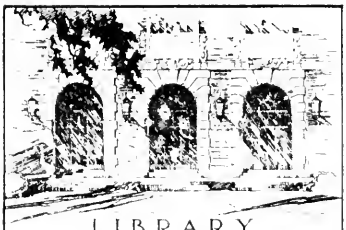

Carnivorous Plants
and
"The Man-Eating Tree"

BY
SOPHIA PRIOR

BOTANY
LEAFLET 23

FIELD MUSEUM OF NATURAL HISTORY
CHICAGO
1939

The Botanical Leaflets of Field Museum are designed to give brief, non-technical accounts of various features of plant life, especially with reference to the botanical exhibits in Field Museum, and of the local flora of the Chicago region.

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CLIFFORD C. GREGG, DIRECTOR

FIELD MUSEUM OF NATURAL HISTORY
CHICAGO, U. S. A.

FIELD MUSEUM OF NATURAL HISTORY
DEPARTMENT OF BOTANY
CHICAGO, 1939

LEAFLET NUMBER 23

CARNIVOROUS PLANTS AND "THE MAN-EATING TREE"

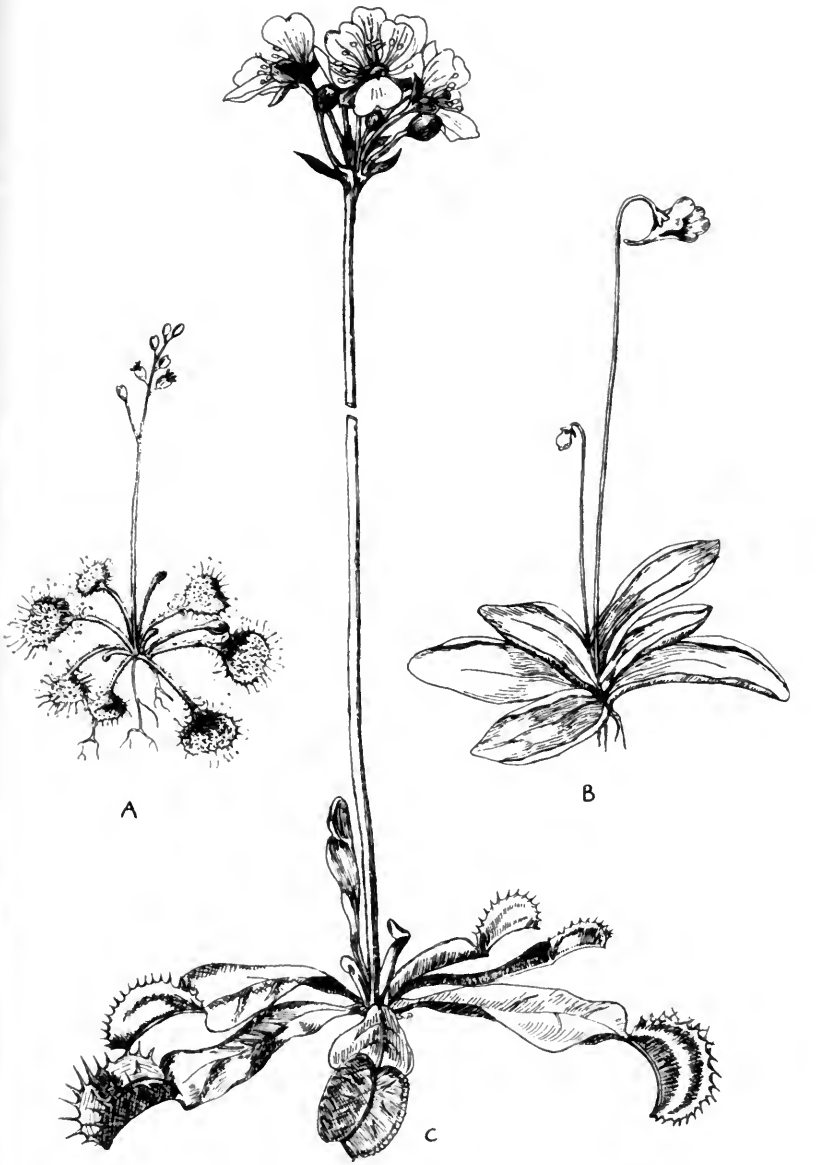
The habit of capturing prey and of digesting animal tissue for food, is so commonly held to be a special attribute of predatory animals that it seems paradoxical to speak of carnivorous plants. There exist, however, a number of flowering plants that not only capture small animals, by passive or active means, but have the power of digesting and assimilating the organic food thus obtained. As to relationships, these plants do not constitute a single group but belong to various, in part unrelated, plant families, and thus exhibit several kinds of structural provision for capturing prey. This prey generally consists of small insects, but in some instances of other small animals—minute freshwater crustacea, isopods, worms and various aquatic larvae, and, it is said, even small vertebrates—captured either like flies on sticky fly paper, or by a trap mechanism, or by drowning.

One of the minor types, the common butterwort (*Pinguicula vulgaris*), has a rosette of several small oblong leaves, about an inch and a half long, with a very short stalk. When fully grown the leaves lie closely pressed to the soil, usually with numerous flies and insects adhering to the upper surface. Darwin describes the leaves as having two kinds of glands which secrete a colorless viscous fluid, so sticky that it may be drawn out in long threads. The margins of the leaves curve inward, apparently to hold this substance which becomes so pro-

