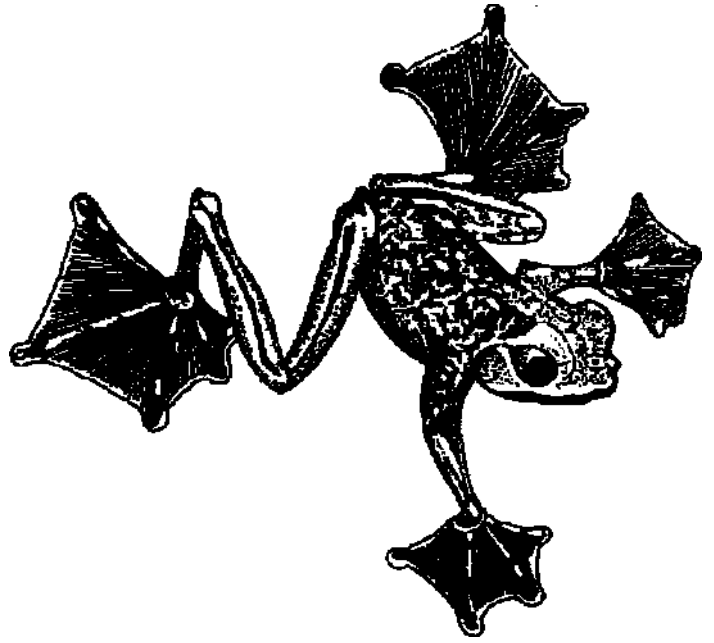
Slimy Hag-Fishes

Hag-Fishes are not only the most primitive among living vertebrates, but the most repulsive as well. These ocean dwellers are literally 'slimy' characters, secreting vast quantities of slime. They never attack living prey capable of defending itself, but polish off the weak, injured and diseased. They bore into the body of the victim and in a surprisingly short time eat away all the flesh leaving only the skin and bones!



They ‘Sail’ Long Distances

Rhacophorus, the Flying Frog, does not actually fly but these tree frogs do sail fairly long distances, holding their webbed feet fully spread out. Another peculiarity of these odd animals is their uncanny ability to ‘sense’ water. At egg-laying time the female crawls through the high branches till she is directly above a pool of water and there she lays her eggs. After a few days the eggs hatch and the tadpoles fall—sometimes a drop of 12 feet or more—into the water where they grow into adults.



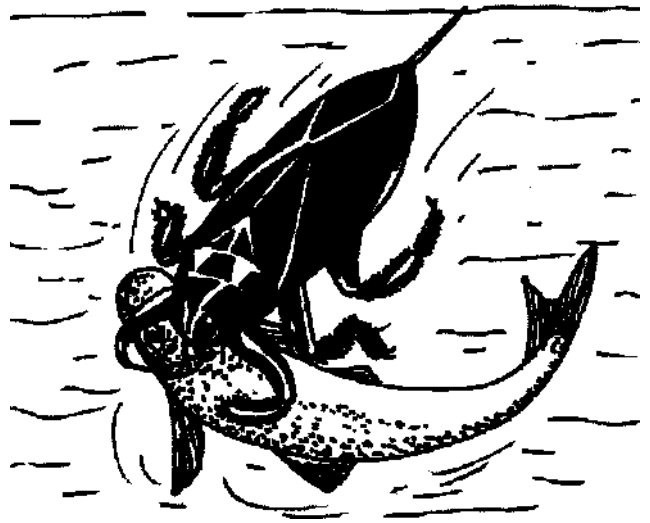
A Champion Climber

Chrysopelea ornata, the flying snake is a beautiful little creature that lives in trees. It is a champion climber and jumper running up smooth perpendicular tree trunks as casually as it jumps across four foot gaps between branches. It does not actually fly but can glide expertly. It launches itself from the tree, spreading its ribs and drawing in its belly. This concave undersurface traps a cushion of air which, like a parachute, holds the snake up as it moves forward to land on the branches of another tree. It can glide a distance of 150 feet or more by this ‘parachute method’!



Giant Water Bug

A fish-eating bug may sound unbelievable but *Lethocerus* the Giant Waterbug eats not only fish but frogs as well. It has special switchblade-like forelimbs that flash open to capture passing prey. The bug then injects it with a chemical fluid which turns all the inner organs, including bones, into a liquid mass, leaving only the skin. The bug drinks up this foul soup at leisure.



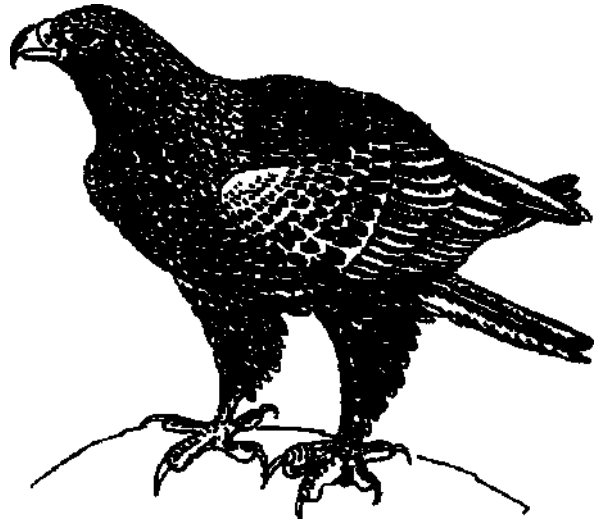
Darwin's Tiny Frog

A veritable walking nursery is *Rhinoderma darwinii*, the tiny Darwin's frog from Chile. The male frog picks up the eggs as soon as they are laid and tucks them away in his oversized vocal sacs. In these pouches, which extend under the skin of the belly almost up to the hind legs, the eggs hatch and the 15 or more tadpoles grow, till they pop out of their father's mouth as fully formed froglets!



The Bald eagle

The Bald Eagle is a magnificent bird which builds probably the largest nest among birds. These nests are fairly huge structures to start with, and since the same nest may be used for half a century or more and added to year after year, they become gigantic masses of sticks and mud—twenty feet deep and nine feet wide! Trees often collapse, unable to withstand the weight of these nests, some of which weigh well over a ton!



