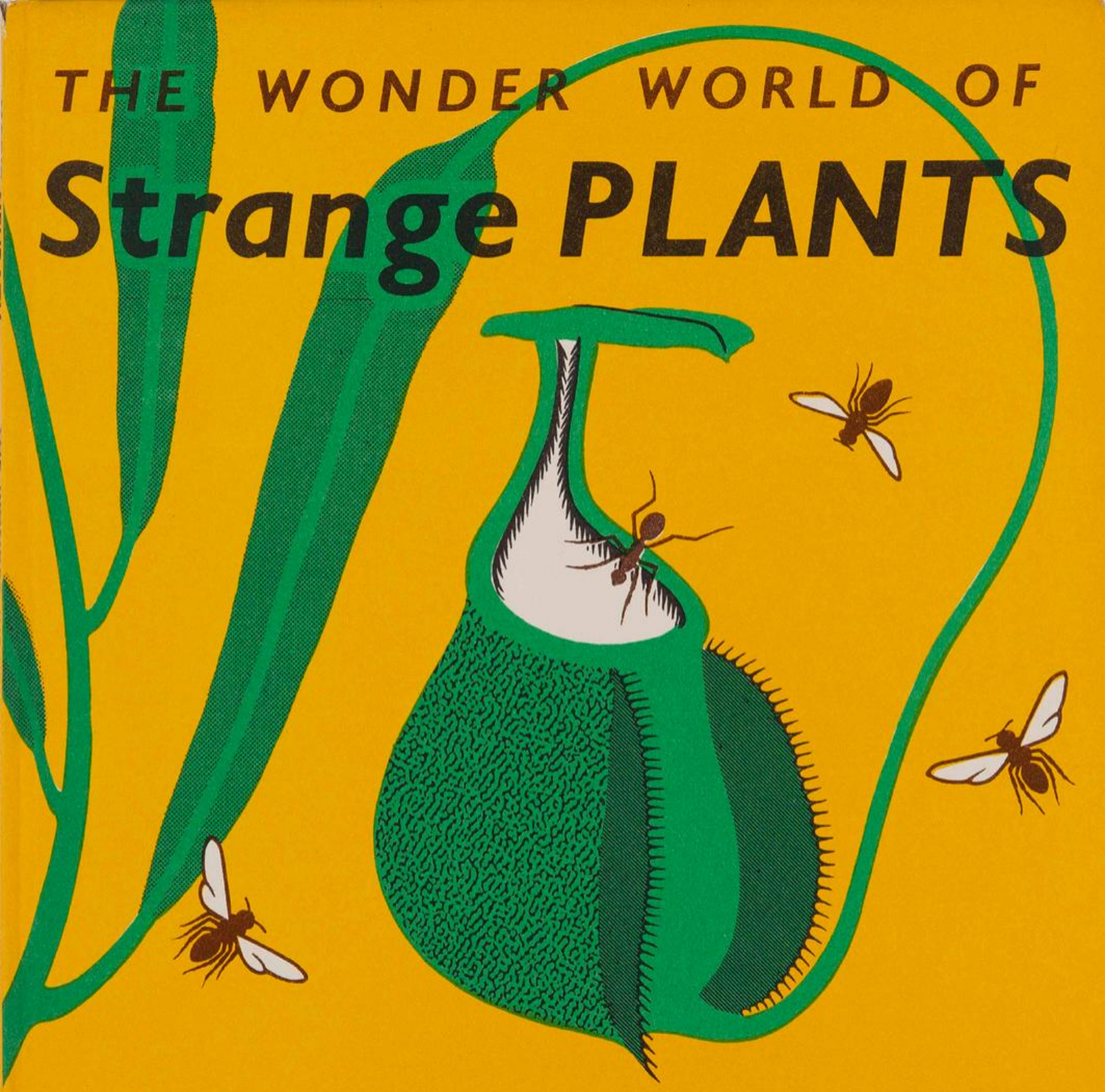
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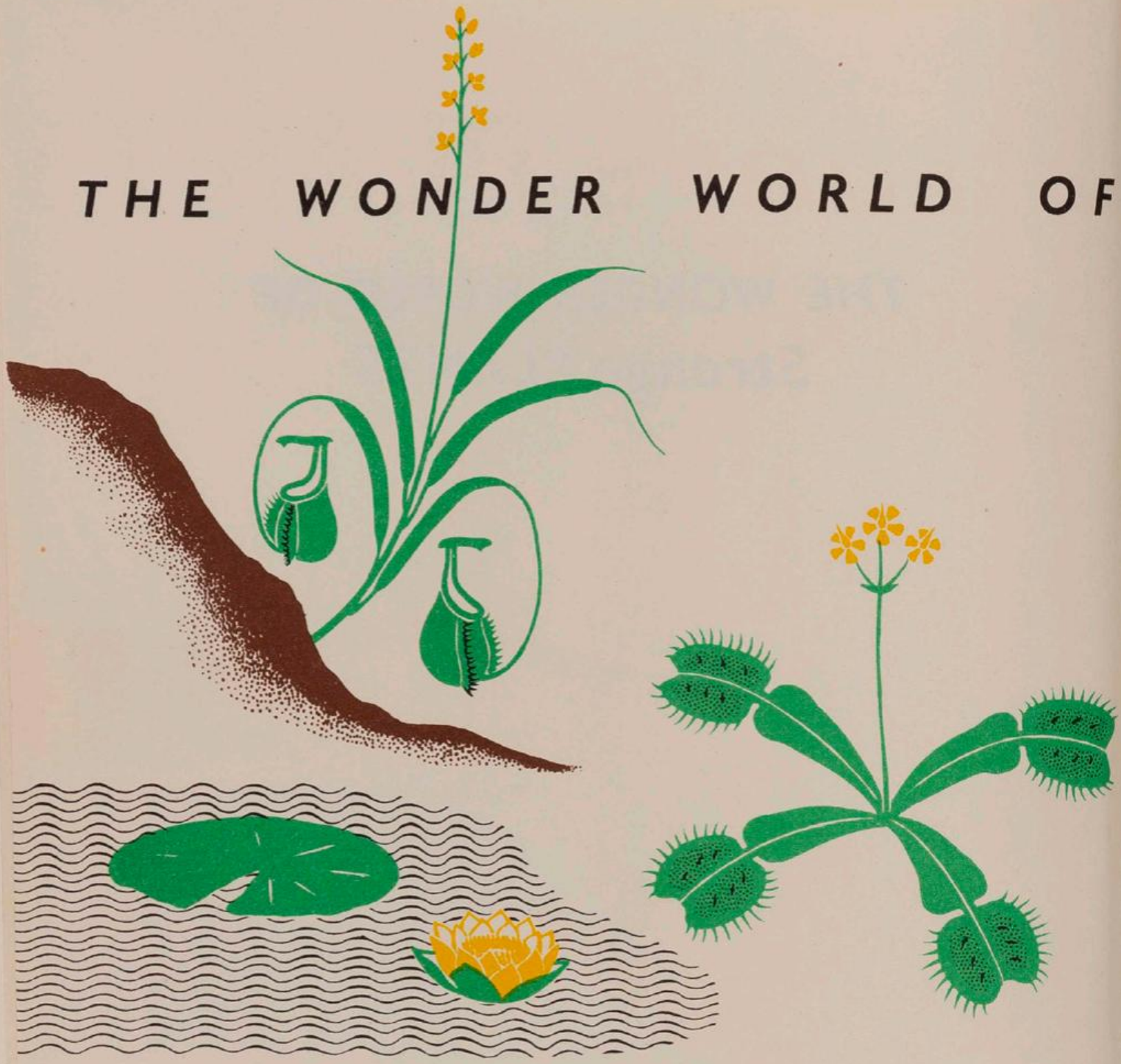
Strange PLANTS



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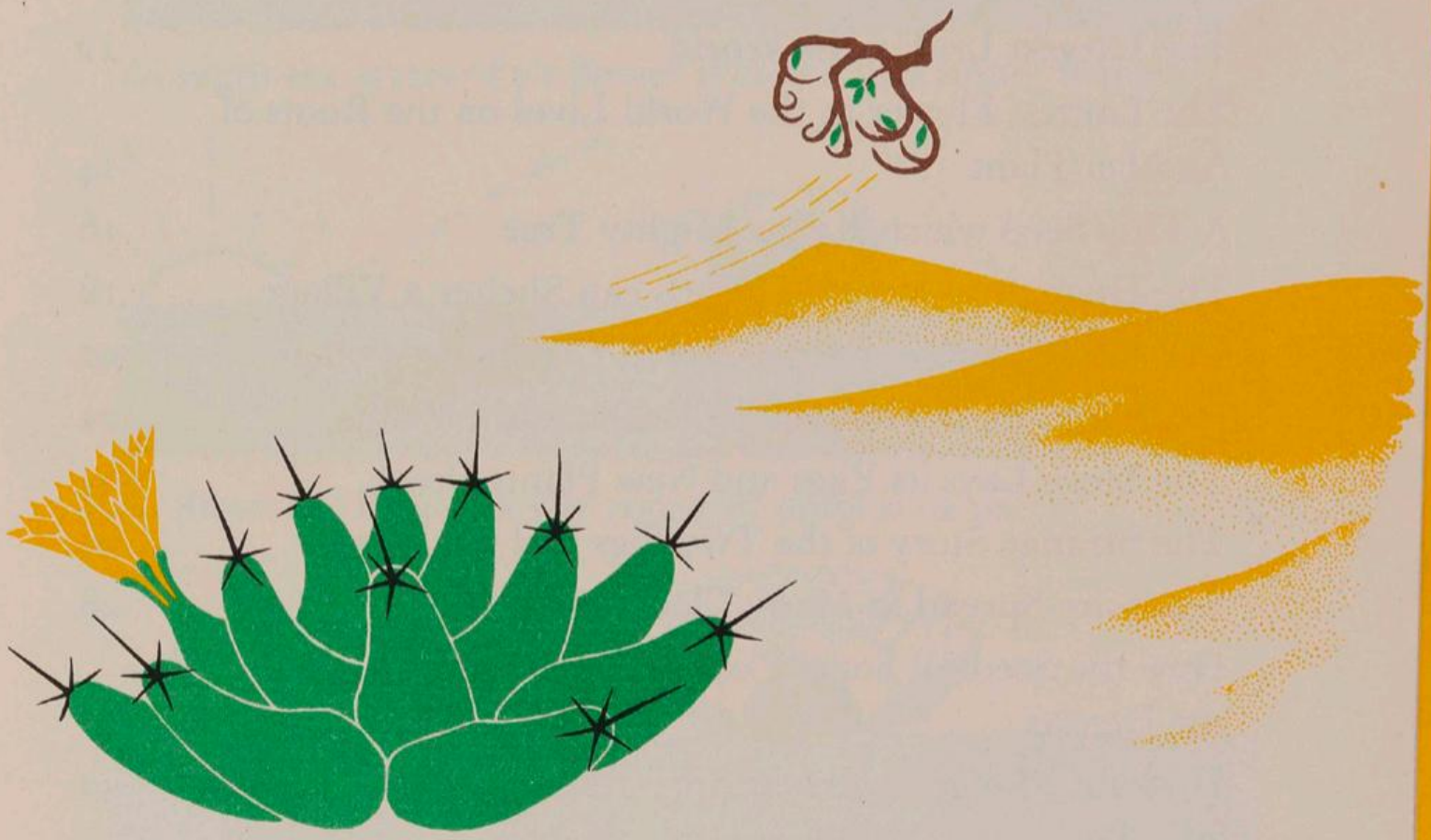