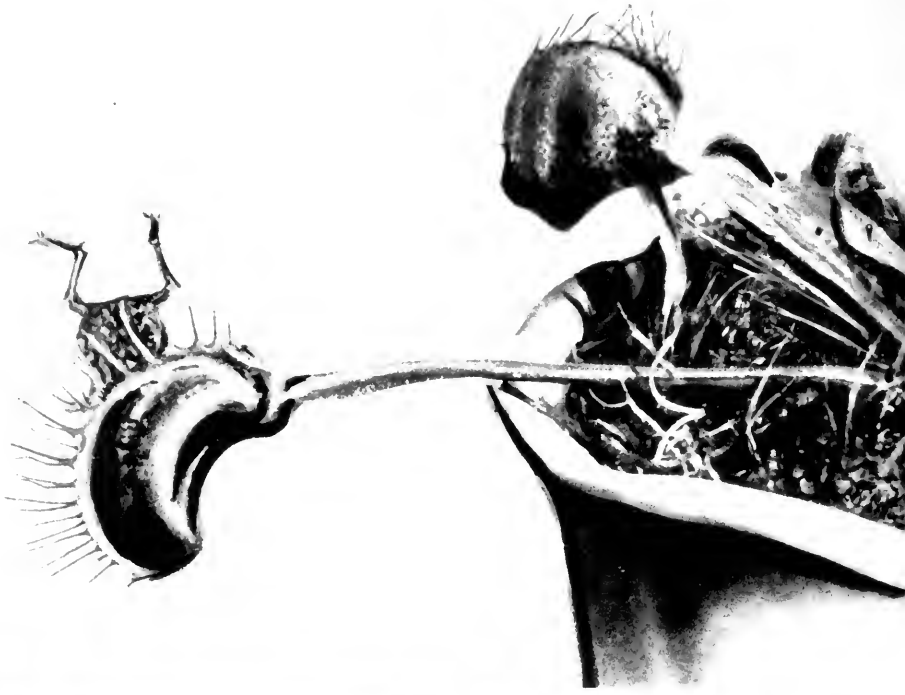
fuse when the glands are stimulated that it trickles towards the curved edges.

The small inconspicuous sun-dew (*Drosera rotundifolia*) is to be found wherever bogs and swampy places exist, even in Australia and at the Cape of Good Hope. Its round leaves, with long slender stalks, seldom attain half an inch in diameter. The stalks radiate from a central point, with the leaves lying flat on the ground like a rosette. In the center of this rosette rises the small stem with minute white flowers. The leaves are covered with curious gland-bearing tentacles, or hairs with glands at the tip surrounded by a secretion resembling minute dewdrops that sparkle in the sun. This phenomenon has given rise to the plant's name, the sun-dew. An object coming in contact with the tip causes a movement of the clubbed structures towards the center of the leaf, the impulse being transmitted from the tentacles touched to others nearby, thus bending them over and enclosing the object. It is an established fact that the secretion from the glands of the sun-dew is capable of dissolving animal substance in much the same manner as in the process of digestion in animals.

Bladderwort (*Utricularia macrorrhiza*), a submerged water plant, with finely divided foliage, is equipped with bladders which are adapted for capturing small animals, such as the minute insect larvae and crustacea which live in the water. The leaves are repeatedly bifurcate to twenty or thirty points and have two or three bladders on each leaf, generally near the base. These structures are translucent, of a green color, and when fully grown are about one-sixteenth of an inch in length. There is a valve on the posterior free edge lined with numerous glands, each consisting of an oblong bead and a pedicel. This valve opens only inwards and is highly elastic. Small animals can enter the bladder through this valve which shuts instantly behind them and does not yield to pressure from within, so that it is impossible for an animal



A. Sun-dew (*Drosera rotundifolia*).
B. Common butterwort (*Pinguicula vulgaris*).
C. Venus's fly-trap (*Dionaea muscipula*).



Above. A Venus's fly-trap with a small frog caught in its grip (×3). American Weekly, August 1, 1937.

Below. Venus's fly-trap closing and closed on a fly. Photos by Leon Keinigsberg.

to escape once it is caught in this prison. Under favorable circumstances many of the bladders may be found to hold as many as eight minute crustacea.

A bladderwort has been described by Moseley which entraps young fish and spawn. "Most are caught by the head, and when this is the case the head is usually pushed as far into the bladder as possible till the snout touches the hinder wall. The two dark black eyes of the fish then show out conspicuously through the wall of the bladder."

According to current newspaper reports the bladderwort is now being used "effectively" to fight mosquitoes.

Among plants, Venus's fly trap (*Dionaea muscipula*), says Darwin, "from the rapidity and force of its movements is one of the most wonderful in the world." The leaf is bilobed, with a foliaceous stalk. On the margin of the leaf are sharp teeth or spikes, with two or three hairs on the leaf. These hairs are extremely sensitive and function as triggers; the instant they are touched the two lobes of the leaf close, locking the spines together. The unhappy insect that set off this mechanism becomes its prey. The leaf remains closed and is converted into a virtual stomach and the glands on the upper surface of the leaf come into action until all the soft parts of the prey are liquified. A Venus's fly trap has been seen holding fast in its grip a small frog. This plant is a native of North Carolina.

The above are all rather small herbs that generally attract but little attention even in places where they are abundant. Much more conspicuous carnivorous plants are the pitcher plants of which there exist two distinct types, one of the northern hemisphere, the other of the oriental tropics. The two types belong to different families but agree in one important respect: the leaf or part of the leaf of each is converted into a pitcher, containing a fluid in which insects and other small animals drown and are digested. The northern pitcher plants, *Sarraceniaceae*, consist essentially of a clump of pitchers,

six inches to two feet or more in height, according to the species. The tropical pitcher plants, *Nepenthaceae*, are much taller plants, with a central stem and foliage like a corn plant. From a tendril-like prolongation of the midrib of the leaf, curious jugs or pitchers hang suspended, one from each leaf. A small leaf-like flap like a lid covers the mouth of the pitcher. The flowers are fragrant, brightly colored, and attract insects, which find their way into the pitchers and may be utilized by the plant.

Because of their peculiar appearance, both types of pitcher plants are often cultivated in greenhouses as curiosities, and consequently they are better known than the other groups of insectivorous plants.

The most generally known pitcher plant of the northern hemisphere is *Sarracenia purpurea*, a widely distributed plant in the marshes of North America from Hudson Bay to Florida. Its leaves are metamorphosed into pitcher-like structures which are arranged in rosettes with their bases resting on the damp soil. They are inflated in the middle like bladders, narrow at the orifice and terminate in a small lamina streaked with red.

The inner surface of these pitchers is lined with cells arranged like scales while the laminae are covered with glandular hairs which exude honey and cover the surface with a film of sweet juice. The animal enticed by this honey finds its way into the pitcher, and is prevented from escaping by the slippery cells lining the inside.