The Hamster

‘A place for everything and everything in its place’ is the motto of the Hamster, the chubby little burrower of Europe and central Asia. He digs up potatoes, gathers grain and carries them all home. Back at the burrow, he does not pile them up any old how, but goes to work with methodical thoroughness, separating the root crops from the grain and storing them separately.

Only when his pantry is neat and tidy, does he turn his attention to other things. The golden Hamster is the fastest breeder in the world: with thirteen young in a litter, and a litter every eighteen days, one pair of Hamsters can actually produce 100,000 young in one year!



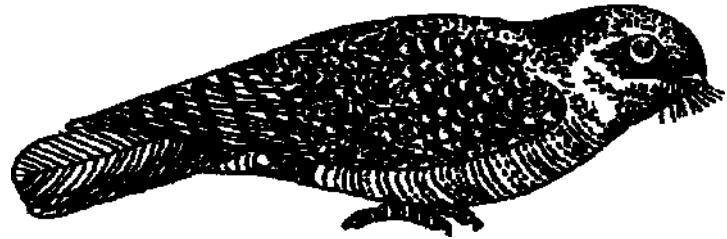
Meditating Monkeys

The oddest looking monkey on earth is the Proboscis Monkey of Borneo, with its three-inch long bulbous nose hanging well below its chin. The function of this bizarre ornament is a mystery to everyone. Proboscis Monkeys are enormous eaters, but they take strenuous exercise too—swimming regularly for hours. These large animals look dangerous and brutal, their faces actually going red with anger. But in reality they are calm, contemplative creatures spending much of their time sitting alone and absolutely motionless—meditating!



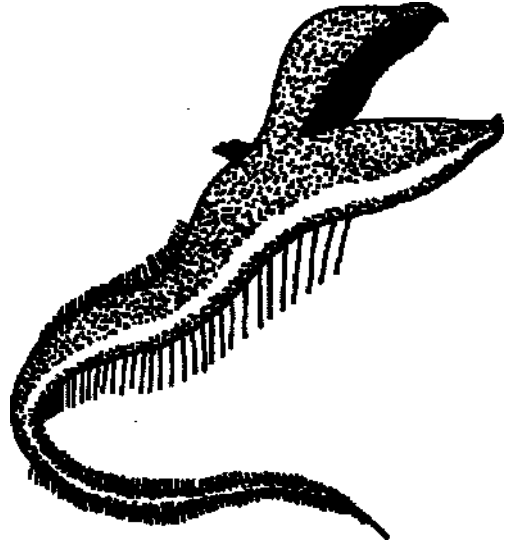
The Ugliest Bird in the World

Podargus, the Tawny Frog-mouth with its broad flat bill and wide gaping mouth has the dubious distinction of being the ugliest bird in the world. It is also the champion sleeper among birds, spending the whole day perched motionless on a dead branch. The colour of its mottled plumage blends with the surroundings so well that it is difficult to distinguish the tree from the bird. It seems *Podargus* sleeps so soundly that even lifting it off from the branch fails to wake it up; worse still, it is said to sleep on, even when the bird next to it is shot down!



Deep-Sea Gulper

“Eat hearty while there is a meal”, is the motto of all deep-sea fishes, for in the jet-black world of the abyss, meals are few and far between. Since there is no plant food available, all these fishes are, of necessity, meat eaters, feeding on other fishes and dead animals drifting down from the upper layers. It is a good thing they all have highly elastic stomachs, able to hold huge quantities of food. The Deep sea Gulper, for instance, seems all tail when its stomach is empty. But this odd creature can swallow fishes three times larger than itself!



The Kangaroo's got a Tricky Cousin

“Playing Possum” is an expression that means ‘to feign death’—because that is exactly what the wily opossum does to escape its enemies. When danger threatens, this tricky cousin of the Kangaroo sinks to the ground closes its eyes and pretends to be dead. The mouth gapes, the tongue lolls out and the animal almost stops breathing. Even if it is picked up there is no sign of life. But as soon as the enemy goes away, the “dead” opossum gets up pretty quickly and trots off to safety!



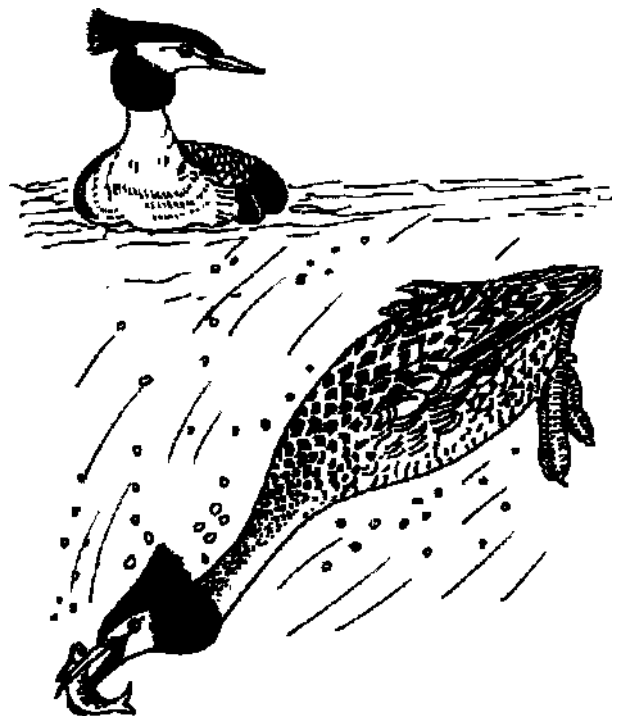
Fur Bearer

One of the most valuable fur-bearers in the world is the beautiful little Chinchilla of Chile. Its silky fur is a lovely silver grey and so fine that individual strands are finer than a spider's web. Naturally the furs were expensive—a single coat sold for eight lakh rupees! No wonder the poor animals were nearly wiped out by hunters till some bright person got the idea of raising them on farms.



