

If Insects Were Larger

We know that there was a time when heads and turtles were as big as men—in fact, several times bigger—for the skeletons of these huge creatures now adorn museums. But has there ever been a time when insects were as big as men, and what would happen if that time were to come again?

M. Plateau, a French scientific man, once undertook to measure the strength of a beetle. He arranged a paste-board tube, rough inside, with a bit of glass set into it, against which the beetle could push in trying to get out into the light. This glass plate was connected with a tiny instrument made to measure force, like those which tell how many pounds a man can lift, but this one, of course, was the right size to fit the beetle. It has been found that a beetle can draw 40 times its own weight, and if some beetles were the size of a cart horse, each one could haul something like 150,000 pounds.

The pyramids are only about 450 feet high, and the highest building in the world is about 900 feet, about 150 times the height of an average man—but, the termitenests of Africa are a thousand times the height of the little insects that build them. If men could build as the termites do, or if termites were the size of men, we should have a city the size of New York or Chicago all under one roof, with its highest windows more than ten times as high as the Washington monument.

The locusts that come in swarms every few years and eat up all the crops can travel a thousand miles in one season, and any man who could get over the ground as fast as they do would be able to go around the world several times while the average tourist was crossing the United States by express.

The maggot of a little black fly has been seen to jump out of a box six inches deep, and if a man could jump like that he would be able to stand on the ground and jump to the roof of a ten-story building without taking a running start. A flea can do better than that. It can jump 200 times its own length, which for a man would be over 1,000 feet at a jump. At that rate a man would not need to take the street cars to his office. He could hop there in four or five jumps to the mile.

The ordinary house-fly can go five feet in a second, and when scared it can travel several times faster than that. The fly is less than half an inch long, so this means that it can go 120 times its own length in a second, or that, if it were a man, it could fly 600 feet a second, and over 30,000 feet, some five or six miles, every minute. No aviator has done anything like that.

Insects, moreover, are very hard to kill. Grasshoppers have been known to live after being put in boiling water, and a mite has been found alive after 11 weeks without food or drink, stuck to the head of a pin. "Walking sticks" and other insects can reproduce lost limbs. If a man could do that he could have a leg or an arm cut off, and a year or so later have a perfectly new one in its place.

If men had insects' appetites there would be lively times in this world getting enough to eat. A dragon-fly has been seen to eat 40 house-flies inside of two hours, which is much as if a man sat down to a hearty meal of a whole roast chicken, vegetables and pie, ate it up in five minutes, then ate another, and kept this up during an entire afternoon. A chicken is about the same size in proportion to a man as a house-fly is to the common "darning needle," and we do not eat it bones and all at that.

The babies of the insect world have still bigger appetites. A silkworm grub eats in its first month of life what would be 300 tons of food, if it were a human baby, and increases 9,500 times its own weight. The average baby weighs about ten pounds, so that if it ate in the way the silkworm baby does, and grew as fast, when a month old it would be bigger than any giant you ever read about in a fairy tale.

No wonder insects do so much damage to trees and crops. It is usually the baby insects, the grubs, that do the mischief. In 1773 there was a plague of beetles in the Hartz mountains, and 80,000 grubs were found on one single tree, while the beetles destroyed more than two million fir-trees in those mountains alone. In Germany, without going outside that country to look for injurious insects, one can find 650 kinds that eat the crops.

And there are so many of these baby insects! In one single season on the island of Cyprus, which is not a very big island, as may be seen by looking at the map, the people collected and destroyed 1,300 tons of locust eggs.

Insects all have large appetites, although the dragon-fly's is one of the worst. A dragon-fly will actually stay quiet on a pin and make no struggle so long as it is constantly fed, and one naturalist actually cut a piece off the insect's tail and fed it into the hungry mouth! It is not written how long he kept on with this peculiar feeding before the dragon-fly noticed that it was not all there.

And this is the reason why insects have never been as big as men, and why they never will. They need too much to eat. It is a case of the cost of living. When there came to be so many insects that they had eaten up all the grass and leaves where they happened to be they began to eat other insects, and when the supply of other insects gave out they had to die, except such of them as could live on animals.