Darlingtonia californica, which is found growing at a height of from 300 to 1,000 meters above the sea in the California uplands, differs slightly in form. The lamina, which is purplish red in color and shaped like a fish tail, hangs at the entrance of the pitcher like a sign board, thus attracting insects from afar. There is also a spiral torsion to these leaves which probably makes escape more difficult for the insect. *Sarracenia flava* shows very little variation in form except that its pitchers are long and narrow. These species produce flowers singly on a spike

and vary in size from an inch to two inches. They are bright yellow with deep red or green markings, or deep red with green markings as in *Sarracenia purpurea.*

Dr. Hooker has described over thirty species of Nepenthes, natives of the hotter regions of the Asiatic archipelago, from Borneo to Ceylon, with a few outlying species in New Caledonia, in tropical Australia, and in the Seychelles Islands in the Indian Ocean. More than half of these are to be found in Borneo, and of these a dozen are exclusively confined to its soil. The pitchers are generally produced abundantly during the younger state of the plants. They show considerable modifications of form and external structure and vary in size from little more than an inch to almost a foot in length. Some species, from the mountains of Borneo, have pitchers which measure a foot and a half, and the capacious bowl is large enough to drown a small animal or bird.

One of the rare pitcher plants in this region is the striking *Nepenthes Veitchii* which grows as an epiphyte on the larger branches of trees. It produces a bag-shaped pitcher about ten inches in length, rather wide and blotched with blood-red patches. The mouth of the pitcher in this species is its most conspicuous and remarkable part that by its rich orange color and its vertical position, becomes a perfect trap for enticing insects at a distance. Another remarkable species which climbs trees has narrow pitchers about twenty inches long and a stalk which is often as long as twenty feet. The mouth of some of these pitchers is fringed with rigid points directed inwards toward the cavity.

Many travelers have described these plants as they exist in their native habitat, especially in Borneo. Mr. Alfred Wallace was told that he would find water at Padang-batu but having looked for it in vain, and being extremely thirsty, he at last turned to the pitcher plants. The water contained in the pitchers was full of insects, and otherwise uninviting; but on tasting it, it was found to be

very palatable, though rather warm. The mountain tops in this region, he relates, are covered with these pitcher plants which trail over the ground or climb over shrubs and stunted trees, the showy pitchers hanging in every direction. Some of the finest yet known have been obtained on the summit of Kina-Balu, in northwest Borneo. The species *Nepenthes Rajah* from the mountains of Borneo surpasses all other known species in the immense development of its pitchers, some of which are twelve inches across, and hold seven pints of water in which small animals or birds can drown.

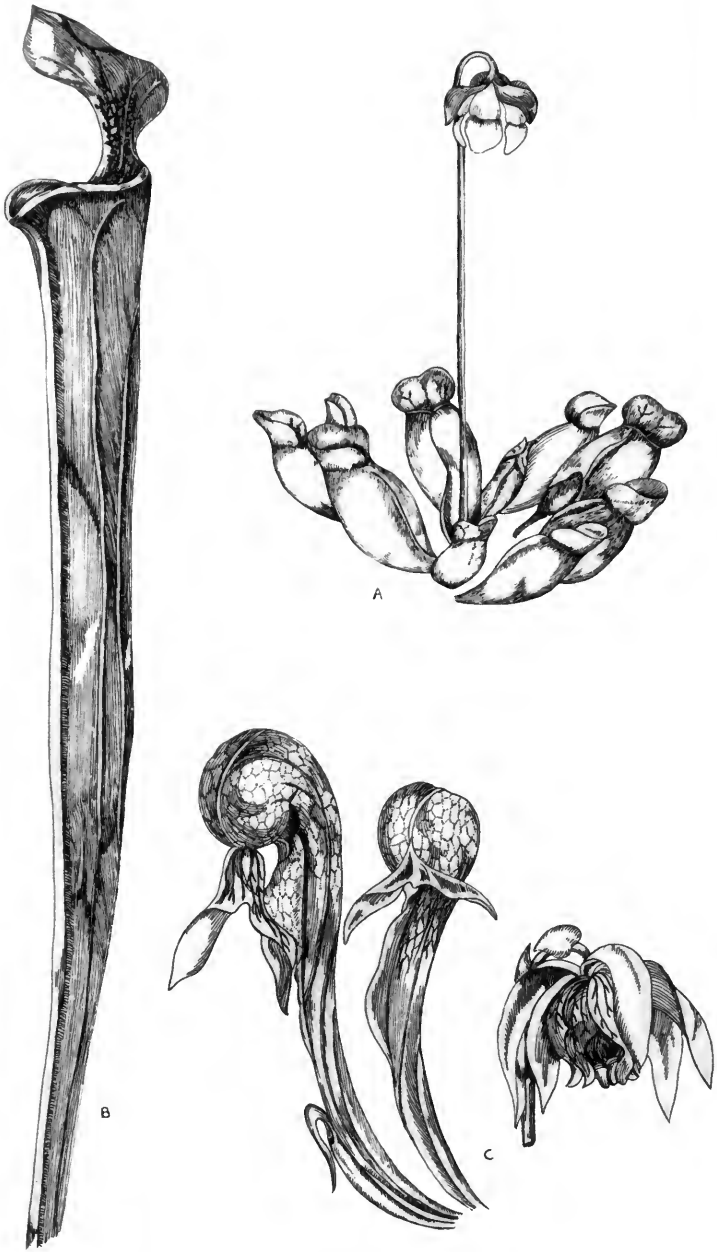
A large plant of this kind was found in tropical India and exhibited at Horticultural Hall in London. The odor from its blossom attracts large insects and even mice.

A small but beautiful and extremely interesting plant, *Cephalotus follicularis*, is found in West Australia near Albany. It grows in peaty soil, almost in running water, and sometimes at the base of woody shrubs. The plants are very attractive in appearance with their gracefully shaped pitchers in bright colors of red to purple, crimson and vivid green. The lids are marked with small spaces of translucent white. These small pitchers are arranged in rosettes from the center of which ordinary leaves appear and often assume a bright crimson and yellow color. The flower spike emerges from the center of this clump of leaves.

The liquid in these pitchers varies from greenish black to quite colorless depending on the number of victims contained in it. In one of these pitchers there have been recognized wings, legs, and chitinous plates from the thorax and abdomen of various insects, balancers of mosquitos, scales of moths, claws of crustacea, the living larvae of a fly and a unicellular alga which obviously lives and multiplies in the liquid.

The living algae and larvae are fine examples of organisms taking advantage of conditions created by others for their own benefit. Among insectivorous plants there

A. Bladderwort (*Utricularia macrorrhiza*), natural size.
B. Section through a bladder with trapped small animals (×30).
C. Leaf showing position of bladders (×5).