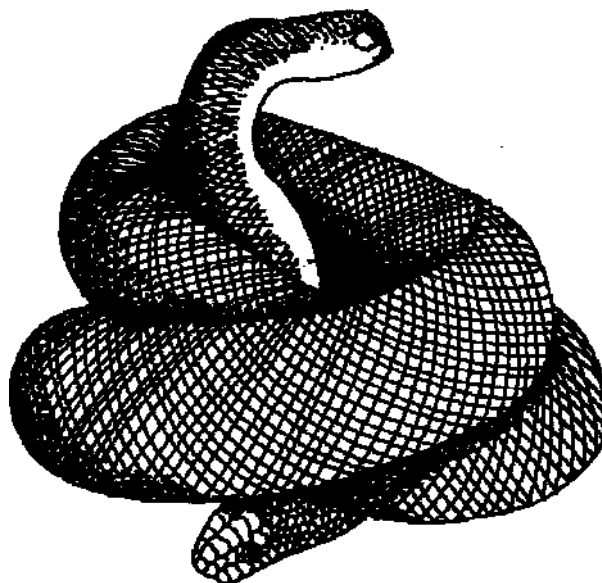
The Grebe

So perfectly has it become adapted to an aquatic life, that the Grebe eats, sleeps, courts, and mates in water. It is true it does not lay its eggs directly in water but it comes pretty close to it, the nest being a small floating raft of reeds. An expert swimmer and diver, the Grebe can, when alarmed, disappear magically by sinking down into the water. And it is the only bird known, which swims away carrying its threatened babies pick-a-back— under water!



The Bluffer

Charina bottae is a bluffer par excellence. A cousin of the famous anaconda, this beautiful silvery boa is just 18 inches long—tiny indeed compared to its 30-ft relative. It has the curious habit, when frightened, of curling up into a tight ball. It then cautiously lifts its blunt tail (which looks very much like its head) and moves it forward as if to strike. By this barefaced bluff it manages to scare away the majority of its enemies!



The Agile Hunter

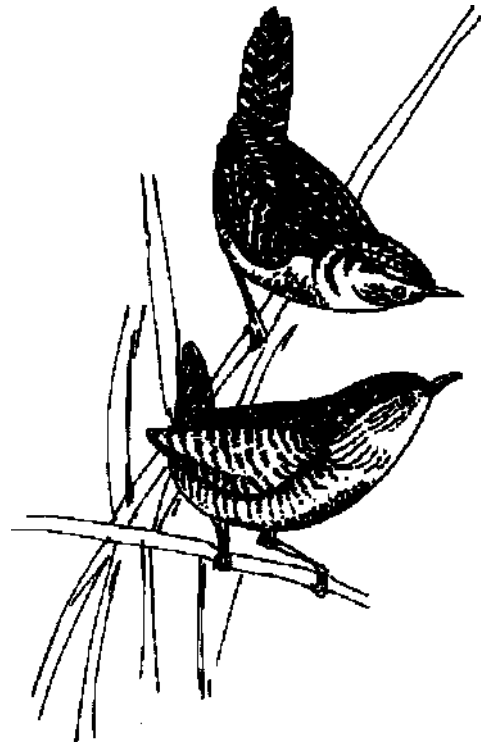
About two feet long, lightly built, with the typical ear tufts of the Lynx, the Caracal is indeed an elegant animal. He is extremely agile and relies on his speed in hunting. He can streak towards a flock of birds and slay a full dozen, before the poor birds have time even to get alarmed. As they attempt to fly away, the cat leaps into the air—even five to six feet and slaps them down!



Wrens Are Smart

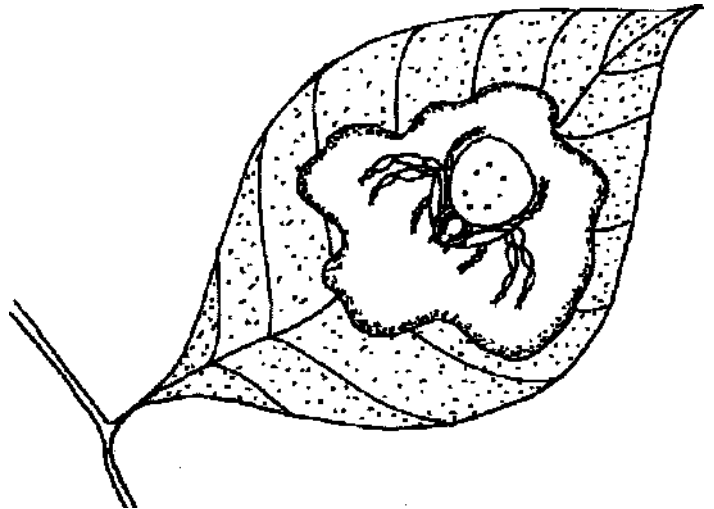
Splendid songsters, some of the wrens actually practise dueting, the male singing the first half of the song and the female taking up the final part. So perfectly timed and in tune is their performance that from a long time people thought that a single bird was doing the singing.

Very smart they are, too—males build special false nests to mislead the parasitic cow-birds which deposit their eggs in the ‘dummy’ nests, thinking that the wrens will bring up their babies. But the female wren lays her eggs in the ‘real’ nest and brings up her young without the bother and trouble of unwanted guests.



The Most Unusual Disguise

Many animals escape enemies by resembling other creatures or things like thorns, twigs, etc. The most unusual among them is *Phrynamchne*, a little spider which imitates of all things in the world—a bird dropping! This may seem very disgusting but it is an extremely effective disguise. The spider spins an irregular web and stations itself in the middle. The whole thing looks so precisely like a splash of bird dropping that even trained observers are deceived. By this mimicry, the wily spider gets a double advantage: it not only escapes from its enemies, but also manages to capture certain butterflies that come to feed on the ‘bird dropping’.



