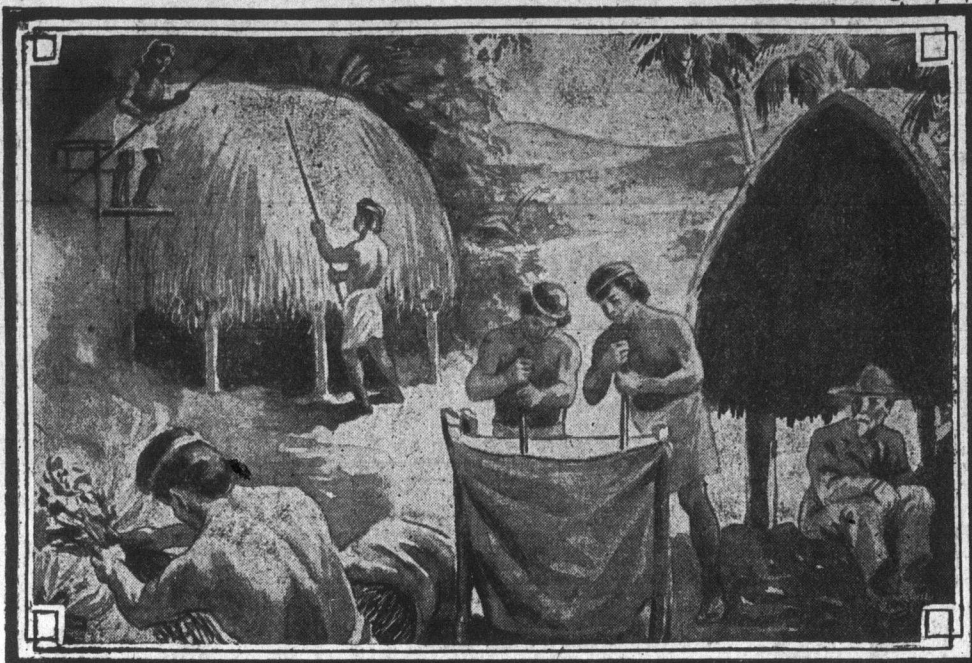


Yerba Mate, Paraguay Tea, a Harmless Substitute for Alcoholic Drinks, to Be Tried in This Country.



How Yerba Mate is cured by South American Indians

SO REMARKABLE in many ways is yerba mate tea, made from the leaves and twigs of a South American tree, that its introduction into this country as a substitute for alcoholic stimulants is being considered.

For some time past United States Consuls in Paraguay, the Argentine Republic and Brazil, where this tree flourishes, have, at the request of the government, been gathering and forwarding information regarding yerba mate. These reports have just been made public by the Department of Commerce and Labor.

Exhilarating and strengthening is yerba mate (pronounced mai-tay) tea. It possesses medicinal qualities that arrest the rapid consumption of tissue and do away with the feeling of weariness that follows excessive labor of mind or body.

South Americans prize yerba mate be-

cause it prevents hunger and sustains strength. Laborers frequently take no other breakfast, but toil nearly all day sustained by this beverage alone.

