Edible Flowers

By ALEXANDER F. SKUTCH

Flowers and fruit of the tropical poro tree. The flowers, fried in an egg batter, make a tasty dish said to induce somnolence.

It is a brilliant morning in late November. Through the open window of my study I look out upon two trees of the *poro*, *Erythrina rubrinervia*, enjoying their generous display of bright scarlet blossoms, whose gay color is doubly welcome after many weeks of wet and gloomy weather. Seven years ago I planted these trees by setting long, straight, living branches upright in the ground. Soon they put forth roots at the buried end and a cluster of branches at the top. Now the tallest is a shapely little tree about twenty-five feet high.

In October, the height of the rainy season here in southern Costa Rica, the *poro* trees begin to shed their compound leaves, each with three ovate, pointed leaflets. Now the profusely flowering boughs are nearly leafless. They will continue to blossom during December and January, when days are bright and nights cool, set seeds, then clothe themselves with fresh foliage when the rains return in late March or April. The flowers are most peculiar, so that at first sight one would never suspect that the tree belongs to the Leguminosae or bean family. The scarlet standard, about three and one half inches long, is narrow and tightly folded. In shape it resembles a somewhat curved sword, whence the names *cuchillo* (knife) and *machetillo* (little machete) applied to these flowers in various parts of Central America, as well as the designation *palo sabre* (sabre-tree) given to the tree in Nicaragua. This long standard is enclosed at the base by a thick and fleshy, nearly cylindrical calyx somewhat more than an inch in length. The other four petals, typical of leguminous flowers, are reduced to mere scales hidden deep within the calyx; the ten long stamens and long, slender pistil are tightly enfolded in the sabre-like standard.

Not every nectar-loving creature can remove the sweet fluid from the depths of a blossom so well enclosed. Almost the only visitor to the poro flowers in my yard is the star-throat hummingbird, *Anthoscenus longirostris*, with a brilliant magenta gorget and a long, straight bill, which he pushes far down into the folded blossom, either for the sake of the nectar, or, as Thomas Belt suggested long ago, for the minute insects which alone can gain access to it. A single hummer takes possession of the two trees and assails all intruders of his own or other species. But sometimes when he is not looking a lovely, sylphlike, green-and-white Barrot's fairy hummingbird, *Heliothrix barroti*, steals up and visits the flowers. Evidently it extracts something to its taste; but just how it manages with its short, sharp bill I have not been able to discover.

The long standards of the *poro* flowers are edible; and the cook, when in a good humor, sometimes gathers a small quantity and makes a tasty dish by frying them in a batter of eggs. They are said to cause drowsiness; but I have noticed no marked somnolence after eating them, possibly because I have never consumed a great many at a single meal. The flowers are followed by long pods, slender except where swollen out by each of the seeds — "torose," the botanist would call these pods. The ripening seeds are attractive to the white-crowned parrots, *Pionus senilis*, which, especially on cloudy afternoons in March, settle in noisy flocks in the *poro* trees. Supporting themselves with one foot, they pluck and hold a pod in the other while, with thick bills, they deftly extract the seeds. Dainty in their manner of eating, they remove the embryos from the thin, white seed-coats. Although the parrots allow me to watch them through the window, like most of their tribe they are distrustful of mankind. If I go out into the yard they fly rapidly away, revealing, as they

spread their wings, beautiful deep blue patches that are invisible while they perch. The few seeds that escape the parrots and finally ripen are as big as beans, with hard, shiny, bright-red coats — as colorful as the flowers themselves.

About the four sides of the yard grows another tree with edible flowers, also a member of the bean family, *Gliricidia sepium*, called locally *madera negra* or "black-wood." The Guatemalan name, *madre de cacao* (mother of the cacao) is more attractive, and reminds us that this tree has from early times been used to shade the cacao plantations. Like the *poro*, these trees are readily propagated by pole-like branches stuck into the ground. Because of the ease with which they root, they are commonly employed as living fence-posts — a great economy in the Tropics where lifeless posts succumb in a few years to the ravages of termites and fungi. The poles must be tall enough so that the cows and horses can not reach the top and eat the leaves as rapidly as they sprout forth — as one of my neighbors learned to his cost. The pinnately compound leaves, which much resemble those of the black locust, fall at the height of the dry season in February and March. Then the slender, naked boughs bear many long, compact racemes of delicately pink, pea-like blossoms. Although the form of the tree is quite different, when arrayed in pink blossoms, the *madre de cacao* reminds me of peach trees in early spring. The flowers are attractive to many birds, especially the dainty Barrot's fairy hummingbird, which sometimes visits the *poro* trees but comes here chiefly in March when the *madre de cacao* is in bloom. Brilliant wintering Baltimore orioles cling to the branches and probe the pink flowers with their slender bills; and the few orchard orioles I see so high above sea-level (2500 feet) seem to visit me chiefly for the sake of the flowers of the *madre de cacao*. Yet big, black bumble-bees appear to be the chief pollinators. These blossoms are also edible by man, and are best when fried in a batter of egg, like the *poro* flowers. Strangely enough, the bark, leaves and seeds of the *madre de cacao* are said to be poisonous to rodents, dogs, and other animals; yet cattle eat the foliage with impunity, and men the flowers!