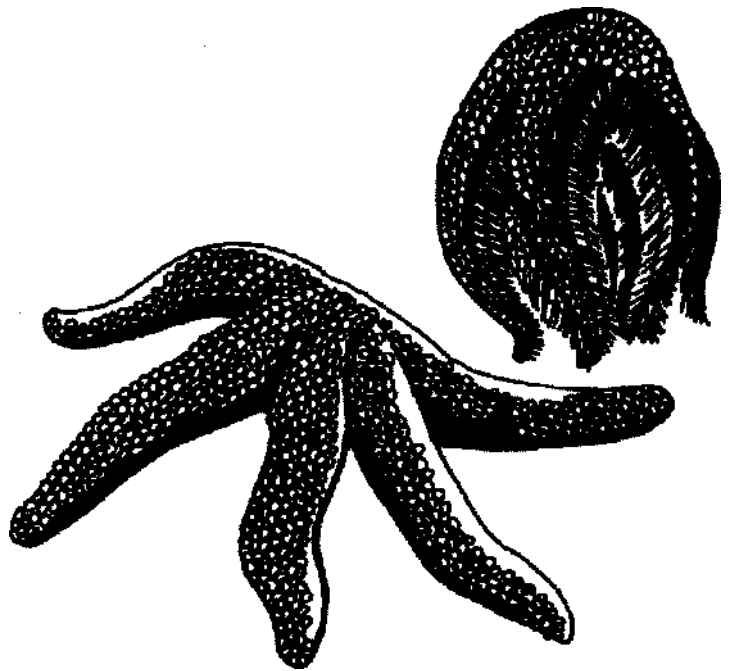
Brutal Disciplinarians

Whoever named the common marmoset *Hapale jacchus* (meaning gentle leapers) evidently didn't know the animal well. These tiny South American cousins of our monkeys are wonderful leapers all right, but they are very far from gentle. In fact they are irritable creatures, easily annoyed and given to starting violent fights for trivial reasons. They live in groups and the older members are stern disciplinarians, punishing even minor breaches of etiquette brutally. A junior who did nothing, worse than try to grab a tidbit, instead of waiting for his turn, is likely to be caught by an elder, who then proceeds to put him across a branch and deliberately break his arm!



Starfish Story

The eating habits of the Star-fish are truly appalling. Moving along the beach, if he comes across an oyster—his favourite delicacy—he starddles it and grasping it with his arms, begins to force it open, the hundreds of tube-feet on his arms soon have the shells pulled apart in a jiffy. The starfish then turns his stomach inside out slides it into the cavity of the shell, digesting and absorbing the tissues there. When he has had enough, he retracts his stomach, returns it to its usual position and resumes his walk!



Expert Dodger

Even an expert football player will find it difficult to match the tactics of *Pemameles*, the Australian bandicoot—so adept it is at weaving, dodging and bouncing. For all this skill, when threatened, this little animal wants only to hide and curiously enough its first concern is to hide its long trembling nose (even when the rest of the body is in full view). This is not a mere foolish whim but a necessary precaution, because the body of the animal may go unnoticed among tufts of grass or leaves, but the ever-quivering nose would be a dead-giveaway!



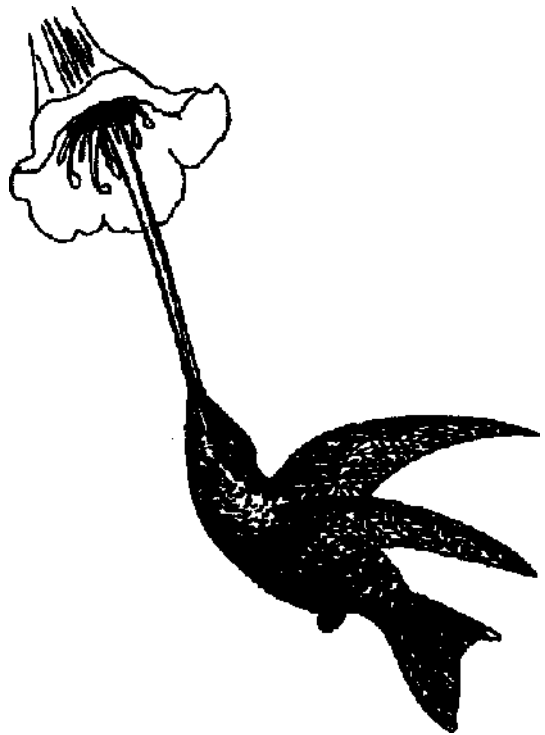
Certainly a Vicious Brute

The Alligator Snapping Turtle was probably so called because of its alligator like aggressiveness, for this, the largest of fresh-water tortoises is certainly a vicious brute. Living in swampy lakes and ponds, it blends perfectly with the surroundings, its shell looking exactly like a moss covered boulder. A fish eater, it has an amazing angling technique inside its mouth is a long worm-like structure, reddish in colour in vivid contrast to the white lining of the mouth. Lying motionless in the water with its mouth open, the turtle lets the wriggling 'bait' lure fishes literally into the jaws of death!



Miniature Helicopters

The Humming Bird are the champion stunt flyers in the world. Like miniature helicopters they can take off vertically, and they can fly not only up, down and forwards but can actually fly backwards. Also they can hover in one spot for more than a hour without the slightest trace of fatigue! Not at all bad for tiny birds, some of which are no larger than a bee. They naturally burn up a lot of energy with all this flying and it has been estimated that if a boy had to make up energy spent at the same rate, he would have to eat nearly 250 loaves of bread every day!



The Spider Monkey

Aides, the Spider Monkey is very aptly named: not only does he have long and thin legs but when he walks on all fours the knees and elbows angle up giving a very 'spidery' effect in deed. The tail is completely prehensile and serves as a fifth hand. (*Aides* means Hand-tailed). Hanging by the tail alone the monkey can use his other hands to gather fruits, leaves etc., to eat. For a change he goes to a stream and scoops up some fish—hanging upside down, of course!