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MARIE NEURATH



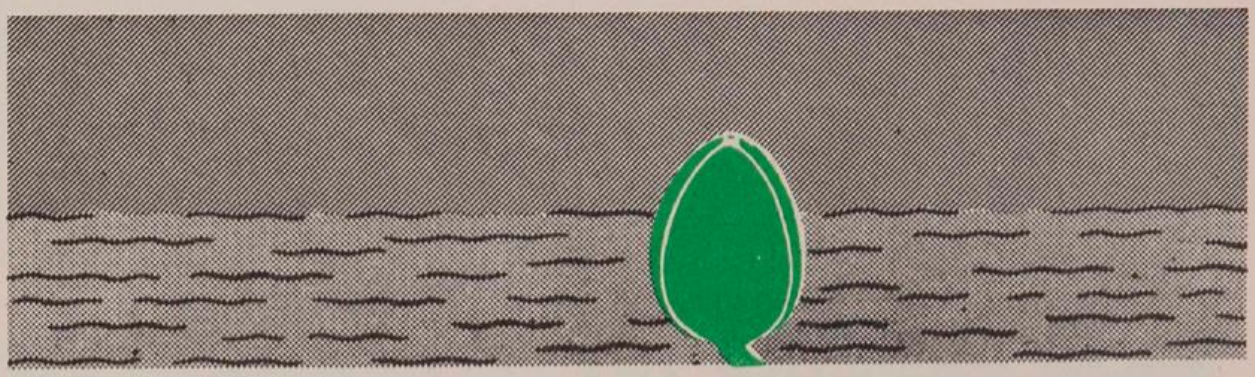
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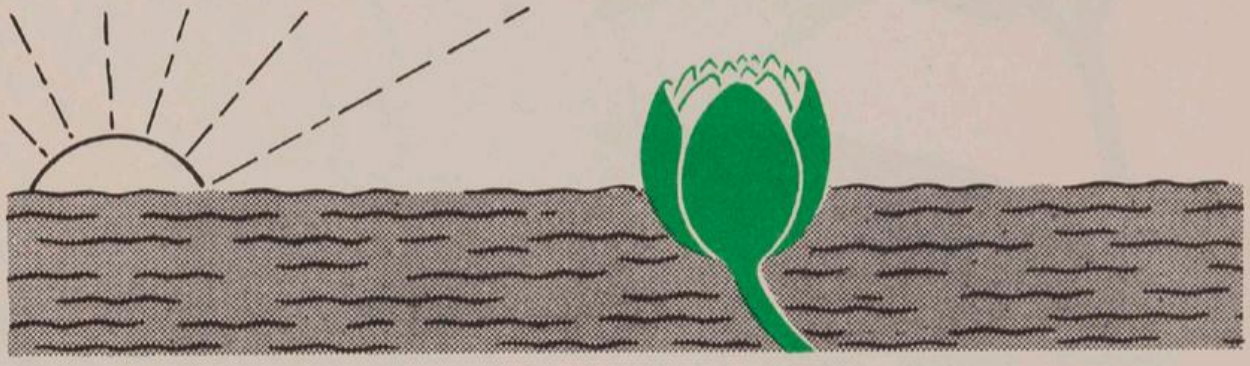
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The Water-lily Rises with the Sun



At night the water-lily's flower is closed and under water.



At dawn the flower slowly rises and unfolds its petals.



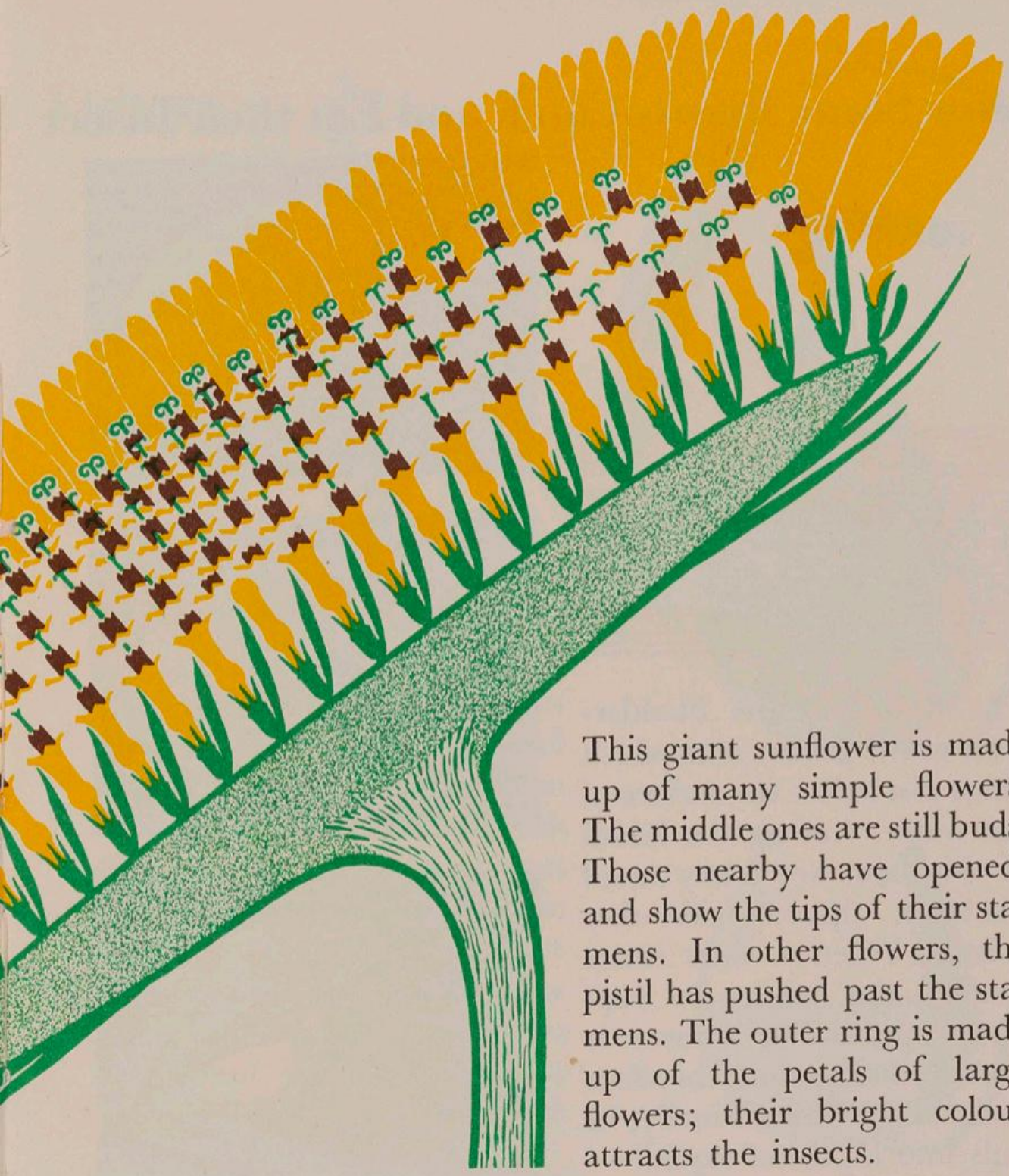
In the day, with petals wide open, it floats on the surface.

Many Flowers Make One Flower



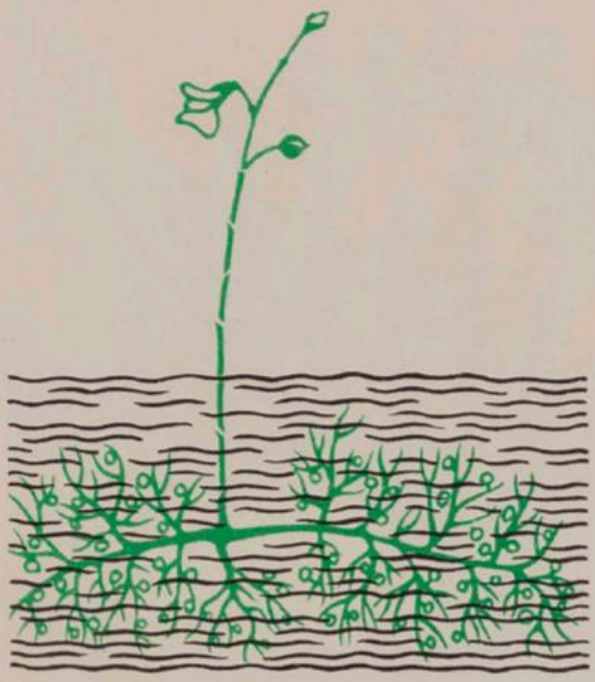


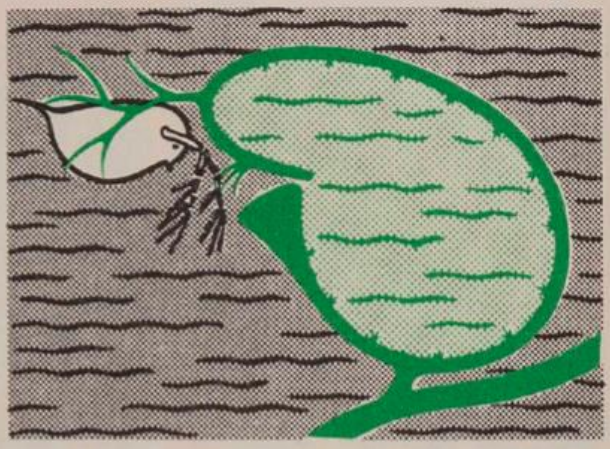
Inside a simple flower, like this wallflower, we find the pistil which holds the baby seeds. Nearby are the stamens, where pollen is formed. Pollen, usually from another plant, must reach the seeds before they can ripen. Sometimes it is blown by the wind, sometimes carried by insects.



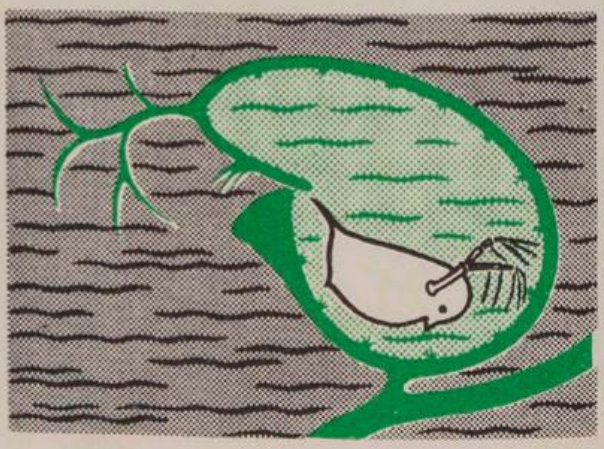
This giant sunflower is made up of many simple flowers. The middle ones are still buds. Those nearby have opened, and show the tips of their stamens. In other flowers, the pistil has pushed past the stamens. The outer ring is made up of the petals of large flowers; their bright colour attracts the insects.