Some beetles, like the sexton beetle, eat the flesh of dead mice, birds, and other animals, and naturalists who have a specimen that they want made into a clean skeleton, often leave it where the beetles will do the

CHINESE FAMINE PICTURES



SEEKING ALMS

Perhaps some of the readers of The Colonist would be interested in hearing what Mr. Helmer of the China Inland Mission in Toronto writes regarding the sad condition of things in China; his letter is dated 17th February:

"As nearly as we can learn there is about a million people affected by the famine, many of whom would starve to death if not helped, others perhaps could survive until they might get another crop.

"We are receiving quite a large number of small donations, which we are forwarding to our treasurer in Shanghai, to be used as far as possible by our own missionaries.

"In sending forward these donations we certainly do remember sufferers in prayer that God will not only use the money to save lives, but that it may turn to their souls' salvation."

Now may I ask all who read this to do all in their power to send help to these poor people? We cannot realize what it is to be slowly

work. "There is not enough food in the world of any kind to feed a creature that eats in the way an insect does, unless the creature is very small. If one single race of insects were created today as big as men they would starve in a very short time.

There are some other reasons why insects have remained small. One is that they have fought each other a great deal more fiercely than the most warlike men ever were known to do, and there is no insect that is not considered a good dinner by some other insect that has been fitted particularly for the job of hunting it.

The huntress-wasp eats spiders; the spider eats flies and other winged creatures; some kinds of flies imitate bees, and sneak into the hive and eat the baby bees; dragon-flies are particularly fond of mosquitoes, and so it goes. Sometimes there is one kind of wasp, or beetle, or spider, that is on the lookout for the grown insect, and another enemy that is all ready to eat up the larva or grub. Our scientific men at Washington spend a great deal of time experimenting with insects in this way. When the farmers are troubled with a grub, or weevil, or other insect that damages the crops, the scientific men go looking for some other kind of insect that will eat that insect. But they have to be careful about bringing it into the country, or the remedy may be worse than the disease.

There have been times when some scientist brought a wasp or moth from Europe, thinking it would clear out the grubs of some insect that was spoiling the crops, and the moth started out on its own account and ate up the leaves on the trees when the grubs gave out. There are a great many kinds of insects in this world, and some of them are good policemen.

Still another reason why an insect is safer when small is that it can hide better. If insects were as big as men, it would be almost impossible for them to keep out of sight of their enemies, and man, with his cannon and dynamite, could make an end of most of them in very quick time. But so long as they are little enough to hide in the grass, on the bark, under logs, in the water, and in holes and cracks, they manage to keep on living and satisfy their appetites. They can hide, better, and escape quicker, and do more in proportion to their size than any other live things in creation, and they have been taught this by thousands of years of dodging enemies.

Besides the hungry insects, there is the whole bird creation which lives largely on insects, and the birds, when let alone, will keep the insects from getting too big or too numerous. A bird's appetite is almost as big as an insect's, and a good, active bird can dispose of more bugs in a season than a farmer can kill by scraping them off with a big stick. The only way human beings can kill off in-

sect faster than they can grow is by not letting them have a chance to grow—killing the grubs before they wake up and begin to eat. If the people who need grain and fruit for their own use did this, and also let all the insect-eating birds religiously alone, we would not have so many million insects to board as we do now. This is something worth thinking about.

Leaves From The Bible of Ireland

A Small Tribute to the Noteworthy Fact that Next Friday Will Be the "Sivinteenth"

Did ever ye hear of the reign of Conaire, ye Victoria folk? Well, then, if ye did not, sure it's high time ye were learning, and if ye did, ye'll be pleased to hear of it again; so, either way, I'll be after repeating the legend as it was set down by one that was a good deal cleverer than I, or you either, for the matter of that, although by the same token, that isn't very polite. Whist now:

Now there was great plenty in Ireland through his reign; seven ships coming at one time to Inver Colpcha, and corn and nuts up to the knees in every harvest, and the trees bending from the weight of fruit, and the Buiras and the Boinne full of fish every summer, and that much law and peace, and good will among the people, that each one thought the other's voice as sweet as the strings of harps. And the wolveys themselves were held by hotsgaes not to kill more than one calf in every pen. There was no thunder or storm in his reign, and from spring to harvest there was not as much wind as would stir a cow's tail, and the cattle were without keepers because of the greatness of peace. And in his reign there were three crowns in Ireland, the crown of flowers, the crown of acorns and the crown of wheat ears.