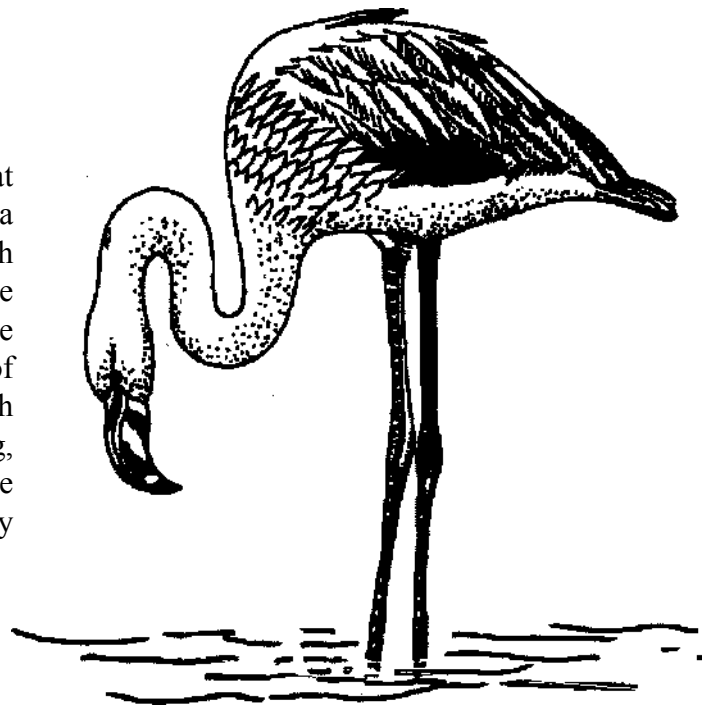
Birds of Paradise

When Australia's Birds of Paradise were first seen by Europeans, nearly 450 years ago, even scientists decided that such fantastically beautiful birds must surely be denizens of paradise only. Hence the name. Among the most ornamental birds in the world, the 43 species have an amazing variety of brilliant plumes, shimmering ruffs and ribbons, and sprays of lacy feathers, which resemble a fountain when displayed. During the breeding season, the birds dance, jump, swing and perform all kinds of acrobatics, to attract the ladies of their choice. Some birds fall backward off the branch turning a complete somersault before landing gracefully on the ground.



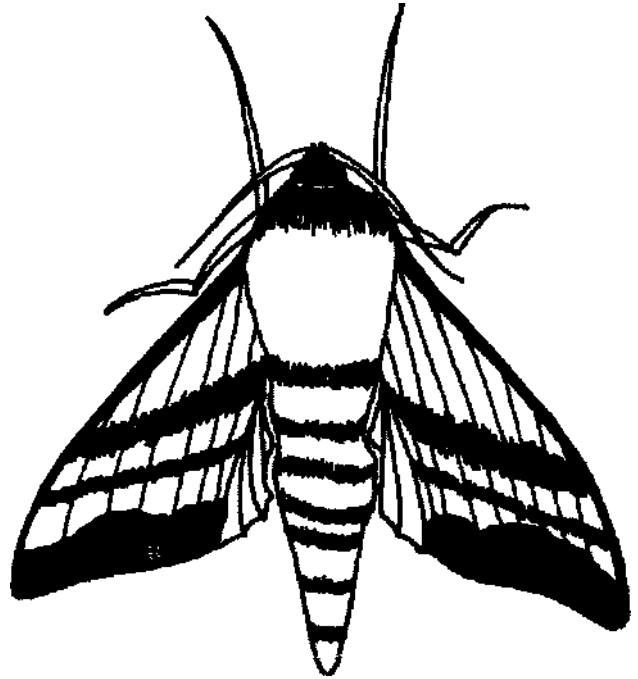
An Ingenious Beak

The flamingo's oddly bent beak with spiny fringes at the sides is admittedly not a thing of beauty, but it is a very useful organ. When feeding, the bird wades through water with its head inverted and the beak scoops up the soup-like mud. Then using its tongue as a strainer the flamingo forces the mud and water through the sides of the mouth leaving only the shrimps, pondsails etc., which form its food. Because they cannot see while thus feeding, the birds post sentinels. Every now and then some of the diners walk out to relieve the watching birds, so that they can have their dinner!



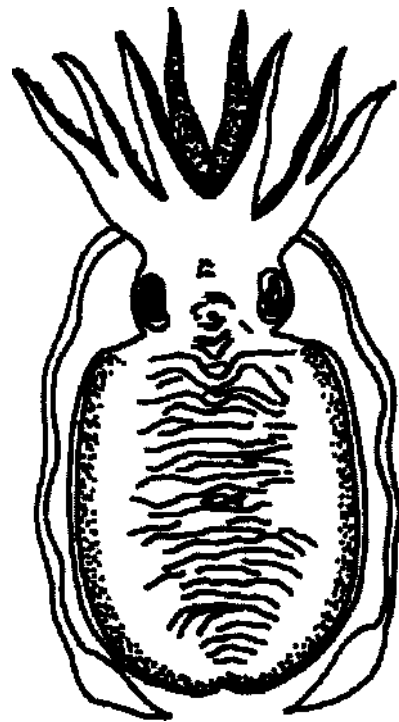
Now You See it, Now You Don't

The eyed Hawk Moth caterpillar always rests upside down on the under side of a twig and if for some reason it is turned over, the insect frantically wriggles to get back to its usual position. This is not an odd quirk but a sound defence trick. The eater-pillar is so coloured that in its normal position it is practically invisible, but turned over, it stands out for all its enemies to see and snatch. How the eater-pillar knows this is a mystery!



Cuttlefish

Swimming leisurely along, a few inches above the ocean bottom, and spouting a gentle jet of water now and again at the sandy floor, the Cuttlefish isn't just being playful. It is actually looking for its dinner: the tiny shrimps that He concealed in the sand. Occasionally the jet of water removes the protective layer of sand and exposes a shrimp. The shrimp, in a panic, quickly begins to cover itself again. The Cuttlefish detects the movement, shoots out its tentacle, snatches up the shrimp and gobbles it up!