How Some Plants Catch and Eat their Insect









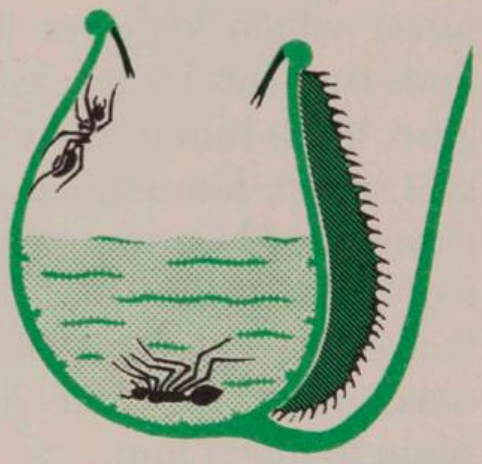
The flower of the bladderwort grows from a stem which floats just below the surface of the water. Among the leaves of this stem are many small bladders, tipped with tiny bristles. When a water insect touches the bristles, a trapdoor opens. The insect is sucked inside, and the door shuts behind him. Finally, he falls into a pool of liquid.

Visitors

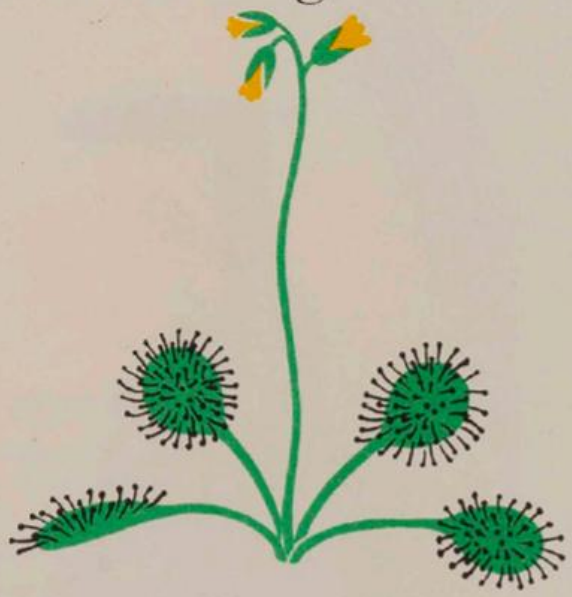


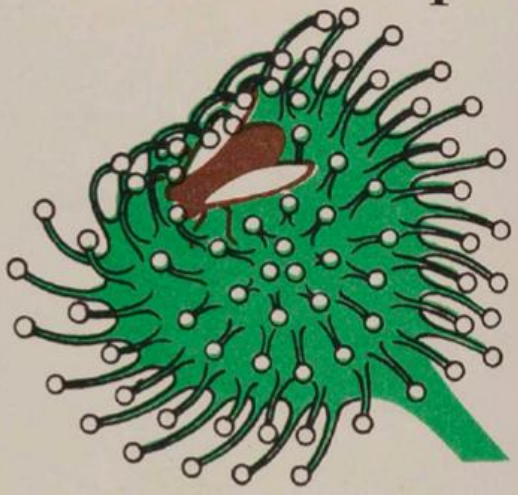


This pitcher plant has some of its leaves formed like small vases. Under the lid and on the rim there is a sweetish liquid, like honey. An insect may crawl along the rim to get the honey, but when he tries to explore inside, he slips and falls in. He struggles to climb out, but cannot get past the ring of hairs. At last he is eaten by the hungry plant.

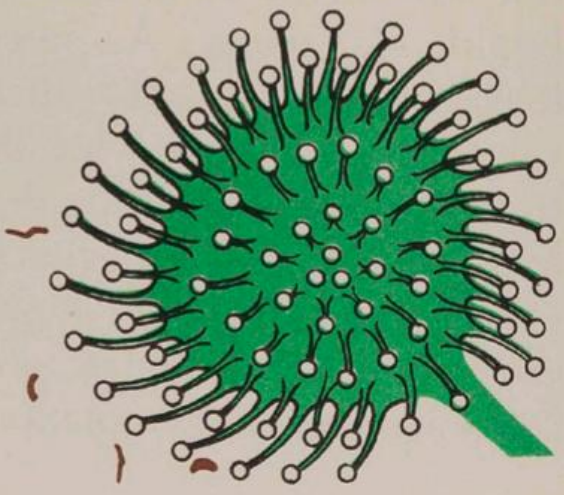


Slow-moving Plants which Can Set Traps for



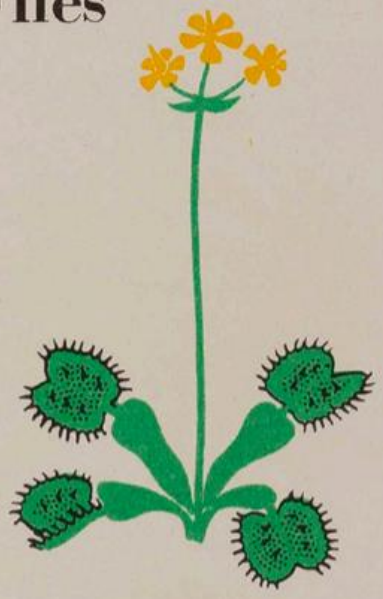


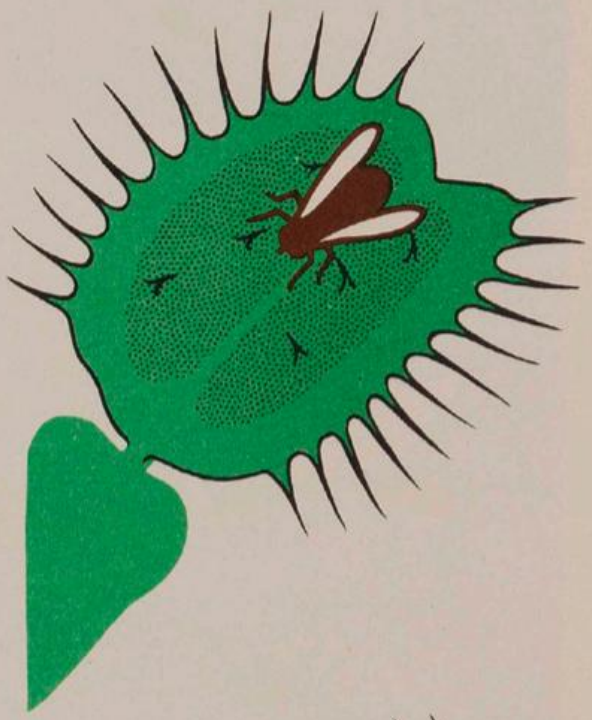




The leaves of the sundew plant are covered with hundreds of tiny club-shaped tentacles, each tipped with a drop of liquid which looks like dew. Any small insect which ventures too near, finds that this liquid, as sticky as glue, holds him fast. As he struggles to free himself, the tentacles close round him one by one, pressing him tightly against the surface of the leaf. The 'dew' which oozes from the leaf helps the plant to digest him.

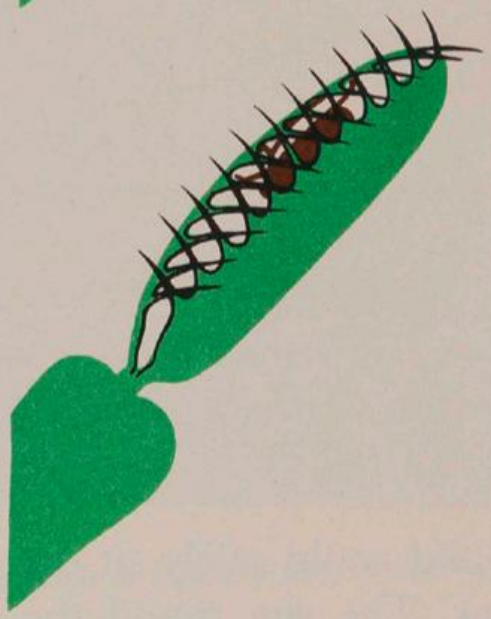
the Flies



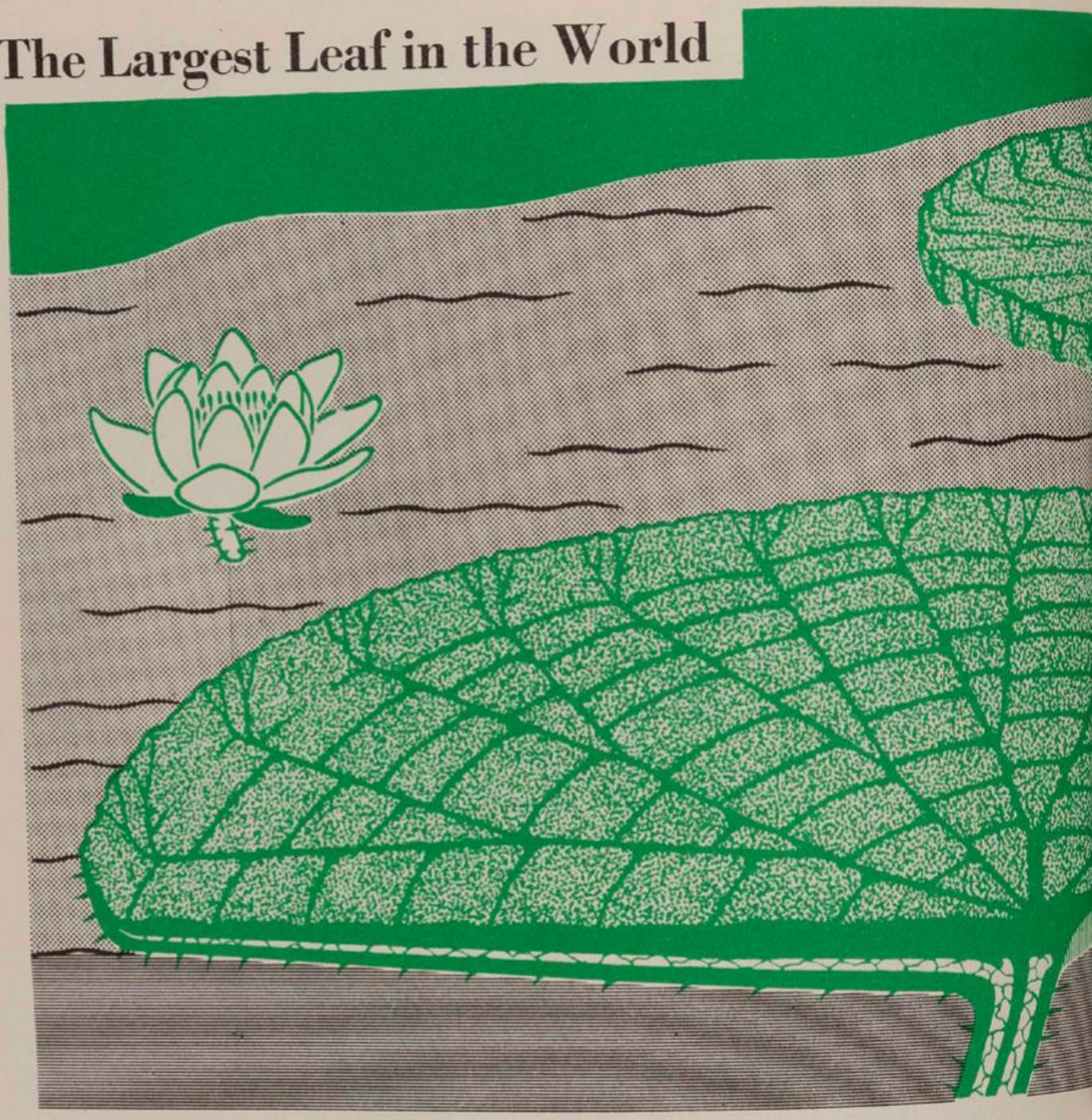


The slender flower of the Venus Fly-trap rises from a cluster of thick, spiky leaves which rest on the ground. Each leaf, bent down the middle like two pages of a half-opened book, has three bristles on either side.