And now then, this is the pretty little story all about Deidre and the sons of Usnach:

One day Deidre and her companions were out on a hill near Emain Macha, looking around them in the pleasant sunshine, and they saw three men walking together. Deidre was looking at the men and wondering at them, and when they came near she remembered the talk of the hunter, and the three men she had seen in a dream, and she thought to herself that these were the three sons of Usnach, and that this was Naoise that had his head and shoulders above all the men of Ireland. The three brothers went by without turning their eyes at all upon the young girls on the hillside, and they were singing as they went, and whoever heard the low singing of the sons of Usnach, it was enchantment and music to them, and every cow that was being milked and

W. W. Perrin, Victoria, is glad, as you know, to forward all subscriptions sent to him. I shall be glad to do the same with all that are sent to me, and with all my heart I beg you not to forget these sufferers, but to send something, much or little, just what each one feels he or she ought to give, and may God bless the givers as well as the recipients.

May I add the wish that every church should take up this matter, and among their members respond heartily to the appeal.

I am sure any of our clergy will gladly forward gifts on behalf of the sufferers.

Envelopes marked for this purpose can be obtained from the Victoria Stationery Company, 1207 Government street.

Any who are kind enough to send to me my address, Miss Caroline Machlem, 1126 Richardson St., Victoria, B. C.

Subscriptions for the relief of Chinese famine sufferers will also be received and acknowledged by The Colonist.

heard it, gave two-thirds more milk. And it is what happened, that love for Naoise came into the heart of Deidre, so that she could not but follow her. She gathered up her skirt and went after the three men that had gone past the foot of the hill, leaving her companions there after her.

So Naoise turned back and met Deidre, and Deidre and Naoise kissed one another three times, and she gave a kiss to each of his brothers. And with the confusion that was on her a blaze of red fire came upon her and her color came and went as quickly as the aspen by the stream. And it is what Naoise thought to himself that he never saw a woman so beautiful in his life; and he gave Deidre then and there the love that he never gave to herself alone. Then he lifted her high on his shoulder and he said to his brothers to hasten their steps. And they hastened them. "Harm will come of this," said the young men. Although there should harm come," said Naoise, "I am willing to be in disgrace while I live."

If ye liked that little bit of a love piece, here's some good advice for ye, such as will stand ye in good stead, I'll be bound, when ye are like to be mulvathered entirely.

And when it was told Cuchulain (that's Cahoolin), that messengers were come for Lugaid, to make him king in Teamhair (Tara) he rose up and began to advise him, and it is what he said:

"Do not be frightened man in battle; do not be light-minded, hard to reach or proud; do not be ungentle, or hasty or passionate; do not be overcome with the drunkenness of great riches like a flea that is drowned in the ale of a king's house. Do not scatter many feasts to strangers; do not visit mean people that cannot receive you as a king; do not let wrongful possession stand because it has lasted long; but let witnesses be searched to know who is the right owner of land. Let the tellers of history tell truth before you. Do not use too many words; do not speak noisily; do not mock, do not give insults, do not make little of old people. Do not think ill of any one; do not ask what is hard to give. Let you have a law of lending, a law of oppression, a law of pledging. Be obedient to the advice of the wise; keep in mind the advice of the old. Be a follower of the rules of your fathers. Do not be cold-hearted to friends; be strong towards your enemies; do not give evil for evil in your battles. Do not speak any harm of others. Do not waste, do not scatter, do not do away with what is your own. When you do wrong, take the blame of it; do not give up the truth for any man. Do not be trying to be first, the way you will not be jealous; do not be an idler that you may not be weak; do not ask too much that you may not be thought little of. Are you willing to follow this advice, my son?"

Then Lugaid answered Cuchulain, and it is what he said: "As long as all goes well I

(Continued On Page Twelve.)

Witchcraft in China

Although there was considerable interest aroused, some time ago, by the announcement that Dr. Wu, the noted Chinese minister, had taken an active part in a spiritualistic seance, it seems to have been forgotten that the diplomatist in question comes from a nation in which various forms of occultism have always been held in the highest honor. In fact, as occasionally pointed out in The Scrap Book, there is scarcely a field of human endeavor or speculation, even, in which China has not, at one time or another, been pre-eminently successful. This holds true for the occult.

According to Chinese data, one thousand three hundred years before the birth of Christ, witches and wizards, ghosts and spirit-com-munion were familiar subjects of Chinese respect. It is even alleged by the Spiritual Review that a certain part of the Chinese Empire is allotted to a tribe of magicians, and anyone wishing to acquire magical art can proceed there and put themselves under the immediate instruction of an adept.