A. The common pitcher-plant (*Sarracenia purpurea*).

B. A pitcher of the trumpet plant (*Sarracenia flava*), a large leaved pitcher-plant, of southeastern United States.

C. (*Darlingtonia californica*), a native of California uplands.

All about one quarter natural size.

are many striking examples. In Borneo, there is a spider that lives on the upper slippery part of a Nepenthes pitcher where it weaves a thin web for a foothold and lies in wait for insects. A parallel case exists of an insect in New South Wales which lives on *Drosera binata* and shares the insects captured in the sticky tentacles of the plant. Geddes mentions an American fleshfly which lays its eggs on the rim of Sarracenia pitchers. When hatched the larvae crawl down into the decomposing mass, live there for some time and finally make their way underground to pass the chrysalis stage. A bird associated with this plant slits the pitchers in search of these particular larvae.

There are various opinions concerning the process of digestion by these carnivorous plants. One is that the liquid contained in these various pitchers and bladders is a culture fluid for bacteria which attack and decompose the captives, and that the plant absorbs the decomposed products without having brought about digestion. On the other hand we have the view held by others whose experiments, made under conditions excluding the action of bacteria, indicate that true digestion takes place by digestive ferments which must have been secreted by the plant.

Plants capturing and consuming animals for food provide a striking instance of reversal of the prevailing order of things. The phenomenon, though not very conspicuous, is of such an extraordinary nature that it has stimulated the inventive imagination of many authors of natural history fantasies.

As a result readers of Sunday Magazine supplements have been startled from time to time by stories of vegetable monsters as formidable and incredible as dragons and werewolf or other atavistic nightmares of medieval zoology.

Some of these tales, such as that of The Death Flower of El Banoor, are plainly intended to be fiction. Others challenge our incredulity by making serious claims of

being true accounts of actual observations. Their authors are apt to grow irascible when approached for further information and it is to be noted that the scene is always laid in some indefinite place in a far-off country, difficult of access and uninviting to visitors.

Fifty years ago "the man-eating tree" was generally ascribed to Central America. Now, since that part of the world has become easily accessible and too well-known to serve as a hiding place, its habitat has shifted to more remote Madagascar or Mozambique.

Some of the various accounts that follow are quoted just as they appeared in print.

THE DEATH FLOWER

"We may dismiss as mythical the travelled tale of a Venus fly-trap which was magnified into quite another matter before Captain Arkright was through with it, for such tales grow larger the farther they go from their beginning. It was in 1581 that the valiant explorer learned of an atoll in the South Pacific that one might not visit, save on peril of his life, for this coral ring inclosed a group of islets on one of which the Death Flower grew; hence it was named El Banoor, or Island of Death. This flower was so large that a man might enter it—a cave of color and perfume—but if he did so it was the last of him, for, lulled by its strange fragrance, he reclined on its lower petals and fell into the sleep from which there is no waking. Then as if to guard his slumber, the flower slowly folded its petals about him. The fragrance increased and burning acid was distilled from its calyx, but of all hurt the victim was unconscious, and so passing into death through splendid dreams, he gave his body to the plant for food."[1]

A FLESH-EATING VINE

Mr. Dunstan, a naturalist, relates that while botanizing in the swamps of Nicaragua hunting for specimens,

[1] Skinner, Charles M., Myths and Legends of Flowers, Trees, Fruits, and Plants.

he heard from a distance his dog crying out, as if in agony. Running to the spot whence the cries came, he found the animal caught in a perfect network of what seemed to be fine, rope-like roots and fibres. The plant seemed composed entirely of bare interlacing stems, resembling the branches of a weeping willow denuded of foliage, but of a dark, nearly black, color, and covered with a thick, viscid gum that exuded from its surface. Mr. Dunstan attempted to cut the poor beast free with his knife, but it was with great difficulty that he managed to sever the fleshy fibres of the plant. When the dog was finally extricated, Mr. Dunstan saw to his horror not only that its body was blood-stained, but the skin appeared to be actually sucked or puckered in spots, and the animal staggered as if from exhaustion. In attempting to cut the vine the twigs curled like living, sinuous fingers about Mr. Dunstan's hand, and it required great force to free it from their grasp, which left the flesh red and blistered. The tree, it is reported, is well known to the natives, who tell many stories of its death-dealing powers. Its appetite is voracious and insatiable; and in a few minutes it will suck the nourishment from a large lump of meat, rejecting the carcass as a spider does that of a used fly.

THE SNAKE-TREE

The "Snake-tree" is described in a newspaper paragraph as found on an outlying spur of the Sierra Madre, in Mexico. It has sensitive branches of a slimy, snaky appearance, and when a bird alights on them incautiously, it is seized, drawn down in the tree and lost to sight. Soon after it falls, flattened out, to the ground, where bones and feathers, no doubt of former captures cover the earth. An adventurous traveler having touched one of the branches of the tree tells how it closed up on his hand with such force that it tore the skin when he wrenched it away. He then fed the tree with chickens, and the tree absorbed their blood by means of suckers with which its branches were covered, very much like those of the octopus.

"MONKEY-TRAP TREE"

A recent report is credited to a Brazilian explorer named Mariano da Silva who returned from an expedition which led him into a district of Brazil that borders on Guiana. He had there sought out the settlement of Yatapu Indians. During his journey he saw a tree which nourishes itself on animals. The trunk of the tree has a diameter of about 90 centimetres and is about six to seven meters high. Around the lower part are found leaves which are 0.9 by 20 centimetres large and the thickness of the thumb. The tree itself exudes a peculiar sharp odor which attracts animals, especially monkeys. As soon as they climb the trunk, all is up with them, for very quickly they are completely closed in by the leaves, and one neither hears nor sees them again. After about three days the leaves open and let drop to the earth the bones, completely stripped.

"THE MAN-EATING TREE"

"The man-eating tree" was repeatedly described in newspapers and magazines from 1878 to 1882, but it is alleged to have been discovered long before. Travelers and missionaries have spent considerable time investigating for their personal satisfaction the question of its existence and have always come to the conclusion that the tale is without foundation.

Dr. Carle Liche who claimed to have seen the tree in Madagascar in 1878 first writes of it in a letter to Dr. Omelius Fredlowski, following which it appeared in numerous magazines, papers, and even scientific journals in various parts of the world, however, without sufficient verification to warrant a scientific investigation. A part of the account which appeared in the *Carlsruhe Scientific Journal* was quoted in a newspaper story as follows:

"I had gone," he writes, "to Madagascar, the land of the lemurs, the lace plant, the gye-gye, and also of the man-eating tree, to visit Queen Ravalana II, and was persuaded to visit the Mkodos, by a native who had heard

that besides generous daily pay, I was accustomed to reward liberally anyone who showed me something strange or out of the way.