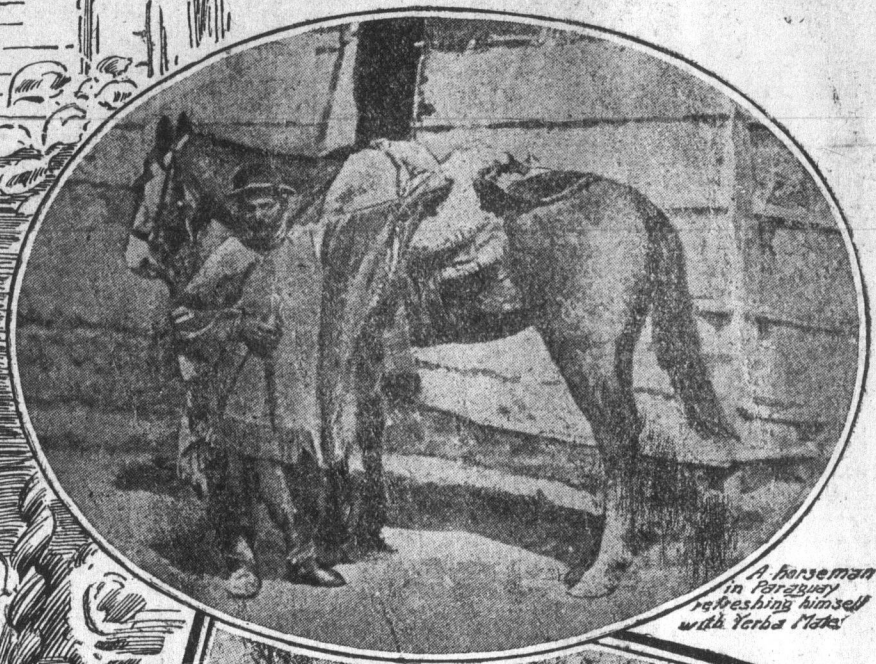
So thoroughly does it meet the demand for stimulating drink that its use is said to have saved South America in a large measure from the curse of drunkenness.

It gives exhilaration of mind and body, with none of the deleterious effects of alcohol. It is said to cure headaches, prevent gout, banish insomnia and the unpleasant effects of a debauch.

With no apparent anxiety to create a world market for this wonderful "Paraguay tea," owners of yerba mate plantations droned along with the primitive methods of years ago and even guard with suspicious jealousy what they regard as the secrets of the business.



Yerba Mate gourd and the bombilla through which the tea is sipped



A horseman in traditional dress refreshing himself with Yerba Mate



The Yerba Mate Tree

It is fearful to contemplate what the crime and violence would be in a country like Paraguay, where strong rum can be bought for six cents a quart, if the people were deprived of yerba mate," is a statement made by Dr. Eben M. Flagg, an American who has resided for a number of years in South America.

Seemingly, yerba mate is able to provide all the stimulation required by the people of those countries, and apparently it does not do them any harm.

Perhaps it is an acquired taste that longs for this peculiar tea. Perhaps it is the fact that it soothes the nerves while it keeps the body up to the demands made upon it by mental or physical labor that makes it popular.

The native of Paraguay eats his heartiest meal at night and soon retires to rest. The next morning he takes only yerba mate for breakfast, and on that alone labors until nearly noon, doing the most wearying work of the day.

In parts of South America yerba mate constitutes nearly the entire sustenance of field laborers. Women often drink ten or twelve cups in a day, and all authorities agree that it is able to sustain the system during long intervals of labor. It is much cheaper than coffee, selling at 8 or 10 cents a pound.

VALUED BY NATIVES

Paraguay, the Argentine Republic and Brazil produce nearly all the yerba mate consumed, and the excellence of the three varieties ranks with connoisseurs in the order named.

James M. Ayers, United States Consul at Rosario, Argentina, in a report to the government, states that yerba mate is now used by 18,000,000 of persons in that country, Brazil, Chile, Peru, Bolivia and Paraguay, the annual consumption never falling below 55,000 tons.

Not only is it popular in South America as a beverage, a mild stimulant and a sustaining food, all in one; but it is highly valued by the natives as a remedy for certain forms of headache.

They assert that it promotes digestion and banishes dyspepsia; that it is a safeguard against insomnia, prevents gout and is especially beneficial to persons of sedentary habits. It gives activity to the brain—although the peon does not drink it for that reason—and, as indicating perhaps that it was intended by nature for the use of man upon higher planes of modern social life, it pleasantly counteracts the depression following an alcoholic debauch.

Although commonly called a tea, yerba mate is really an herb, or species of holly. The leaf resembles that of the laurel. Sometimes the tree grows to a height of twenty feet, although it is seldom cultivated, and in the wild state averages fifteen or eighteen feet in height.

The management of the yerba mate plantations is primitive. Scarcely any of the planters pay the least bit of attention to improvements of any kind. Traditional methods of gathering and curing the leaves, handed down from past and gone generations, are still followed by the natives.