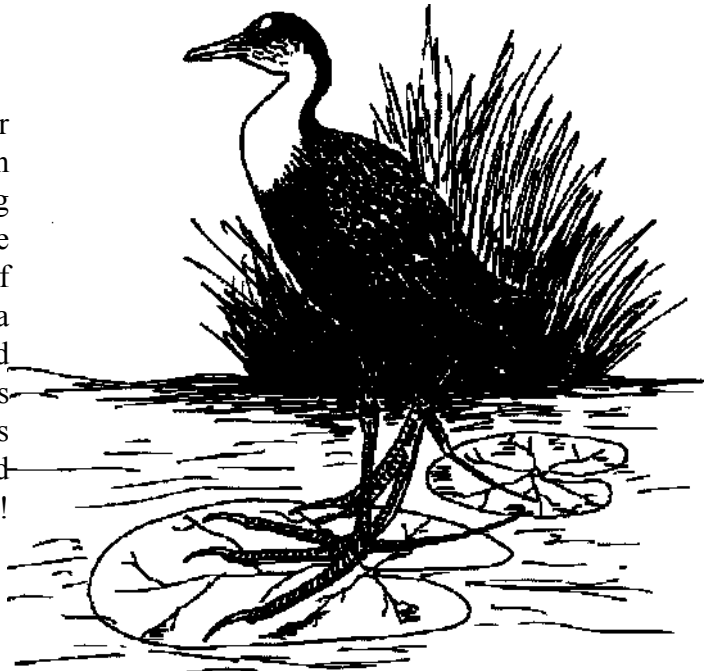
Incredible

A very peculiar creature indeed, is *Macaca cyclopsis*—for some unknown reason these Formosan monkeys have given up their tree-top homes and taken to living in coastal caves. Each one spends much of the day alone in his own cave, emerging at dusk to join a few friends for a swim and a dinner of crabs and other shellfish—an odd diet for a monkey! Odder still is the fact that these animals, unlike other monkeys, are not gregarious. Each one prefers to spend its solitary hours talking to itself!



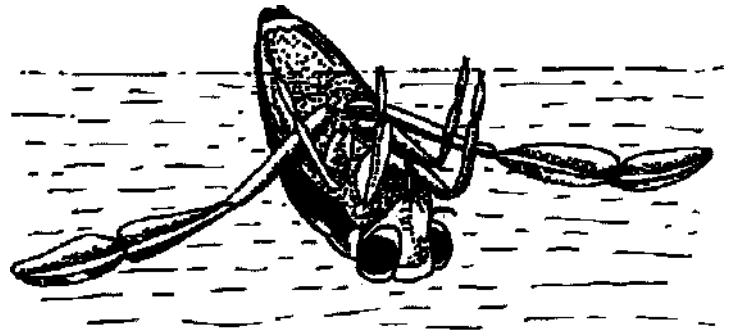
Graceful Little Lily-Trotters

Jacana means ‘lily-pad jumper’—very apt name, for these graceful little birds can be found tripping along on lily leaves without sinking into the water. There is nothing miraculous about this ability: it is just that the birds have specially long toes which help to distribute the weight of the body evenly. What is really strange about the Jacana is its habit of laying its eggs on a nest of floating laves and twigs, which sometimes drifts all over the lake. The eggs are under water most of the time and yet no harm comes to them. What’s more, the chicks are able to swim and dive and lily trot’ with expert ease, as soon as they hatch!



Water Beetles

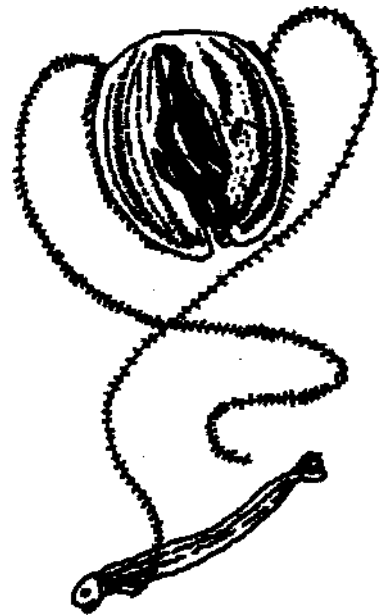
With its oarlike hind legs, and keeled boatshaped back, the Backswimmer is well equipped to travel swiftly through the water. This strange water beetle spends its life floating on its back, occasionally sticking its tail above the water surface to catch a breath of fresh air. At the least hint of disturbance, the second pair of legs gather up a large bubble of air, the 'oars paddle furiously, and the insect dives to the bottom, and clings to a plant. After the 'all-clear', it simply lets go, and surfaces riding the bubble that was once its diving bell!



Ueep-oea

With the skill of an expert cowboy, the tiny Sea Gooseberry throws out its long tentacles to lasso its prey. The tentacles which are normally kept neatly coiled in two pouches at the sides, can reach 20 times the length of the animal — this would mean at least a 120-foot rope for a cowboy!

This beautiful little creature looks like a tiny glob of jelly, its transparent body shimmering iridescent in the sun and glowing eerily in the dark. For all this delicate beauty it is a ravenous eater. Shoals of these animals can play havoc with stocks of herring and ruin the entire fishery!



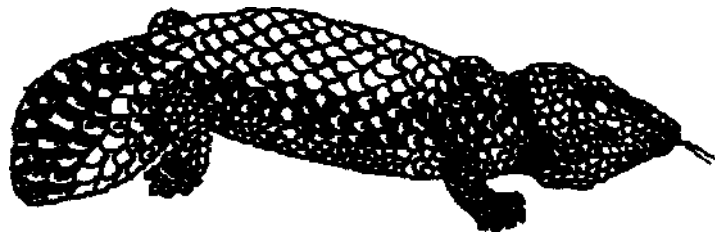
The Training of the Shrew

Playing at trains may seem the favourite pastime of young shrews, for often they can be seen lining up behind the mother, the first one gripping her tail, and the rest gripping the tail of the one in front. After the line is formed, the mother moves off followed by a procession of young, all keeping in step. This 'caravanning' is not just a game but a necessary defence training, for though the young shrews can move about fairly early, their eyes do not open for quite some time. So when the family is threatened by an enemy, they form their caravan, and linked together, as one, escape to safety!