"In his company I journeyed to the southeastern part of the island, among the hills covered with thick virgin forest, where there is a district practically unknown, whose white visitors can be numbered on the fingers of one hand. This is the region inhabited by the Mkodos.

"It was while among these natives that I was witness to what was probably the most horrible sight I have ever seen. Their religion consists in the worship of their sacred tree, one of the most wonderful freaks of nature. To this tree they offer human sacrifice. Once upon a time, as each was consummated, it had been their custom to burn each tree. This, however, they had been forced to give up on discovering that the trees were getting to be very scarce. When I arrived they were practically extinct, and it was with difficulty that my guide, whose wild stories had attracted me to the place, could find one to show me.

"The sacred tree is most remarkable in appearance. Its trunk, which rarely rises ten feet above the ground, is of a strange, barrel-like shape, covered with a quaint mosaic sort of bark, looking like nothing so much as a gigantic pineapple. At the top of this trunk it is between eight and nine feet in circumference, and upon it is fixed a remarkable growth very much resembling a huge plate. From the top of the trunk there hung eight leaves. They are of extraordinary size, ten to twelve feet long, a foot wide where they were hinged to the tree, widening to about two feet, and finally tapering down to a point as sharp as a needle. They were plentifully strewn with huge venomous looking thorns.

"These leaves could not have been less than fifteen inches thick in the centre, and hung down inertly along the trunk, their point trailing in the earth. Above these there stretched, rigidly and horizontally, a number of

branches several feet in length. Finally, from underneath the plate-like arrangement, there grew, pointing upward, half a dozen frail looking stamens—palpi would be a better name, I believe—that shivered constantly, as if agitated by some strong wind.

"It seems the plate-like affair on top of the trunk contained some thick sweet juice. This liquid, which is a product of the tree and was probably originally intended to attract birds, is highly intoxicating, and even a very small quantity very soon produces coma. When sacrifices take place a woman is forced to climb into the tree and drink. If the devil inside is in good humor, the girl will be allowed to get down again in safety. If he was feeling ugly, however, then the poor girl was out of luck. Exactly how the tree was going to prevent her jumping down I could not make out, but I was to learn eventually.

"I desired to draw closer and examine the tree carefully, but my guide begged me not to, warning me that the tree would certainly be angered at my sacrilege and would take my life in revenge, explaining that the leaves would rise up and crush me. Of course, I did not pay much attention to this, but, nevertheless, left the tree alone, for it has always been my habit to respect native superstitions and customs.

"One evening my guide presented himself to me and told me that what he had been waiting for would take place that night.

"That night, having made the chief a present to insure that I would be welcome to witness their ceremony, I followed the tribe into the forest. They made their way to the sacred tree, and round it built twelve fires, so that the whole surroundings were lit up brightly. Then they disposed themselves about them and made themselves at home, some eating, but most of them drinking huge gourdfuls of native ferment. Very soon they were all of them more or less intoxicated, both the men and the women, with the exception of a young girl nearby who

neither spoke nor moved, but glanced about her as if she were terrified out of her wits.

"Suddenly without warning the yelling ceased and they scattered away like frightened deer. The crucial point had arrived. For a moment there was complete silence but for the crackling of the fires. Intuition told me that the girl I had noted before was the one that was to be the sacrifice. I looked at her and saw mortal terror imprinted on her features. Yet for the life of me I could not imagine why, and put down her fear to indignation.

"By now the first group of dancers had somewhat recovered, and, suddenly springing up, rushed upon the poor girl with unearthly shrieks and yells. They surrounded her, and with shouts and gestures ordered her to climb the tree. Terrified she shrank back, apparently begging for mercy. At that, the whole crowd joined in, furiously howling at her to obey. Once more the dancers gave out their orders; then as she still refused and struggled, they armed themselves with spears, and stabbing at her forced her to retreat in the direction of the devil-god. For a while she resisted, seeking to hold their spears with her hands, and only getting wounded as a reward for her plucky defence.

"At last, seeing it was useless to fight further, she turned and faced the tree. For a moment she stood still, gathering herself up for a supreme effort, then quickly she sprang toward the tree. Like a monkey she scrambled up, and reaching the top knelt and drank of the holy liquid. Quickly she jumped up again and I expected to see her jump down, thinking all was over, in that dim light not noticing instantly what caused her so to shrink with terror.

"Suddenly I realized what was happening, and I seemed to be paralyzed with horror. The tree, seemingly so dead and motionless a moment before, had come to life. The palpi, so frail looking, had suddenly ceased to quiver, and had coiled themselves about the girl's head

and shoulders, holding her so firmly that all her efforts to free herself remained absolutely useless.

"The green branches so rigid before began to writhe, and coiled themselves round and round like snakes. Then as that mass struggled there arose a horrible sight I shall never forget—the great leaves began to rise slowly, very slowly. Those evil looking thorns were now closing on her with the force of a hydraulic press.