For many years the harvesting and marketing of these leaves was almost entirely in the hands of Jesuit pioneers. One of the legends of Paraguay and Argentina is to the effect that a curse was invoked on the yerba plant by the Jesuits when they were forced to abandon their rich lands and populous Indian villages in the Misiones country, the principal seat of the industry.

CARING FOR THE TREES

Such a ban did the Jesuits put upon the yerba tree, according to the legend, that any effort to cultivate it since their departure invariably results in failure, the trees being sure to die when any effort is made to do anything with them except to take the crop from them as they grow wild.

Whether due to fear of this legend or not, few attempts have been made to cultivate the yerba tree, and harvesters of its leaves are compelled to make long journeys into the wild country before reaching the yerba forests.

In a report upon the subject, W. F. Walker, United States Vice Consul at Buenos Ayres, states that only the leaves and small twigs are gathered for market.

"When the trees are four or five years old the first crop, a small one, may be gathered," he writes. "Care is exercised not to remove more than one-fifth or one-fourth of the leaves on each tree."

the tree further matures. Only the leaves and twigs on the sides of the trees are clipped, those at the top being undisturbed.

"It is supposed, although not definitely known, that the plants attain their prime at eighteen or twenty years, and that after another ten or fifteen years they are deteriorated to such an extent that it is well to abandon them."

"A crop is taken from each tree every four years, the harvesting period lasting from about the first of March to the last of July. Picking is done by women and children as well as by the common laborer. Many of them are Indians."

"The cost of labor is very low, generally about 15 to 30 cents a day; the curing process is cheap, methods of grinding the leaves are primitive, so that, except for the cost of transportation from the interior, the cost of the tea to the consumer would be even cheaper than it is."

After having been gathered, the leaves and twigs are taken to a roasting shed, which consists of a thatched peaked roof supported by poles at the corners. Under the roof is a scaffolding or platform, on which the yerba is spread. Beneath the scaffold a fire is built, and it dries or toasts the foliage until it is brittle and partly broken up.

Now ready for milling, the product is packed in bags in Argentina and Paraguay, and in barrels in Brazil, and sent to the mills, which may be hundreds of miles distant.

According to the process described by Dr. Eben M. Flagg, who spent a considerable time in the vicinity of yerba plantations, the crudely prepared product is screened in order to separate leaves from seeds and twigs. The leaves are then ground finer, but not quite to a powder.

The twigs are chopped separately into about half-

inch lengths and are afterward stirred in with the leaves. According to the taste of the country, yerba mate tea is not palatable when brewed from the leaves or the twigs alone, but one is said to impart a flavor to the other.

There are four principal ways of preparing the beverage, says Dr. Flagg. These are "mate amargo," which is bitter; "mate dulce," served with sugar; "mate con leche," with milk; and "mate cocao," with cocoanut.

A little egg-shaped gourd, holding a small teaspoonful, is used for brewing, but the principal equipment is a small tube, or "bombilla."

This "bombilla" is of metal, about eight inches long, and resembles a thermometer tube and bulb. The tube is about the thickness of a lead pencil, while the bulb is approximately the size of a hazelnut, flattened on one side.

The tube is perforated with holes so small that the ground yerba does not enter them, and so distant from one another that the liquid cannot be sucked too rapidly. This flattened bulb is set against the bottom of the gourd, and ground yerba—about two teaspoonfuls—is placed around it in the little cup. Boiling water is poured into the gourd and almost immediately the first drink may be taken. It is sucked through the "bombilla."

A second pouring of hot water produces a draught much stronger and of even richer flavor. The gourd may be filled and emptied six or eight times, according to the strength of the yerba and the taste of the drinker.

Ordinary "mate amargo" is produced as described. One may add sugar, or pour milk on the yerba instead of water. Oil of the cocoanut added makes a beverage that is smooth to the palate and of peculiar delicacy.

Brazilians do not, as a rule, employ such a process, but make the beverage much as ordinary tea is steeped. Usually they put an ounce of ground mate into a quart of boiling water, the tea being strained and ready for use, after being steeped for ten or fifteen minutes. It is sweetened to taste.