The moment a fly touches one of these bristles, the two halves of the leaf begin to fold together. Before the fly can escape, the long spikes round the edge are twined together like the fingers of two tightly clasped hands.



The Largest Leaf in the World

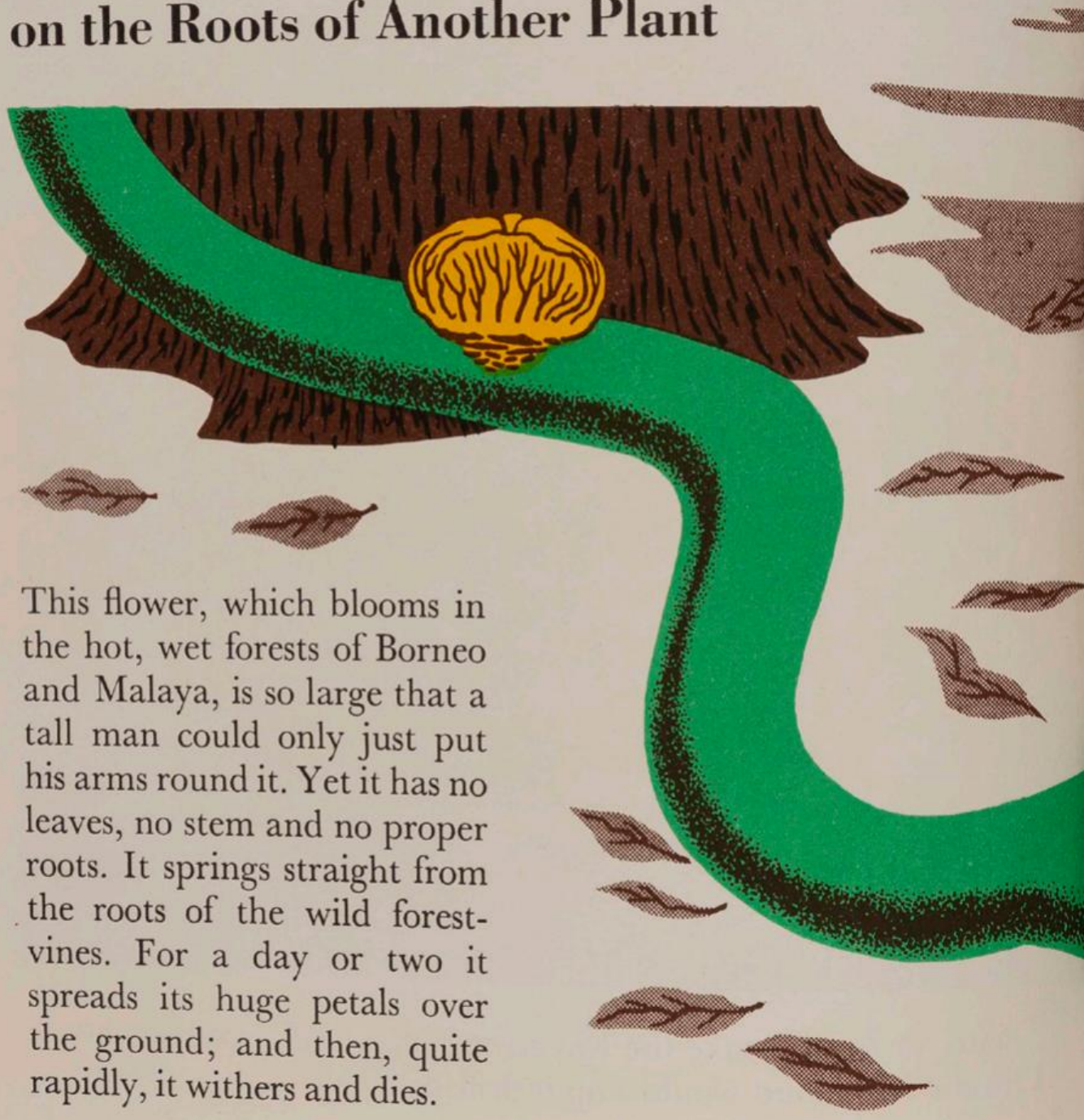


A child could safely sit on a leaf of this giant tropical water-plant. The rim round the edge would keep him dry; tubes



with air inside make the leaf strong like a raft; roots anchored in the river mud would stop it drifting away.

The Largest Flower in the World Lives on the Roots of Another Plant



This flower, which blooms in the hot, wet forests of Borneo and Malaya, is so large that a tall man could only just put his arms round it. Yet it has no leaves, no stem and no proper roots. It springs straight from the roots of the wild forest-vines. For a day or two it spreads its huge petals over the ground; and then, quite rapidly, it withers and dies.



A Tiny Seed which Kills a Mighty Tree

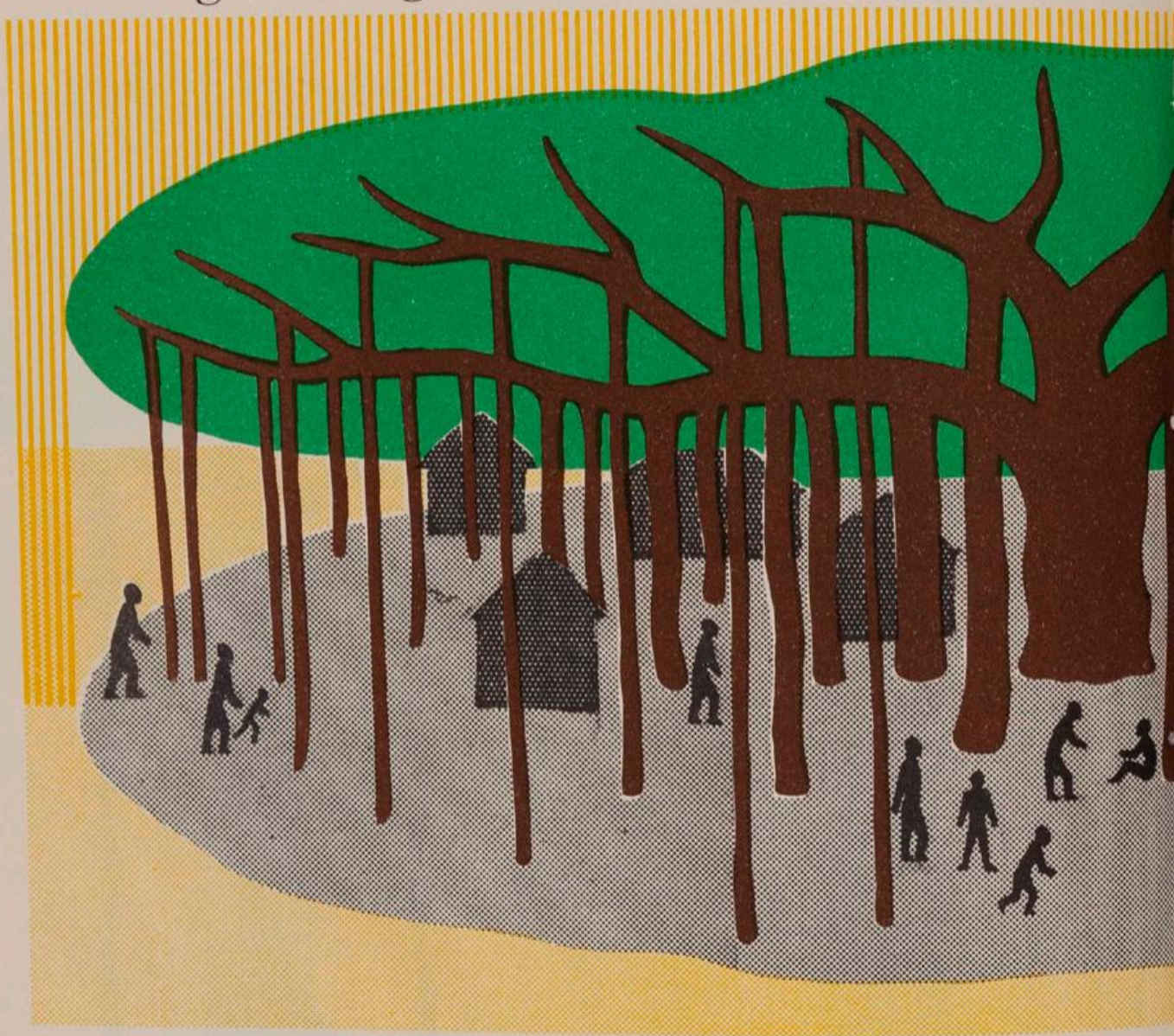


On the stem of a giant tree a bird drops a tiny seed. The seed grows, sending out long, hanging roots and slim branches.



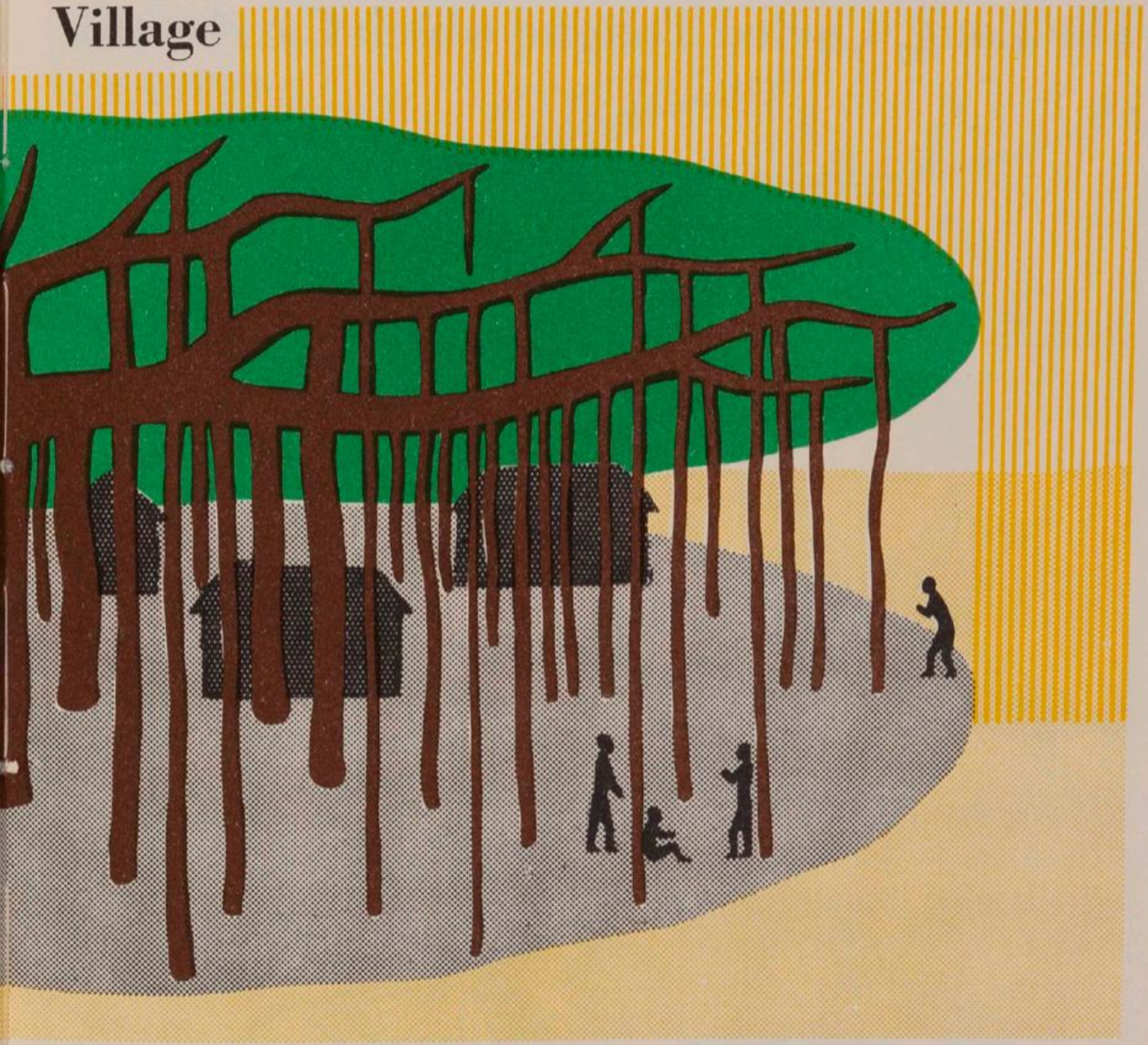
Slowly the roots tighten around the tree and kill it. When the old tree rots away, a strangler-tree stands in its place.