Still another plant with edible flowers that grows in my yard is the *itabo*, *Yucca elephantipes*. Of much slower growth than the two leguminous trees, my single example, already two or three feet high when planted seven years ago, is now only three yards in height and has not yet blossomed. When well-grown the *itabo* is about twenty feet high, with a few thick, stiff branches, each bearing at its end a generous cluster of long, sharp, bayonet-like leaves — much in the fashion of the related Joshua trees of the arid Southwest of the United States. At the level of the ground the trunk is often enormously flaring or swollen, whence the specific name, elephant-foot. The big, pure white, bell-like blossoms, borne in great pyramidal panicles at the ends of the stiff branches, are picturesquely called *pichones de itabo* — nestlings of the *itabo*. When chopped fine and fried they have an agreeable flavor, with just sufficient tinge of bitterness to serve as an appetizer.

Everyone who has eaten artichokes or cauliflower has nourished himself with blossoms, although with these the surrounding tissues contribute more food than the flowers themselves — swollen, fasciated stems in the case of the cauliflower; receptacle and bracts with the artichoke, a composite flower. In the Tropics, the tender, still unopened inflorescences of palms of various species are eaten. Here again one devours the floral stems along with the flower buds. But the so-called "palm-cabbages" consist usually of the soft vegetative tissues of the growing point rather than immature flowers. Sometimes while passing through extensive forests I have stayed my hunger with these various soft parts of palms, eaten raw. But on the whole I should be happier if palm trees were in no way edible. For trespassers are rapidly despoiling my woodland of its *palmitos;* and it seems a crime to sacrifice a stately tree, fifty feet or more in height, for as little food as a single cabbage provides. Fortunately, most of my palm trees are not *palmitos* (*Euterpe*) but *chontas* (*Iriartea*), whose towering, slender trunks are supported by stout, spiny prop-roots, which spring from the trunks two yards or more above the ground. Although edible, the "cabbage" of the *chonta* palm is bitter and not so highly esteemed as the sweet *palmito*. Not only do the blossoms of the plants growing in my yard provide occasional food for human consumption, they are even more important as nourishment for the chickens. These eat many of the fallen flowers of the *poro* and *madre de cacao*, and in addition the petals of orange blossoms, the white petals of the rose-apple tree, *Eugenia jambos*, and the small violet flowers of the *stachytarpheta*, a hedge shrub belonging to the verbena family. Among the local wild birds, I have seen several species of saltators — big, plain-colored, thick-billed members of the finch family — eat the large, succulent blossoms of legumes and other plants. In a note published in *The Wilson Bulletin* for June, 1947, Mr. Hervey Brackbill recorded that at Baltimore, Maryland, he saw English sparrows eat petals and stamens of apple, pear, and cherry blossoms, and a mockingbird devour apple blossoms. He cited a few instances of flower-eating by birds recorded by (Continued on page 108)

Gourmets

By JOHN NIXON, JR.

For breakfast they devoured the east
Warmed by a rosy flame —
A thin sky baked with starry yeast,
Some clouds as pink as ham.

At noon, not hungering for bread,
They dined on strips of sun
Spread picnic-wise beneath the shade
Of elms. They thought it fun.

And fun it was from eight to nine
To dip in countless jars
For evening's choicest muscadines.
Their finger bowls were stars.

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other observers. A cardinal ate forsythia blossoms; English sparrows ate pea and bean flowers; Galapagos finches consumed blossoms of various kinds; and, in England, plum blossoms were eaten by both the marsh-tit and the wood-pigeon.

A few animals of other kinds may eat flowers, at least occasionally. My horse sometimes devours one of the great, pink, pompom blossoms of a hibiscus bush growing in front of the house. But I have never seen him eat more than one in a day; nor does he take an interest in the almost equally big red hibiscus blossoms; nor have I seen either of the two mares eat the pink or the red variety of hibiscus. My colt seems to like the fallen flowers of the *poro*, but the other horses, so far as I have seen, do not share his taste. Dr. L. van der Pijl of Bandoeng, Java, who has made a study of those curious night-blooming flowers, which are pollinated by bats, reported that some trees of the sapodilla family offer their corollas as food to the fruit-eating bats, which transfer their pollen. Finally, even a reptile, the collared lizard, may depend in part upon flowers as food, as recorded by Mr. Harlow in *Nature Magazine* for January, 1949.

All told, anthophagy or flower-eating does not appear to be a widespread or common habit in any group of animals, but is perhaps most important to chickens and other gallinaceous birds. There are two reasons why I should not expect flowers to be popular as food. It would be wasteful for the plant to store starch or other substances of high nutrient value in parts that, in general, are dropped a few days, often a few hours, after opening; thus the need to economize material would act against flowers' becoming valuable as food. And if petals were made appetizing to birds or other creatures, they might be gobbled up even before they had served their function of advertising the presence of nectar or other substances that draw the pollinators. If flowers were highly edible, animals might have fewer fruits to eat. But the fact that, without having made an effort in this direction, I have now in my yard three plants whose blossoms serve as human food, suggests that in aggregate the world must contain a great many edible flowers.