Very little yerba mate is exported from South America. In Argentina the wholesale price of the prepared product ranges from four to eight cents a pound, according to quality. Some specially prepared and flavored brands, put up in ornamental packages, retail for twenty cents a pound.

In Paraguay the yerba plantations—they are generally uncultivated forests—are said to cover about 3,000,000 acres, or 400 square miles. In the Argentine country the forests are usually far in the interior and are scarcely ever vis-

ited by any except owners and native workmen.

It is largely for this reason probably that even regular consumers of yerba mate know little about its grow Owners of plantations, too, are extremely reticent with asked for information upon the subject.

The crop can be made ready for market much easier than coffee, for the reason that while the preparation of the coffee bean requires a long and complex process yerba mate may be properly cured in thirty-six hours.

Ten men, in a couple of days, can prepare from the to four tons for market.

Of recent years the Argentine Government has indicated its intention to improve the quality of the product and to learn more of its habits under cultivation. What object in view, experiments are now in progress the botanical gardens at Buenos Ayres.

Owing to the excessively hard shell of the yerba, a belief is current in most South American countries that it must be swallowed and acted upon by the digestive apparatus of a bird before it will sprout.

Recent growers have found that soaking the seed in strong solution of lye for twenty-four hours softens seed sufficiently.

Even at best, the cultivation of yerba mate tree is not as yet far beyond the experimental stage.

Prisoners on Probation for Life

SENTENCE is suspended, and you are held on probation for the rest of your natural life.

"If you behave yourself from now on, you will not be molested; otherwise you will be liable at any time to be hauled up for punishment."

A curious test of humanity is being made by Judge Samuel P. Hadley, of the municipal court of Lowell, Mass. He believes that a prisoner arrested for intoxication will remain sober longer if put on probation than if sentenced to imprisonment, and he proposes to find out whether or not he is correct.

For more than fifty years Judge Hadley has been associated with the police court of his town, first as clerk and then as Magistrate.

He has long been endeavoring to make the work of his bench corrective rather than punitive, and frequently has taken cases out of the hands of the police to give a penitent "one more chance."

His most recent effort in this direction, that of placing a drunkard on probation for the remainder of his life, has brought to him letters of inquiry from all parts of the country. Some of the writers believe that probation is less corrective than punishment, and remonstrate with him.

In spite of protests and arguments to the contrary, however, the Judge holds that his solution of the problem is the proper one.

"In the case at hand," he explains, "the prisoner had an excellent record as a probationer, but a poor one otherwise. That is to say, he kept sober for six months when placed on probation, and then got drunk celebrating his redemption. I have put him on probation for the rest of his life, and I believe that it will keep him sober permanently."

"I wish to say one thing more. I feel sure the drunkard can be saved. One of the letters that I have received this week suggests that it is idle for me to attempt to reform men by probation. The writer believes that they are lost anyway. Now, that isn't my experience at all."

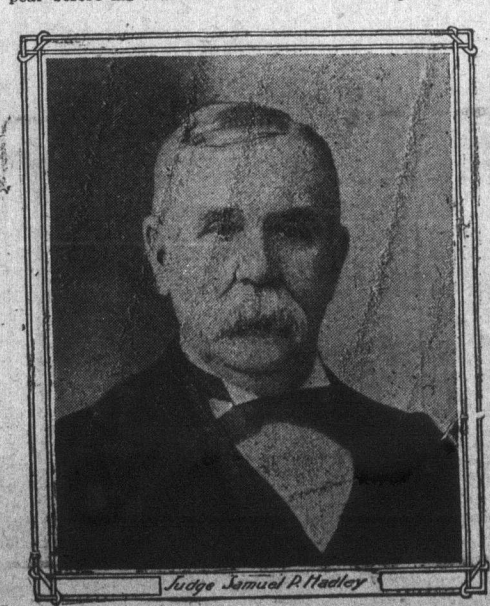
"We have made a close and careful study of the effect of the probation laws, and the results that we obtain are from observation, and not from supposition."

"About 25 per cent. of the drunkards placed on probation go to the devil in spite of everything. About 30 per cent. show an improved condition and 15 per cent. are reformed."