The Huge Strangler-tree which can Shelter a



The strangler-tree grows to enormous size, till it looks more like a forest. Long roots grow from its branches and reach towards the earth. In time, many of them become new trunks.

Village



These now support the giant branches which can shelter a whole village. Hindu merchants, or banyans, spread their markets under such trees. So they are called banyan trees.

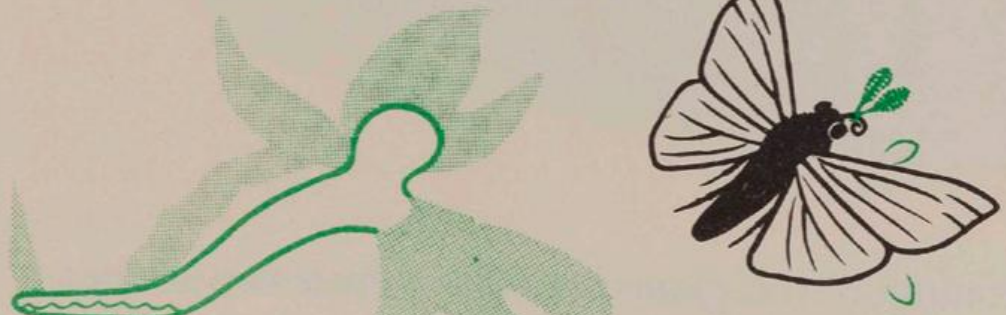
The Long, Curled Tongue which Carries the



This orchid has two pollen-bags, joined in the shape of a saddle. Below them is nectar which attracts moths.

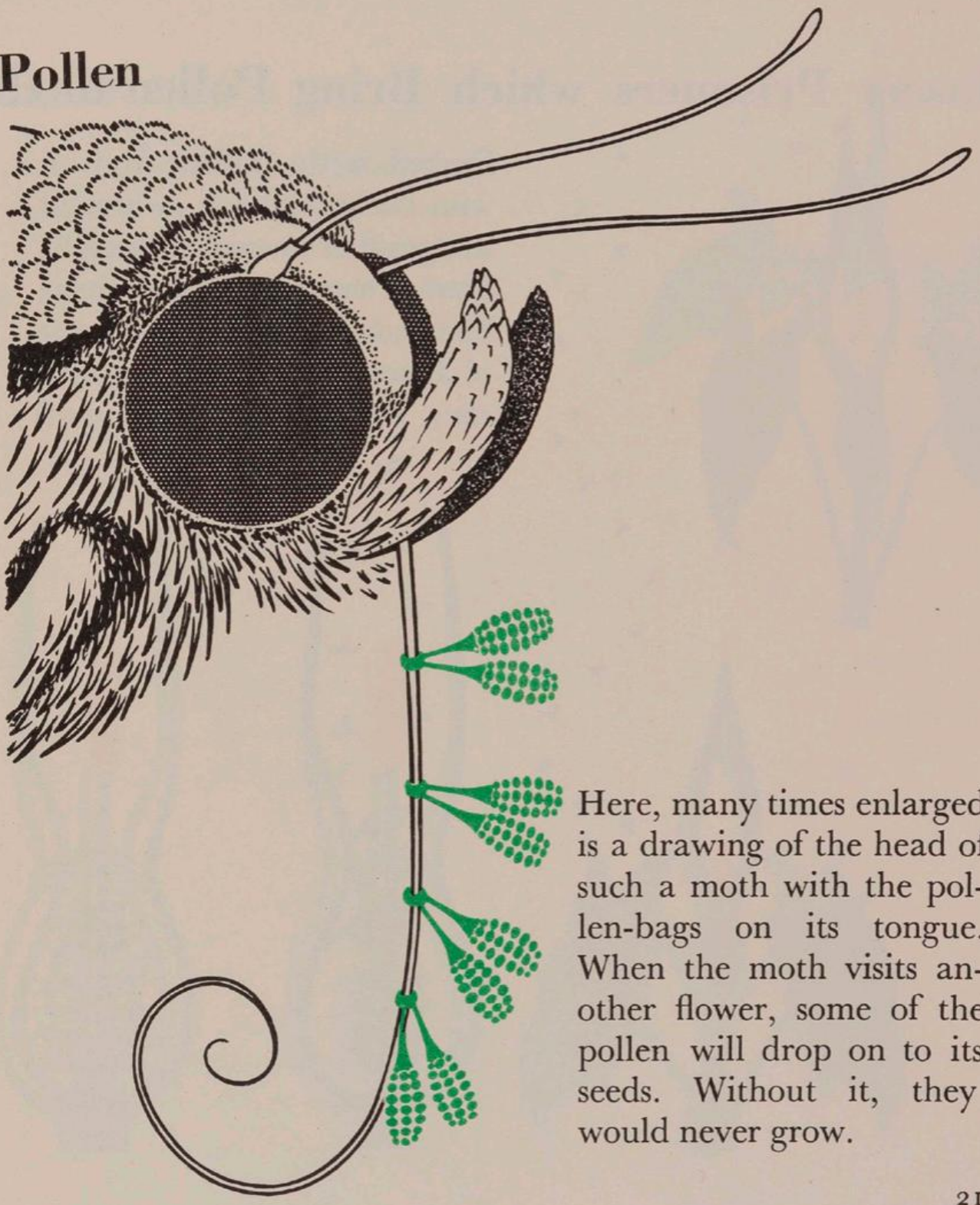


This moth has such a long tongue, it can reach the nectar without putting its head into the flower.



When it curls its tongue back, the bags cling to it.

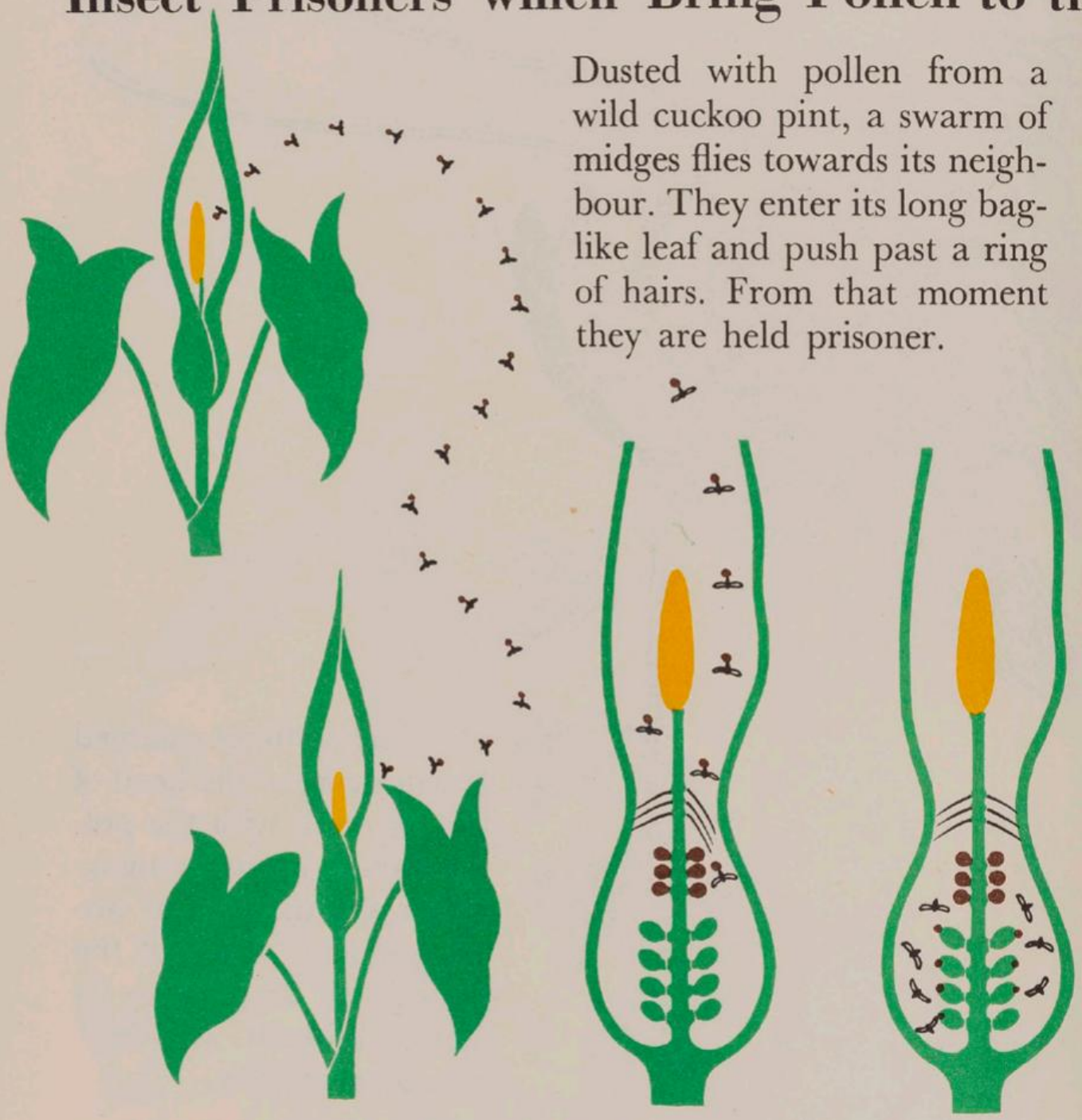
Pollen



Here, many times enlarged, is a drawing of the head of such a moth with the pollen-bags on its tongue. When the moth visits another flower, some of the pollen will drop on to its seeds. Without it, they would never grow.