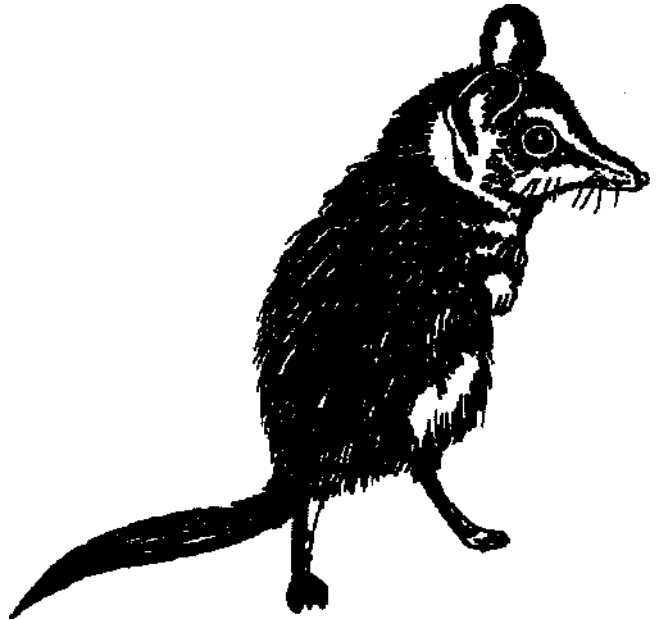
The Pinecone Lizard

With its stumpy tail and body covered with scales, the Shingleback is aptly called the Pinecone Lizard. It is a slow and stupid animal, given to lying right in the middle of the road to warm itself. When an enemy approaches, the defenceless creature merely sticks out its tongue like a cheeky boy. It would be comic, if it were not for the fact that the mouth is a deep pink and the tongue a bright blue. The effect is so startling that the predator beats a hasty retreat!



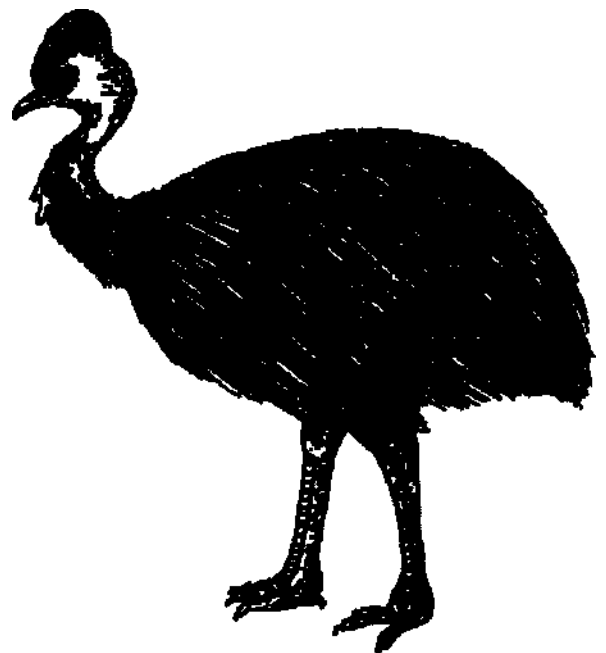
The Fat-Tailed Mouse

The fat-tailed *Sminthopsis* actually stores fat in its tail, the thickness of the tail varying with the seasons and the amount of food available. For all its tiny size and dainty looks, this charming marsupial mouse of Australia eats like a farmhand, and puts away vast quantities of beetles, cockroaches and other insects at each meal. Maybe it has to, for running around with ten children on its back the whole time must a mighty tiring job!



A Man-Killer

A stocky thick-set bird, with an ugly bare neck and a grotesque helmet on its head, the flightless Cassowary isn't exactly beautiful to look at. And its temperament matches its looks: sullen and irritable, given to fighting at the least provocation, it is the only bird in the world which can kill a man. With quick slashes of its long knife like nails, quite unlike those of any other bird—it has been known to disembowel a man and disappear into the jungle in just a few minutes!



Blistering Barnacle

When the young Barnacle is tired of wandering about, it cements itself on to a rock or ship bottom and grows a shell. Inside this shell the animal spends the rest of its life, standing on its head. When the tide is in, its feathery feet come out to sweep minute sea animals into the mouth. Tiny though they are, barnacles cause a lot of damage by fouling ships. It is very difficult and expensive to remove them, for barnacle cement is so tough that it resists heat, cold and all chemicals so far known to science!



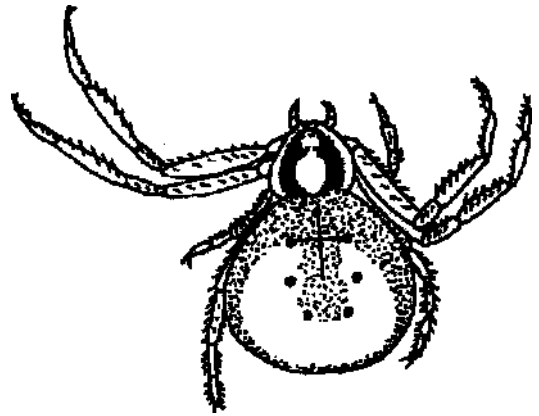
Living Waterbags

Cydorana is an attractive little frog from Central Australia, which escapes the dry season by hiding in a hole in the ground. Before going into hiding, the little creature soaks up water and its body becomes swollen like a balloon. The desert aborigines regard it with affection, for during the drought, when other sources of water are not available, these 'living waterbags' often save a thirsty traveller by providing life-giving water!