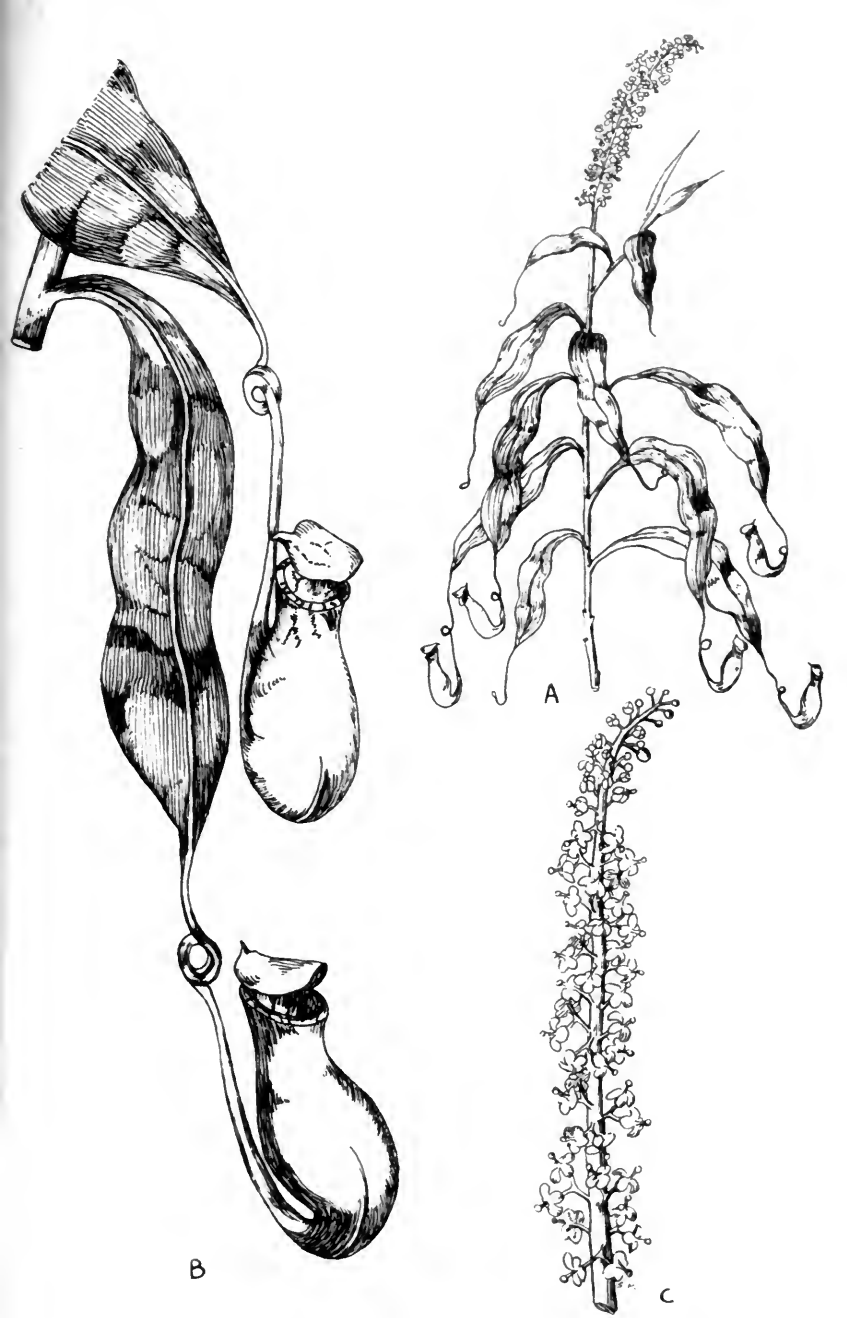
"As they came together tightly there trickled down the trunk a pinkish mixture, which the maddened natives fought and trod each other down to get one mouthful of the intoxicating fluid from the tree and the blood of the human sacrifice.

"Then the feasting began again amid much rejoicing. The devil was appeased."[1]

Five years later in the same paper there appeared a similar story. This time it was a Mississippian, W. C. Bryant, a planter, who was determined to use a piece of land that was "tabooed" to everyone, on the island of Mindanao in the Philippines. Taking no heed of warnings, he started out with four white men and a group of natives who had been deceived as to their destination. Most of the natives finally had to be left behind at camp, as they refused to go into the forbidden territory, except an old man named Leon and some carriers.

"Mountains began to rise, and with them mounted the old guide's warnings about 'diabolos,' 'demonios,' 'kotras,' and other inventions of a superstitious mind lurking just ahead. The following day he began hugging Bryant's knees and weeping on them, and repeated this gesture so often that it impeded progress until King picked up the old fellow like a child and carried him half a mile. Then the meeting came to a head and the white men won because, scared as the natives were to go on where the 'diabolos' were thicker, they were even less willing to go

[1] William, B. H., American Weekly, Sept. 26, 1920.



A. (*Nepenthes distillatoria*), sketch of an entire plant greatly reduced.

B. Foliage of Nepenthes showing tendril with the pitcher at the tip, about one quarter natural size.

C. Portion of flower spike, about one third natural size.

An Australian pitcher-plant (*Cephalotus follicularis*), one half natural size (after Von Marilaun).

back alone without the protection of the white men and their guns.

"Like men counting themselves already dead, the Moros plodded along into the foot-hills of the mountains. Noon of the next day found the party preparing its meal in the midst of a small plateau covered with tall, wiry grass, high as a man's head.

"While the meal was cooking, Bryant decided to push forward a short distance to a knoll from which he might hope to see what was ahead, for the guide in this strange country was of little use save to cut a path with his naked bolo through the grass and ferns.

"Leon went on with him, his blade rhythmically moving right and left two paces in advance. It was a windless day, without even a break to ripple the surface of the sea of grass in which there was a notable absence of animal tracks. Not even birds were in evidence. The old man paused, listened and cocked a watery eye, full of fear and rebellion at the white man. Bryant listened and realized that he had never been in such complete silence. There was not even a rustle in the grass nor the whir of an insect.

"It was uncomfortable and he motioned for Leon to proceed, but the old man burst into a pitiful plea to go back and fell at Bryant's knees, but the white man gave him a shove and again the swish-swish went on until a lone tree rose in their path.

"The tree was perhaps thirty-five or forty feet high, a compact sort of a tree with heavy dull-green leaves lying close together with a shingly look and concealing the boughs and upper trunk. Approaching near, the American was impressed with several things at once.

"The foliage stopped all around at a beautifully even distance from the ground as if carefully trimmed by human hands, and the thick trunk stood in the center of a perfect circle of barren ground about thirty feet in diameter.

"All about this park-like opening the congonale grass stood like a wall, but in the clearing itself not a wisp of

any sort of vegetation was visible, nothing but what appeared to be a sort of volcanic ash. The air was heavy with an odor that struck an unpleasant chord in Bryant's memory, and yet to this day he cannot place it. It was an animal smell, something between that of carrion and the circus, and yet neither.

"At the base of the trunk, shiny with some sort of sticky exudation, was a pile of white bones too dry to taint the atmosphere. Instead of saving himself thirty feet of unnecessary mowing, Leon started to carve himself a path around the edge. Bryant looked upon this as one more example of the stupidity and perversity which all white men have remarked in the negro. Lazy as a dog, nevertheless when the Philippine aborigine does do anything he choses for himself the hardest and most inefficient way.

"The American did not mind. He was glad of the extra time to examine that tree. His guess was that the big black leaves, like a shingle roof, had made the ground barren and dead within the circle. Still some rain should have blown in. Why was the boundary so sharp?

"Among the bones Bryant saw what might be a human skull and started across the open to pick it up. As he moved he noted half-consciously that a breeze must be springing up, for the leaves just above his head were beginning to undulate. A faint hissing made him look again to see if it could be a snake.