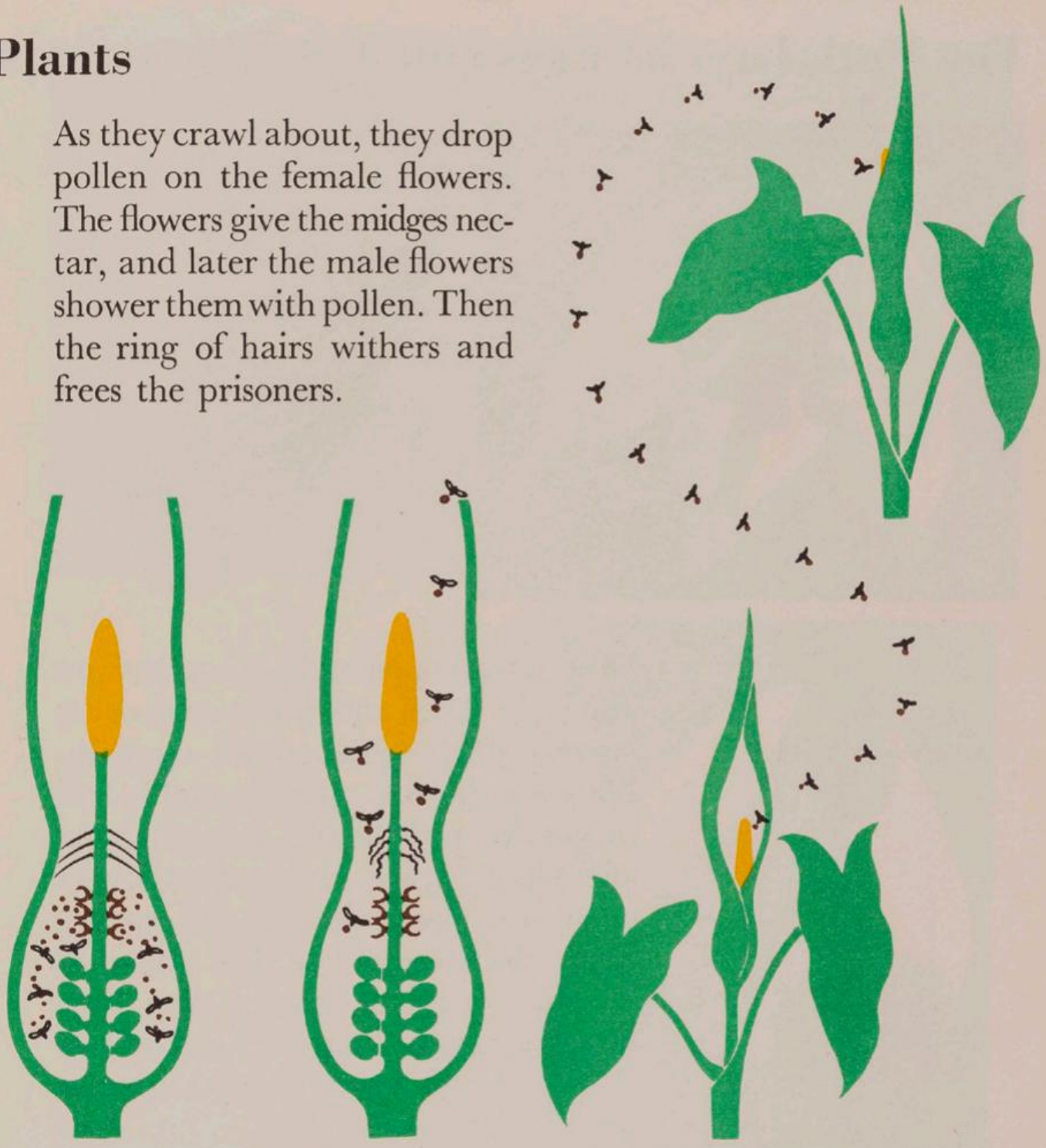
Insect Prisoners which Bring Pollen to the

Dusted with pollen from a wild cuckoo pint, a swarm of midges flies towards its neighbour. They enter its long bag-like leaf and push past a ring of hairs. From that moment they are held prisoner.



Plants

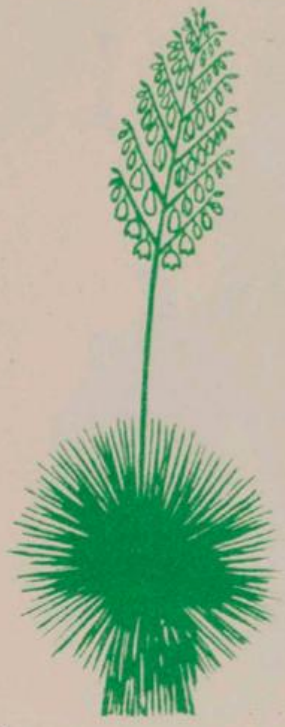
As they crawl about, they drop pollen on the female flowers. The flowers give the midges nectar, and later the male flowers shower them with pollen. Then the ring of hairs withers and frees the prisoners.



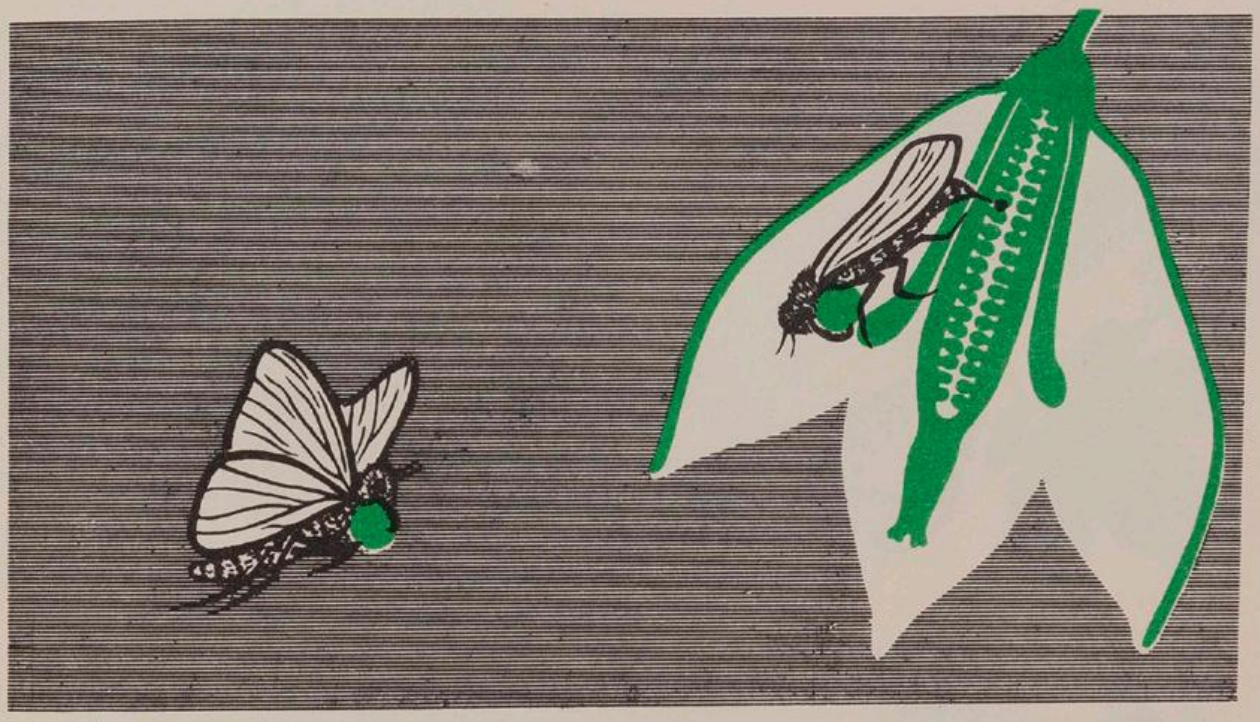
The Moth Lays its Eggs and New Plants Grow



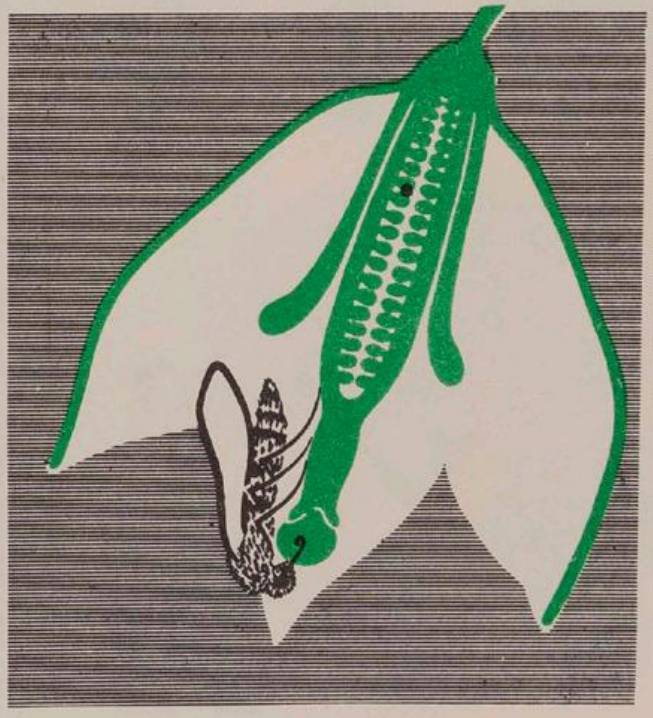




Most flowers open at day-time and are visited by bees and wasps and other insects which fly about in daylight. But some flowers open at night, and they have night-flying visitors. Soon after dark, when the yucca flowers open, this moth enters and settles. She collects the pollen dust and rolls it into a big ball, bigger even than her own head. Then, holding the ball tightly, she flies away to another yucca flower nearby.



There she lays her eggs in the seed-box, crawls to the tip, and covers it with the ball of pollen. In time, the seeds will ripen. Caterpillars hatch from the eggs and feed on the ripening seeds. But there are still a few seeds left, and the pollen which the mother moth brought enables them to ripen and start new plants.



The Strange Story of the Two Figs and the Wasp



Inside the young wild fig there are a few small male flowers. Further in there are many tiny female flowers. In early spring a wasp enters and lays one egg inside the seed-box of each female flower.



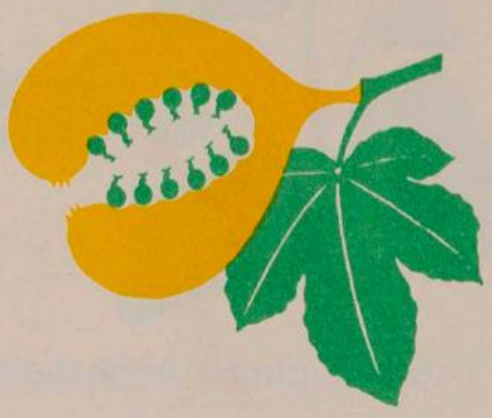
As time goes by, each egg slowly develops into a small legless grub which will one day turn into a young wasp.