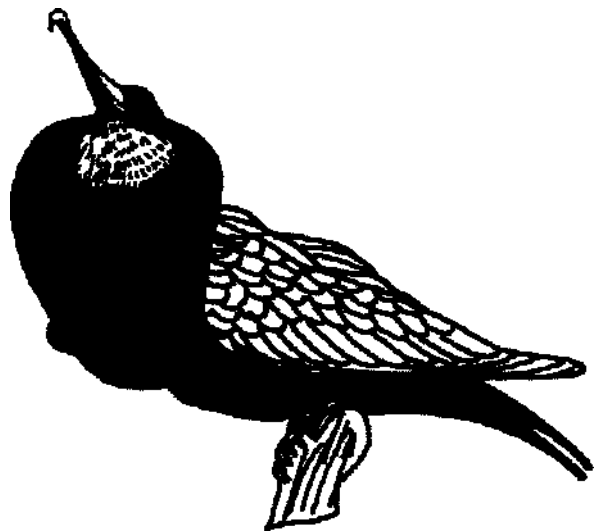
She's Fit to be Tied

Xysticus, the crab spider, has to literally lasso his mate and tie her down before the wedding, for the female is likely to eat him up as casually as she eats ants and other insects. When a male *Xysticus* sees a female, he throws a line, catches her foot, and anchors it to the ground. After all the feet are secured, delicate silk threads are drawn across her head and back, so that the female is clothed in a bridal veil of silk. It takes quite some time for the lady to disentangle herself from this sticky finery, but by that time the bridegroom has made good his escape.



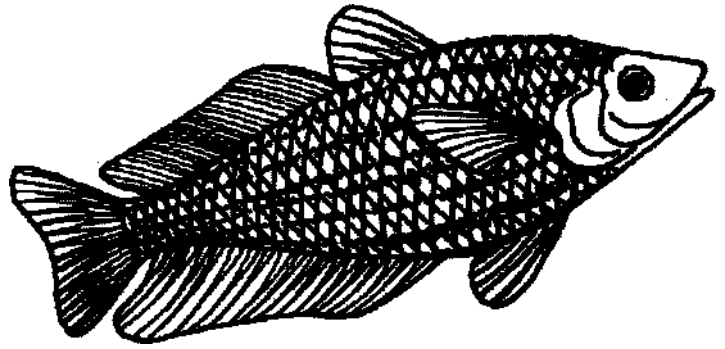
Wow, What A Bird

Truly remarkable is the courting behaviour of the Frigate birds. During the breeding season, the male birds develop a special 'ornament'—an enormous red throat pouch, which is inflated like a balloon. A number of males sit side by side on a branch, and actually say "WOW!" when a female arrives. In fact, there is a terrible din, as all the males set up a chorus of "wow-wow-wow-wow", and clatter their beaks like castanets. They subside as the female's choice is made and await the arrival of the next lady!



A Gown for Every Night

Every night the Rainbow Parrot Fish spins a new a silvery nightgown from the secretions of special glands in its skin. Snugly wrapping itself in this mucous cloak, the fish settles down to sleep the night away in some coral crevice. The cloak is supposed to protect the fish from its enemies, which might like to take a bite while the Parrot Fish is sleeping. But no one is really sure why the fish wants a new nightgown every night!



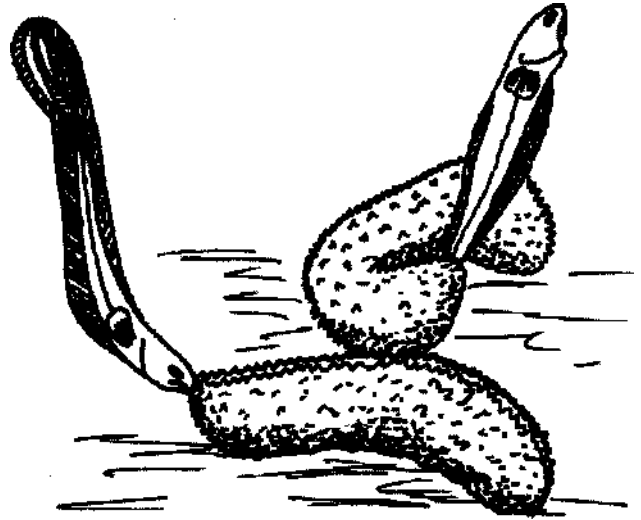
Little Horrors

Immaculately dressed in white and black, the whooping crane of the USA is a majestic five feet in height. The magnificent bird, with a wingspread of seven and a half feet, is named for its bugle-like call, produced by a specially modified windpipe. The call is said to carry a full two miles. The young of the whooping crane are dreadful little brats. Scarcely out of the egg, the two start spearing each other viciously, with intent to kill. The parents are forced to tear the little horrors apart, each parent taking charge of one youngster.



The Pearl Fish

The Pearl Fish likes a home that is alive—literally! So, while quite young, it takes up residence inside a sea-cucumber on a lifetime tenancy basis. The fish makes itself at home, emerging at night to have its dinner outside. If on some days, it feels disinclined to go out, it makes a satisfactory meal of its host's internal organs. The oddest part of it all is, not only does the sea-cucumber put up with the intruder's comings and goings, but it also develops a new set of internal organs, without protest, whenever the fish eats up one set!



A Bugged Bug

The Giant Water Bug is the terror of even frogs and fish in his territory, but at home his lot is not enviable. His wife imposes very effective restrictions on his movements by sticking his unborn young on to his back—with a special glue too, so that he can't even wash them off! With his wings well and truly sealed by the eggs, the poor bug is unable to roam around. No wonder he shrugs off the Imglings' as soon as they hatch and takes to the air again with great relief!



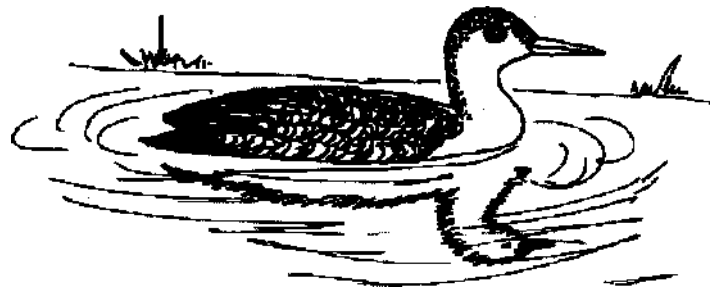
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The Fish Chaser

The Loon probably gets its name for its weird nocturnal screams and demoniacal laughter, which are enough to frighten even a courageous camper. During the day, however, the bird doesn't sound crazy at all and goes about spending much of its time chasing fish. Its underwater hunting expeditions take it 200 to 250 feet down and may last up to 15 minutes, during which the bird swims two miles or more. How the bird manages to hold its breath for so long is a mystery!



End