"The thought was knocked out of his mind by the sudden impact of the guide's body on his back. The Moro landed with a yell, pinioned both his master's arms and tried to pull him over backward, all the time shrieking like a fiend. Bryant, certain that the man was insane, wondered gratefully why the old fool had not struck with his bolo. The American was helpless until he could free his arms, which should have been easy with this rather frail old man, but was not, because the guide fought with the strength of a maniac.

"Bryant set himself to break that grip and finally loosened it enough to get one hand on his pistol and to look into his assailant's face. Leon's complexion was the dirty grey of utter terror and his bulging eyes were not looking at Bryant at all. Bryant was impelled to twist his head in the direction of that gaze and became paralyzed at what he saw. The tree was reaching for him.

"The whole thing had changed shape and was horribly alive and alert. The dull, heavy leaves had sprung from their compact formation and were coming at him from all directions, advancing on the ends of long vine-like stems which stretched across like the necks of innumerable geese and, now that the old man had stopped his screaming, the air was full of hissing sounds.

"The leaves did not move straight at their target, but with a graceful, side-to-side sway, like a cobra about to strike. From the far side, the distant leaves were peeping and swaying on their journey around the trunk and even the tree top was bending down to join in the attack. The bending of the trunk was spasmodic and accompanied by sharp cracks.

"The effect of this advancing and swaying mass of green objects was hypnotic, like the charm movements of a snake. Bryant could not move, though the nearest leaf was within an inch of his face. He could see that it was armed with sharp spines on which a liquid was forming. He saw the heavy leaf curve like a green-mittened hand, and as it brushed his eyebrows in passing he got the smell of it—the same animal smell that hung in the surrounding air. Another instant and the thing would have had his eyes in its sticky, prickly grasp, but either his weakness or the brown man's strength threw them both on their backs.

"The charm was broken. They crawled out of the circle of death and lay panting in the grass while the malignant plant, cracking and hissing, yearned and stretched and thrashed to get at them.

"The paroxysm worked up to a climax and then gradually began to subside, and Bryant, having overcome a faintness and nausea, walked with Leon to the opposite side. Immediately the commotion was set up anew and the huge organism bent its energies in grasping them from the new direction. After a more careful survey, Bryant estimated the leaves at about three inches across, roughly three times that in length and thick like a cactus. Each was in a vine-like tendril the thickness of a man's thumb and appeared to have the property of extension in length as well as uncoiling like a spring.

"The bones on second thought, he considered hardly large enough for a man, perhaps not even for a full-sized ape. There were many feathers and he was not certain that he did not see hair and fur.

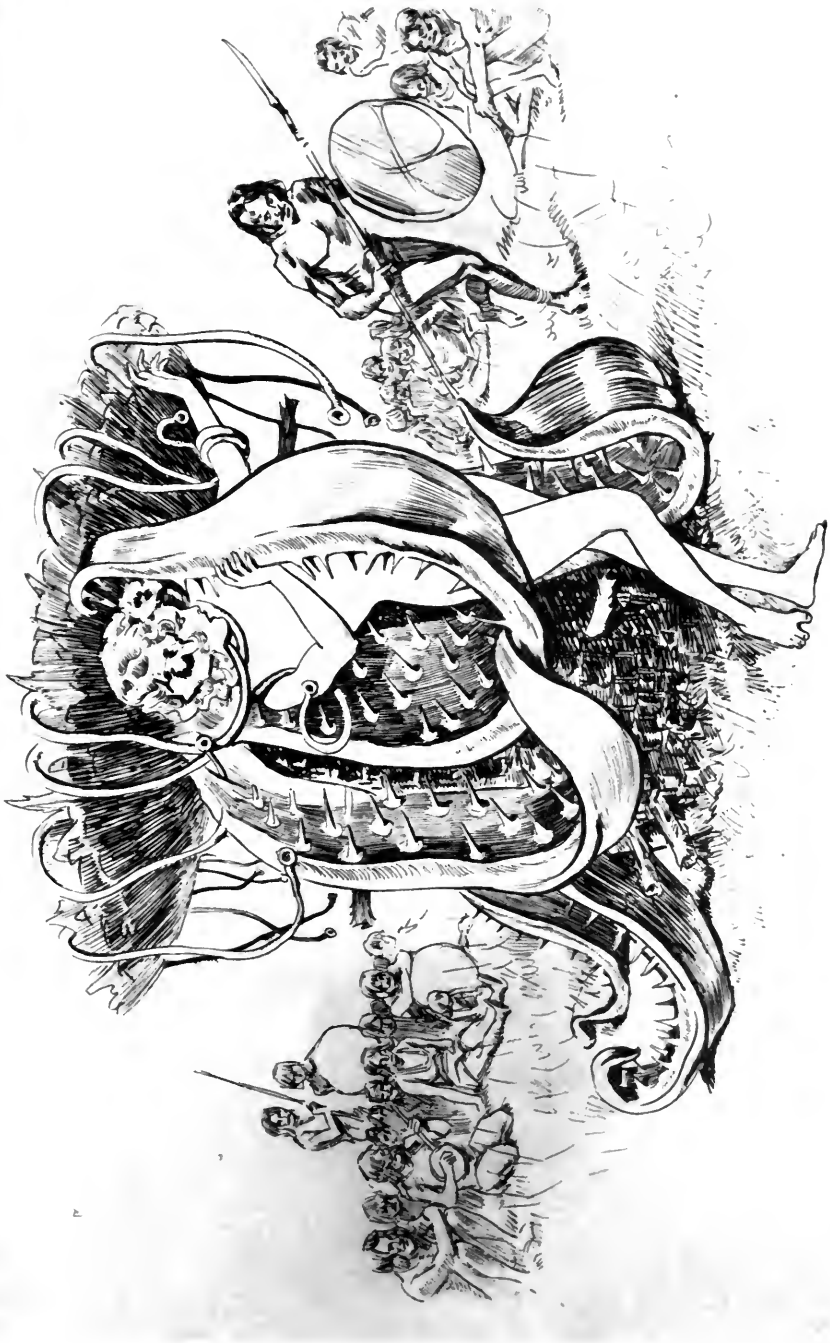
"The distant report of King's rifle reminding them of dinner, brought to an end the study of the deadly tree. His last backward look showed it with leaves slightly ruffled like the feathers of an angry parrot.