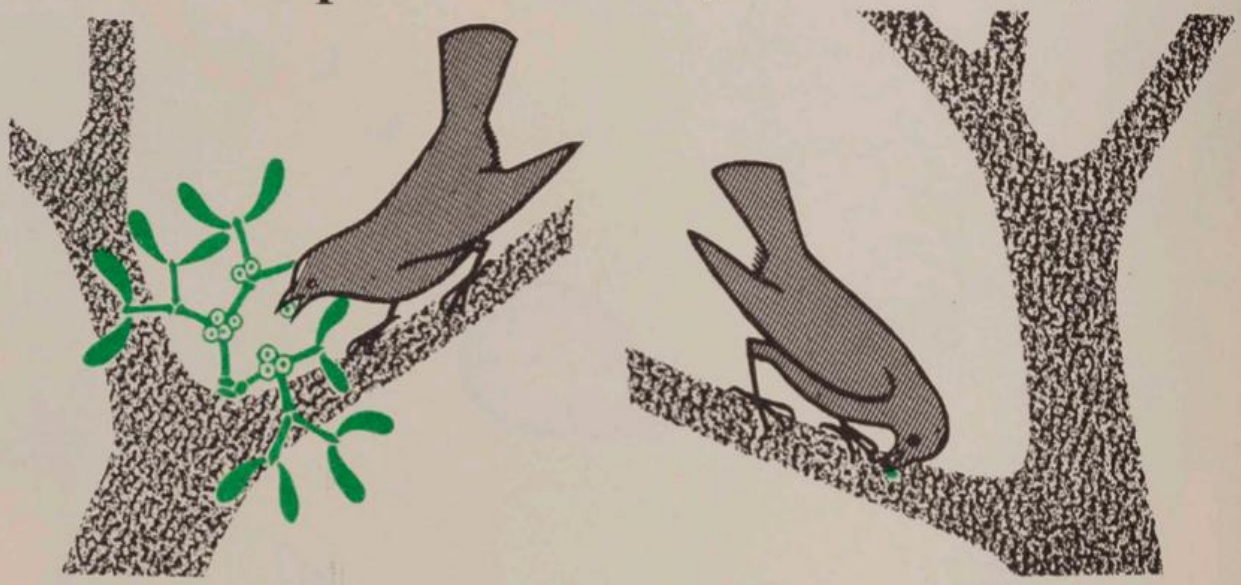
Now the farmer, who has an orchard full of cultivated fig trees, comes along and fills a basket with wild figs. Although he knows that they will never be good to eat, he needs them; for without them his own fruit would not ripen.



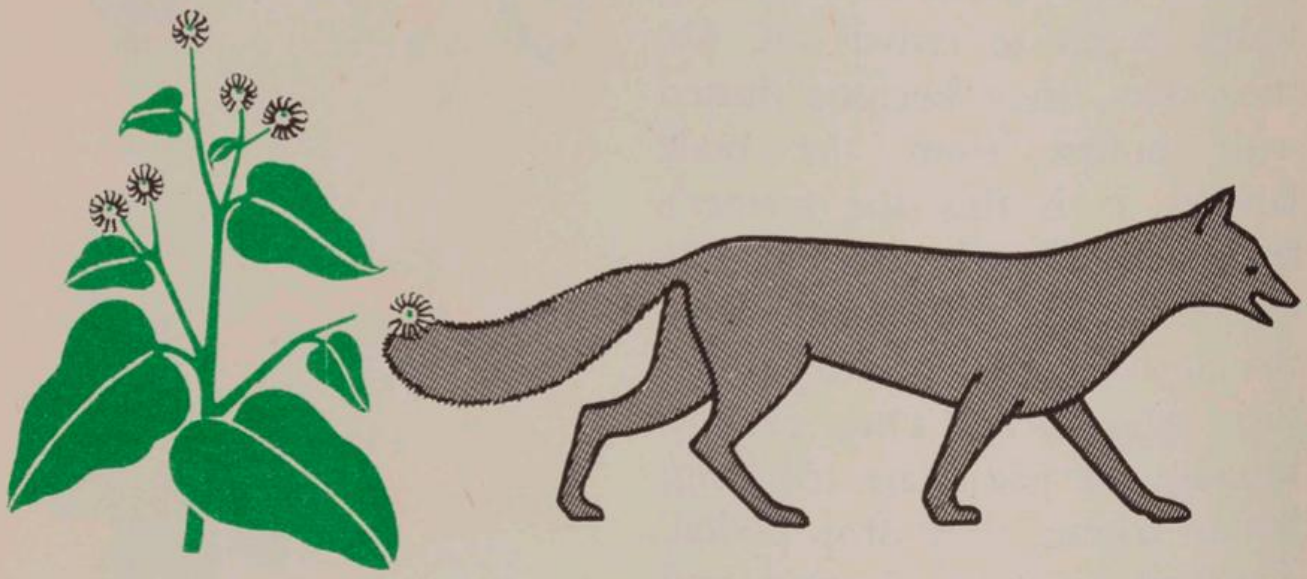
He hangs the basket on one of his own trees, and soon the young wasps begin to crawl out. On their way, they become dusted with pollen from the male flowers. It is this the farmer's figs need, for they have only female flowers. The wasps fly to the cultivated figs and try to lay their eggs there. They cannot, because the pistils are too long; but in trying, they drop pollen. The fruit then begins to ripen and grows fleshy and good to eat.



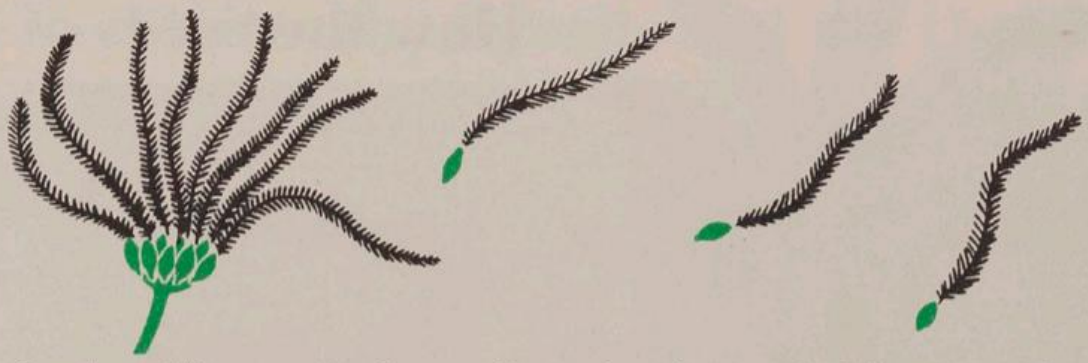
Seeds are Spread in Many Clever Ways



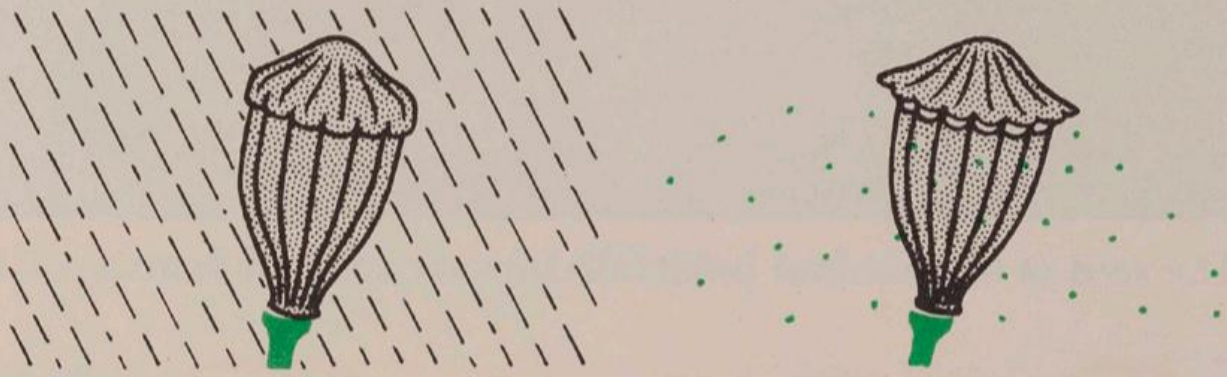
If a mistletoe berry falls to earth, it will die. If a bird eats it and drops the seed on an apple tree, a new plant will grow.



Some plants hide seeds in burrs that cling to passing animals.



The feather-like seed of traveller's joy is carried by the wind.

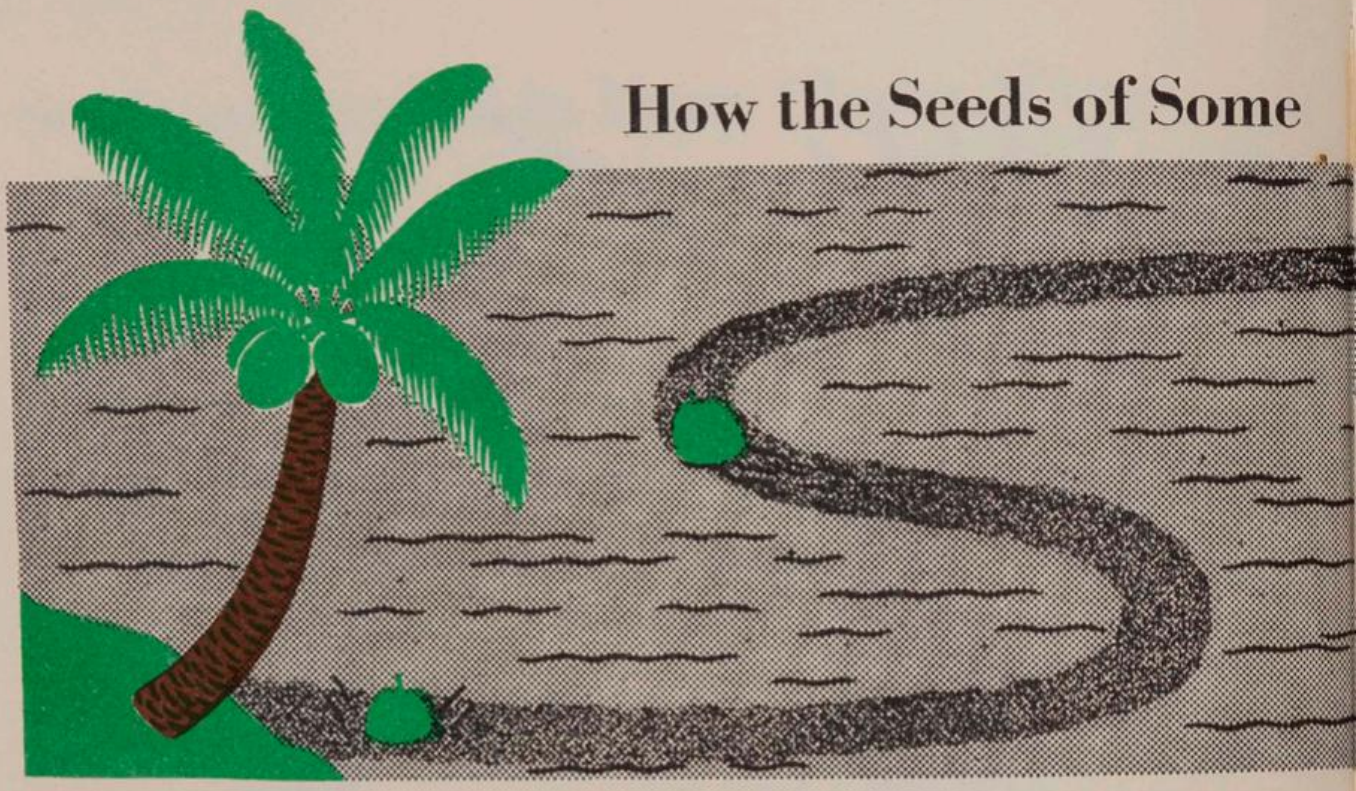


In dry weather the poppy pod opens and the seeds fall out.