Strange and wonderful things are written of these people. One method prescribed by adepts for making a person invisible, is that of opening a coffin, taking out the body, and putting the pupil to sleep in it for several nights in succession. It is said that, at the end of so many days, the sleeper becomes invisible until dawn, and can thus gratify his lust for revenge on an enemy, or commit robbery without fear of detection.

The idea of one being possessed by an evil spirit is flouted in the west. But cases of "possession" are very frequent throughout the ancient empire, and there are many methods of casting out evil spirits, or devils.

Taoist priests find great favor with many people for their powers, but there are also special adepts who enjoy a reputation for their skill in being able to cast out devils, and control the spirits of both living and dead.

These witch-doctors are anything but gentle. The fingers, nose and neck of the patient are punctured with needles. They also apply a certain pill made out of "aitsau" in the following manner: The thumbs of the two hands are tied tightly together. The two big toes are also tied to each other in the same manner. Then one pill is put on the big toes at the root of the nails, and the other at the root of the thumb nails. At the same instant the two pills are set on fire, and there they are kept until the flesh is burned.

Whether in the application of the pills, or in the piercing of the needles, the invariable cry is: "I'm going; I'm going immediately. I'll never care to come back again. Oh, have mercy on me this once; I'll swear never to return."

Ordinary people who cannot afford to employ any professional exorcists, will paste all sorts of written charms upon the doors and windows of the room that the patient occupies. This is also resorted to at a certain period of the year, known to us as the Chinese New Year, by shopkeepers, to keep bad luck from their business.

Another sovereign remedy, and perhaps the simplest, is to take a certain piece of wood with a hole in it, insert a small piece of ivory in the hole, making the form of a cross, and throwing it into the water; thus will the devil, or spirit, go to the deep.

Illness is also looked upon in the light of a possession—the clothes of the sick person will be taken from them and exposed to the sun, and incantations made for the evil one to depart. Sometimes sacrifices are resorted to, such as fowls, etc.

In the old times, it was no mean position to be appointed by the authorities as an officer for "hooting at" or "shooting" evil spirits. In some cases, as a last resort, people will go to a missionary or a convent, for exorcism.

The willow tree is used by the celestial in this connection for various purposes. It is considered by many as efficacious, as an extract, in driving away evil spirits, who might obstruct the way hereafter of the departed, and also for raising spirits, and for those reasons a twig will frequently be seen at funerals carried by the eldest son or chief mourner.

WHO WON?

The late Duke of Wellington got a letter once from a lady saying she was soliciting subscriptions for a certain church and had taken the liberty of putting his name down for £200 and hoped he would promptly send her a cheque for that amount. He forthwith replied that he would respond to the call, but he too was interested in a certain church which needed subscriptions, and, counting upon his correspondent's well-known liberality, he had put her down for £200. "And so," he concluded, "no money need pass between us."

YOUTHFUL STRATEGY

Mr. Slimson—"Willie, didn't you go to the trunk-maker's yesterday and tell him to send around that trunk I ordered?" Willie—"Yes, pa."

Mr. Slimson—"Well, here is the trunk, but no strap."

Willie—"Yes, pa; but I told him I thought you hadn't better have any strap."

The MacTartan (very much frightened)—"Two tickets for Inverness, Mister."

Clerk—"Right, sir, change at Aberdeen, please."

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To every normal individual and most beautiful thing of old times, who would give odds for the elixir of life, generations the major statement that the three score and ten, a decrepitude and disease during the last few years, scientists have led can refute the above of lieve in a happier order from which we quote B. British Medical Journal ago, and investigations not only have strength author's opinions. The but that a proper mode petites are held in the followed, when the fact kept practise-perfect, life, until its normal spa and when even the cefer from decay, senile finish his years as a h day's work, serenely of his duty, and in the

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"There is no short win it is the work of a lition of it is a branch of chance, one of these day ternational Congress on hibition of dotards for and hearty centenarians any rate you may rest steady obedience to the age may be attained, and that it may be prolonge cessary for the promoti large scale lie beyond the cal profession. We can the age, abolish avarice, of power, or quell even t of the struggle for existe but we can do somethi those who will listen to that may be avoided by ples of mental hygiene; weight of our support i culated to promote the b

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