

## MATÉ

BY B. E. DAHLGREN

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To the exhibit of food plants in Hall 25 there has recently been added a case devoted to the plants furnishing the common, mildly stimulating beverages that constitute an important part of our daily food and drink, such as coffee, tea and cocoa, as well as various less familiar ones belonging in the same category, such as cola, guaraná and maté.

The various source plants of all of these have little or no close botanical relation to each other, with the exception of cola and cacao which both belong to the same plant family. However, the one characteristic common to all of these plants is the presence in them of a stimulating alcaloid of the caffeine group—either caffeine, theine, theobromine or guaranine, or a combination of these. It is, of course, this which is responsible for their use and wide popularity.

Coffee, tea and cacao are so well known that they need no special comment in this connection. Guaraná and its use by the Indians of the Amazon and Matto Grosso region were described in the June issue of FIELD MUSEUM NEWS. The North American Indians were acquainted with the stimulating properties of the leaves of cassina and some other shrubs of the holly family native in the eastern and south-eastern United States, but, though well enough known, cassine tea appears never to have been very important. On the South American continent, however, another member of the holly family, maté or matte was found in common use among the aborigines of the Pampas region and is said to have been known even to the Incas of Peru. It has remained in use ever since, and with the increase in population during the last few hundred years has become so important that it may well be called the principal beverage of the millions of inhabitants of Argentina, Uruguay and southern Brazil, as well as of Paraguay, Bolivia and Chile. In a region where the ordinary diet consists so largely of meat, as is the case in the cattle country of South America, the popularity of maté is probably not to be attributed solely to its stimulating effects, but also to the fact that it is the source of some of the essential vitamins.

A shrub or small tree, often compared in appearance to an orange tree, maté grows wild in the woods of the high lands on both sides of the Alto Parana river which forms the boundary between Paraguay and the southern states of Brazil. The leaves of the trees are obtained by chopping off branches, sometimes of considerable size, from which later the smaller branches and twigs are collected, made into bundles and carried into camp. The green branches are then roasted over a fire, laid aside to "sweat" for some time and later again subjected to a fire to dry them. The dried and stiff leaves are finally separated from the branches by beating. Next they are broken into small fragments in a wooden mortar or by a machine especially designed for the purpose, and packed tight into sacks or into green rawhide bags which in drying and shrinking still further compress the leaves, making cushion-shaped packages hard as rock. The harvest is then ready for transportation to the commercial centers. Much of the harvest goes down the Parana river to La Plata and Buenos Aires, but fully three-quarters of the 200,000 tons gathered yearly originates on Brazilian territory and is distributed from there.

While most of the supply still is obtained from trees growing wild in the woods, the planting of maté, once practised by the Jesuit rulers of Paraguay, has recently been undertaken on an extensive scale, especially in Argentina where the plant is known as *yerba maté*, or often simply as *yerba*. The corresponding Brazilian name is *herva matte* or *matte* plant. *Matte* is the Indian name for the small gourd or calabash in which the infusion of the broken leaves is prepared in rural districts to the present day. Thus the meaning of *herva matte* becomes "plant for the gourd." It is prepared in the same way that tea is brewed. A pinch of leaves, as much as may be picked up with thumb and finger, is placed in the calabash, and the vessel is filled



Maté

Brewed like the Oriental teas, the leaves of this plant make a popular beverage in South America.

with hot water. It may be refilled with water several times without further addition of leaves, as the content is consumed. The hot liquid is generally taken through a straw or tube, called *bomba* or *bombilla*, often made of silver and supplied with a bulbous strainer at its lower end. In the cattle country where people live an outdoor life, and where crockery is scarce or inconvenient to carry about, the gourd is passed from hand to hand, and strangers who would ordinarily not think of drinking from another's cup, on meeting take their maté without hesitation from the same *bombilla*. In ordinary domestic use maté is taken with sugar and cream or lemon.

### PARKING AT THE MUSEUM

As announced in previous issues of FIELD MUSEUM NEWS, facilities have been provided for the parking of the automobiles of visitors to the Museum on the grounds at the west entrance of the building. Attendants are stationed there and at the north side of the Museum to assist visitors. A small charge is made for the parking service.

### Sea Urchin Exhibited

Sea urchins excavate retreats for themselves in the solid rock along the Brazilian sea coast. A sea urchin and its hole are exhibited in Clarence Buckingham Hall (Hall 35).

A hammock of the type in which nearly all Amazonian Indians sleep, made of palm fiber strigs, is exhibited in Hall 9.

## PIGEON WHISTLES

BY BERTHOLD LAUFER

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The Chinese have trained carrier pigeons for more than a thousand years, but never on a large scale or intensively. However, they have added to the art of pigeon-training an attractive means of amusement. As they were the first who communed with the air by means of kites, they also were the first who created "music on the air," long before anyone ever dreamed of such a thing as radio. This was accomplished by means of whistles, extremely light in weight, attached to the pigeon's tail-feathers. These whistles consist of two, three, or five reed tubes of graded length in the shape of a Pandean pipe, varnished yellow, brown, or black; or of a small gourd into which reed pipes are inserted.

A complete collection of these whistles, some engraved with the names of the makers, is on view in a case illustrating the musical instruments of China in Hall 32 on the West Gallery. There also may be seen a mounted pigeon outfitted with the whistle, and photographs of live pigeons thus equipped, taken in Peking.

The whistles are fastened to the tail-feathers of the birds while they are still young. When a flock of pigeons flies up, the wind strikes the apertures of the instruments, sets them to vibrating, and produces a not unpleasing open-air concert the charms of which are heightened by the fact that the whistles used in the same flock are tuned differently.

The Chinese explain that the sounds of the whistles are intended to keep the flocks together, and to protect the birds from onslaughts of hawks and other birds of prey. This rationalistic interpretation, however, is not convincing. It is not known, and seems at least doubtful, whether such music makes an impression on either pigeon or hawk, and whether it would really prevent famished pirates of the air from making a swoop at their quarry. Even supposing that this might happen once in a while, we must consider that this music constantly fills the atmosphere year by year, and the unrelenting foes of the pigeon would gradually become accustomed to it and disregard it.

It seems more plausible that this quaint custom has no rational origin, but is rather the outcome of purely emotional and artistic tendencies. It is not the pigeon that profits from the aerial music, but the human ear that feasts on the wind-blown tunes and derives esthetic enjoyment from them. On a serene day one can hear this concert in Peking all day even in one's house. The pigeons which fly about with whistles attached to them are termed poetically "mid-sky beauties."

### Stylolites

Lines running in a most eccentric way, with many sharp angles, may be observed on the surface of many limestones and marbles. These are the traces of bands of thin columns which run through the stone and resemble miniature palisade fences although no fence would pursue so irregular a course. They are named "stylolites" after Saint Simeon Stylites who is reputed to have lived for many years on the top of a column. Indiana quarrymen call them "Devils' Toe Nails." Examples are shown in Clarence Buckingham Hall (Hall 35).

The entire bark of a cork oak tree, as it appears when stripped from the trunk, is exhibited in the Department of Botany.





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