When a squirting cucumber falls from its stalk, seeds shoot out.

How the Seeds of Some

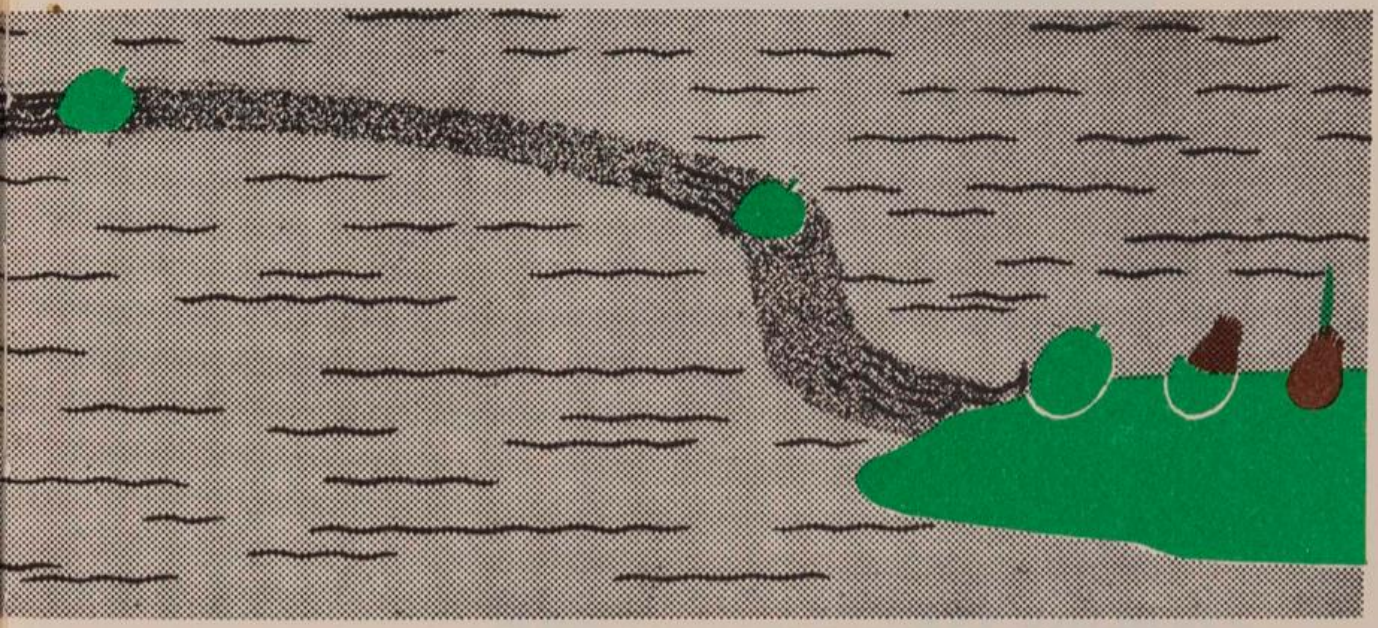


The seed of this coconut palm falls into the sea and floats.



The Rose of Jericho grows wherever it finds water in the desert. When the heat dries the earth, it curls up into a light ball.

Plants Can Cross the Oceans and the Deserts



The current carries it to a far-off island and there it grows.

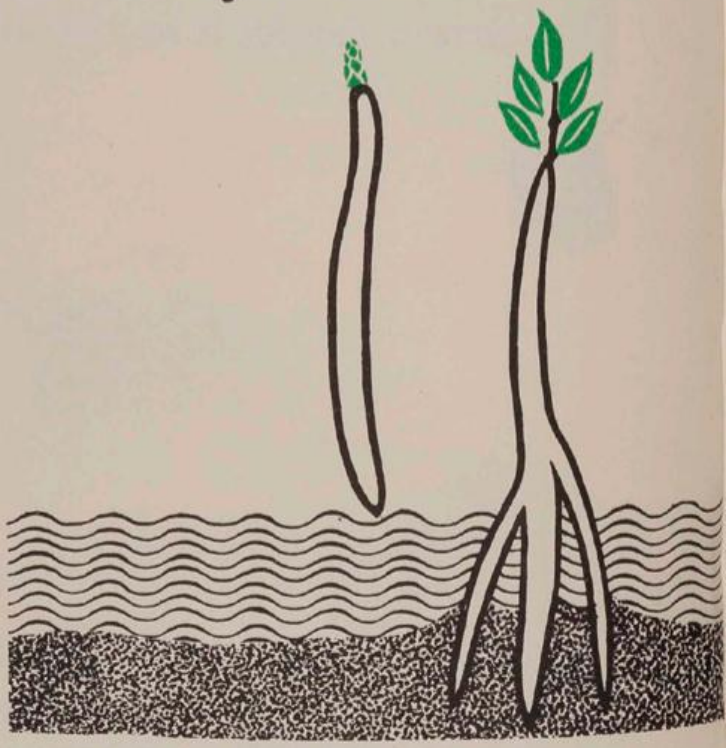


The wind uproots it and blows it far across the desert. When it reaches water, it opens out again and drops its seeds.

How the Mangrove Forest Spreads in Muddy

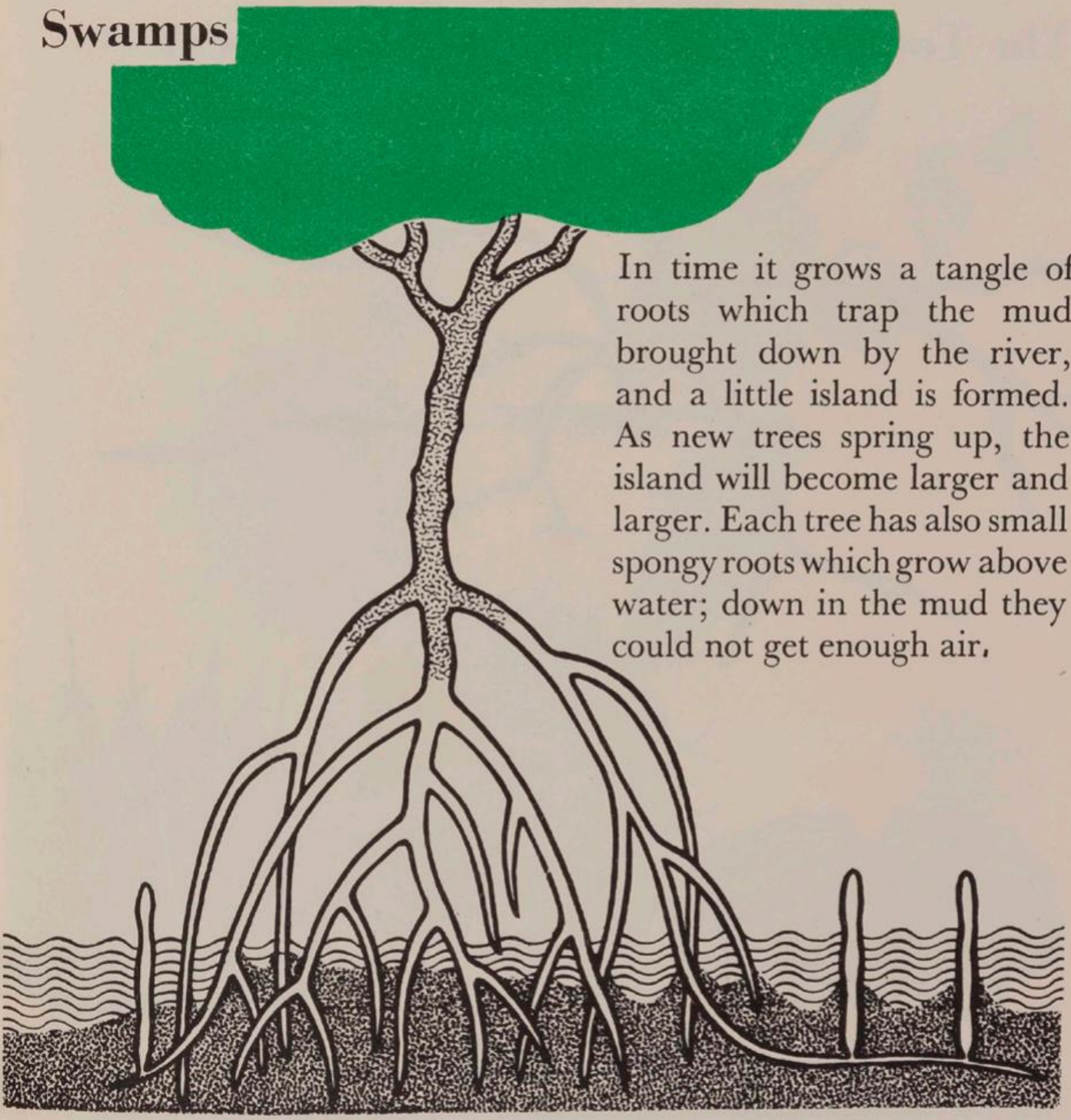






This mangrove tree grows in the shallow, muddy water near the mouth of a tropical river. While the seeds are still on its boughs, they begin to grow long roots. These roots grow as big as your arm. When the wind snaps one off, it falls into the mud and plants itself.

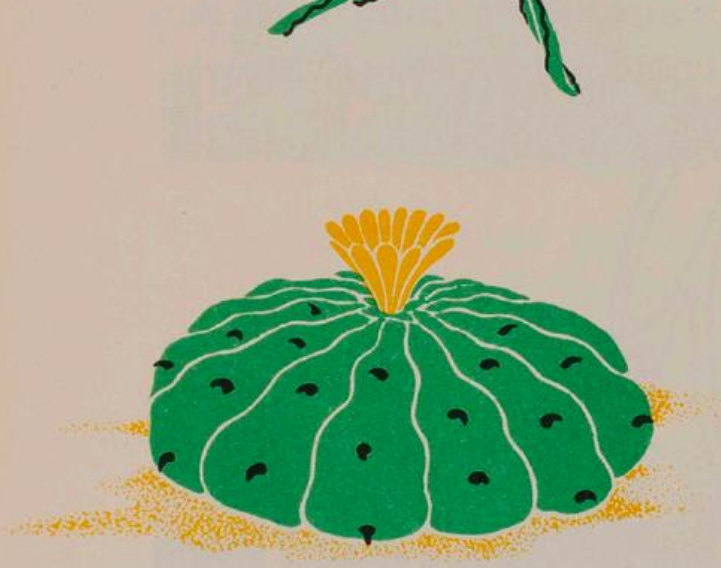
Swamps



In time it grows a tangle of roots which trap the mud brought down by the river, and a little island is formed. As new trees spring up, the island will become larger and larger. Each tree has also small spongy roots which grow above water; down in the mud they could not get enough air.

The Tough, Prickly Plants of the Desert







In hot, dry countries, where few plants can live, bright-flowering cactus plants grow in abundance. Some are taller than a man,



some smaller than your hand. Their tough skin keeps them moist inside. Some have prickles which keep away thirsty animals.

The Beautiful Flower of the Desert Night



Once only, when night falls and other flowers close their petals, this desert cactus blooms. At sunrise the flower will die.