"Now, that is worth striving for. What we want is to make reform permanent in as large a number of cases as possible. The statute says that a court may suspend sentence for such time as it may see fit. The only question is

my mind before suspending sentence indefinitely was to decide whether there was any implied limit upon time.

"We are not going to discard old methods entirely, but the man who reforms ought to do it for life. In certain cases I have my doubts as to the value of suspended sentences; and I often tell the men and women who appear before me that I don't want them to keep straight



Judge Samuel P. Hadley

through fear, but because they ought to do right. I don't believe in virtue practiced under compulsion.

"We are going to try the probation for life ideas upon men who fail to maintain their families especially. Why shouldn't a man support his wife and children for the rest of his life? I have often advocated the revival of the

Experts' New Field: Commercial Economics

A NEW type of expert is the commercial economist, employed by large manufacturing concerns to suggest methods by which expenses may be curtailed and revenue increased.

He carefully inspects every department of a factory, overhauling books, peering into machines, examining and testing material and asking all sorts of questions of workmen and foremen.

Explaining his peculiar avocation, one of these men, who has been investigating large machinery plants in the West, said recently:

"Backed by authority from headquarters, the commercial economist enters a factory and roams where he pleases. If there is a leak, he should find it; if incompetent management results in inadequate revenue, he must point out the remedy."

"Too much reticence in certain quarters arouses suspicion and causes a closer investigation. Sometimes I find foremen protecting incompetent workmen, either through sympathy or for a monetary consideration."

"I was employed recently by the manager of a New England factory to detect the leak in expenses so that it might be plugged."

"Reports, I soon found, were passing from men to bosses, from bosses to department foremen, then to superintendents and finally to the manager himself, unverified other than by general statements."

"For instance, the foreman's excuse for not turning out the standard amount of given articles in a given time was always 'the excuse was valid.'"

"The men were not bringing the plant up to its full measure of efficiency because of the incompetence of the general manager—the man who had hired me—and I bluntly told him so in my report."

"In a certain farm machinery factory in Illinois I discovered that one of the heaviest expenses was the purchase of material for a particular part, exclusively in use there. This bill alone amounted to \$100,000 a year. The firm thought no other material would give the same results."

"Being a chemist, I experimented, and succeeded in producing as satisfactory a part at just half the cost."

"When turned loose in an establishment, the commercial economist begins on the books. He finds out how much is charged against each particular article of manufacture for cost of material, construction, insurance, storage and so on."

and tests it for some suggestion of economy.

"It is often asked why men, engaged in every day of their lives, cannot as readily detect violations of the law of economics as an outside expert. They do quite frequently. Nearly every factory has some bright man who devises and puts into effect plans for improvement. But as a rule such men are not commercial economists. Their innovations relate to their own department."

"The whole factory is the expert's field. He is the purchasing, the character of goods, how they are worked, investigates to see whether cheaper or less material may not accomplish the result, and concentrates his mind on every detail of manufacture, from the raw state of the material to its ready for shipment."

SQUIRRELS FOREST DESTROYER

MR. JOSEF BRUNNER, a Western naturalist, has not much good, but a great deal that is good, to say of the squirrel.

"He is a thief and a murderer," is the Mr. Brunner attacks the busy little fellow's character. "He devotes his life to eating the eggs and killing young of harmless and useful little birds which, if left to live and increase, would protect the forest from harmful insects. By killing these birds, the squirrel ranks as a forest destroyer."

"The red squirrel is not the only sinner. In my opinion, the gray is almost, if not quite, as bad. I have killed many squirrels caught in the act of eating eggs or young birds. Any bird that selects nesting-places which is also adapted to the use of a squirrel is almost certain to be ejected."

"When a forest has been destroyed by fire, lumbermen or insects, it is almost impossible for natural foresting to take place if squirrels are abundant in adjoining tract, because they eat the seeds. Fifty per head each day would be a low estimate. Yet this would make 15,000 in a year."

"And seeds are not the only thing. In winter, ground is often strewn with twigs which have been stripped of buds by squirrels. The trees attacked generally situated at the border of a dense forest, would, if left alone, yield the best seed crop. A squirrel thus destroys in one