"Bryant wished to know why the natives, knowing all this, did not make a business of exterminating these murderous growths. The Philippine replied that a naked man with a bolo 'no can do.' This was probably not the truth. A band of Moros could easily destroy any tree if they really tried. They let them live from superstitious fear.

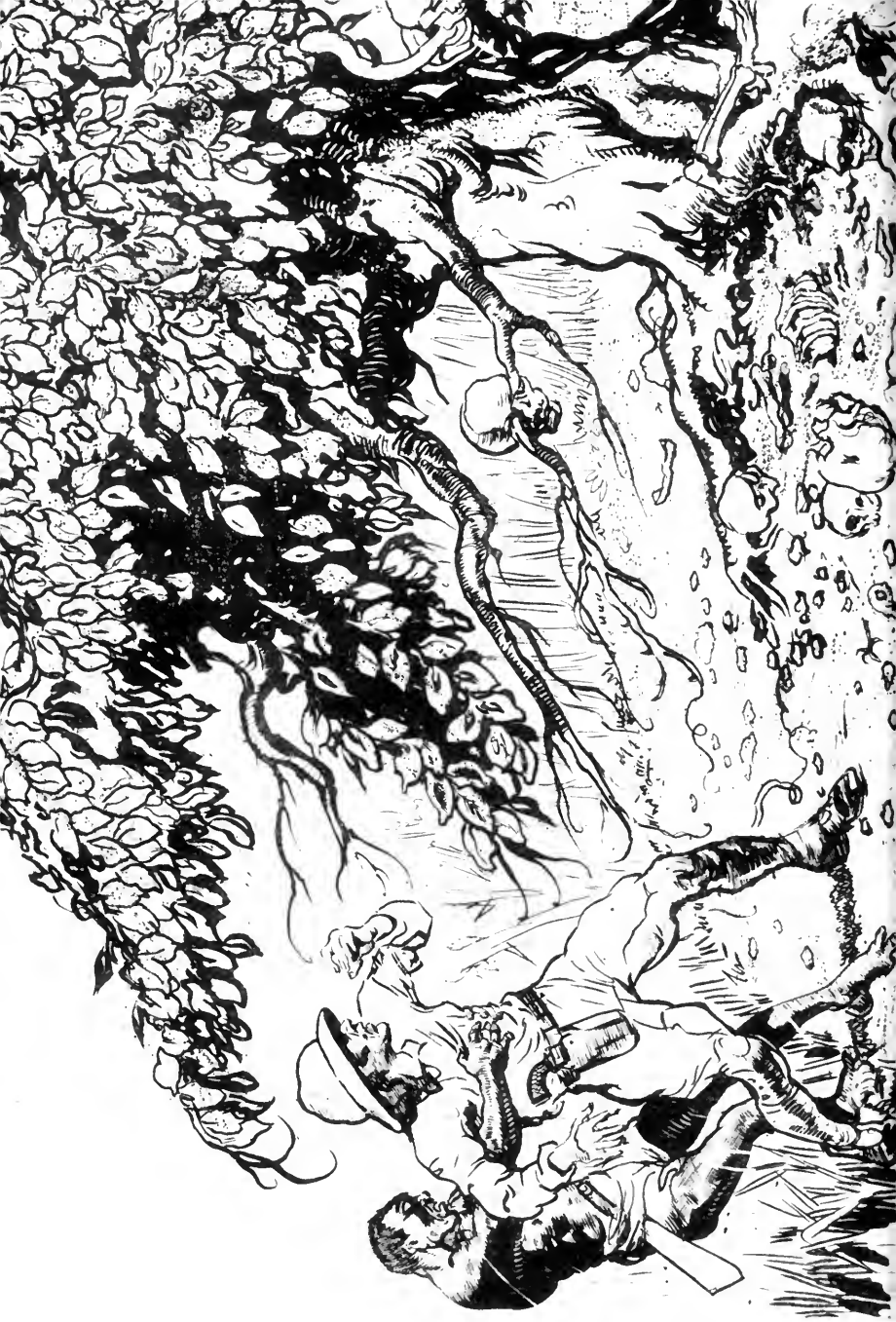
"When Bryant reported this to Captain Johnston, he replied that he had heard of the tree and understood that it stupefied as well as held its victims by force but heretofore had always been inclined to doubt the yarns."[1]

"The author of this tale, having been questioned, replies under date of January 8, 1925, that 'the tree is there and in the main the account is true. The circle at the foot of the tree was about 80 maybe 100 feet in diameter. The tree looked nothing like the drawings [in

[1] Escaped from the Embrace of the Man-Eating Tree. American Weekly, Jan. 4, 1925.



Sacrificed to a man-eating plant. American Weekly, September 26, 1920.



Escaped from the embrace of the man-eating tree. American Weekly, January 4, 1925.

the paper]. It was round as a smoke stack—the trunk, I mean, and dark gray or ash-color. The whole tree was symmetrical and the tree and ground under it, was very inviting to a storm-beset or sun-depressed traveller. The clucking and hissing was, I judged, from a gluey consistency of, or on, the leaves. My impression was that if it reached me, it would fasten and hold me, thus it had done to apes, birds, and animals.' "[1]

The American version of this myth has at least the advantage of discarding the sensational and pseudoscientific feature common to the other reports, and introducing into the legend a note of humorous exaggeration.

THE FLY-CATCHER PLANT OF THE DESERT

"Wide-eyed tourists listen around the desert camp fires to the sad tale of Rot-Gut Pete, who vanished between Salome, Arizona, and his cabin one gloomy night. It seems that Pete had been celebrating something or other at the Last Chance Saloon, and left shortly after midnight with three sheets in the wind and no pilot. A few days later, when Pete showed up missing in his regular haunts, a search party tracked him into the desert.

"Finally, at the base of a very large fly-catcher plant, the searchers found a watch, forty-two boot-nails, eleven buttons, a six-gun, a belt buckle, and two silver dollars. They identified the gun as Pete's by counting the notches. Pete it seems, had leaned against one of the fly-catcher plants, and the thing had closed on him. Later, when the plant was gorged, it had opened again, dropping the metallic debris on the ground. You have to be very careful out in the desert."[2]

This, in its way, seems to embody the quintessence of "the man-eating tree" motif.

[1] Clute, Willard, "Man-Eating Trees," American Botanist, vol. 31, Apr. 1925, pp. 70–73.

[2] Ives, Ronald L., "You Don't Have to Believe It," Science News Letter, Apr. 2, 1938.

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