



# RICE BRAN: A HEALTH FOOD AND HOW TO COOK IT

BY

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MANILA  
BUREAU OF PRINTING  
1932

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Fi-1548 P

PID-87p

THE GOVERNMENT OF THE PHILIPPINE ISLANDS  
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES

BUREAU OF SCIENCE  
MANILA

**POPULAR BULLETINS OF THE BUREAU OF SCIENCE**

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**Popular Bulletin 15**

RICE BRAN: A HEALTH FOOD AND HOW TO COOK IT.

By MARIA Y. OROSA

(Actual date of publication January 23, 1932)

# RICE BRAN: A HEALTH FOOD AND HOW TO COOK IT

By MARIA Y. OROSA

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WITH THE ASSISTANCE OF MEMBERS OF THE DIVISION

In the process of polishing rice the material known as rice bran, or "darak," is removed from the rice kernel. This is also known as "tikitiki." Rice bran is commonly used as a cheap feed for pigs, chickens, horses, etc.

Years ago the Bureau of Science found that rice bran contained a substance, vitamin B, that prevented beriberi. The Bureau of Science also originated an extract of "darak," or "tikitiki," which is used extensively for the cure of infantile beriberi. Rice bran is not only rich in the valuable vitamin B but also has about 21 per cent fat, 12.5 per cent protein, and 45 per cent carbohydrates. It contains, therefore, excellent nutritive material and has a high calorific value. It is much richer in fat than either wheat flour or rice, about as rich in protein as wheat flour, and much more so than rice. The Bureau of Science has found that fresh rice bran mixed with wheat flour will make excellent muffins, hot cakes, cookies, crackers, etc., which taste very much like similar products made from graham flour. These rice-bran foods are not only highly nutritious but are very tasty. Rice bran can be used in the proportion of half or more when mixed with wheat flour. The biscuits, crackers, etc., will be especially valuable for nourishing beriberi mothers whose children are likely to be infected. The darak should be used fresh or should be treated so that it will not become sour or rancid. The oil of ordinary rice bran contains a ferment that causes it to become rancid rather quickly. This ferment can be destroyed by heating the rice bran to 90° C.,

after which it has good keeping qualities. Rice bran, which is now practically a waste product, can be made the basis of a very profitable industry; it can furnish tasty, healthful, and very cheap food material for the Filipino people, and can take the place of much imported flour. It is estimated that more than three hundred thousand tons of rice bran are produced annually in the Philippines.

In this bulletin, the term "darak" is used in the Tagalog sense and signifies the outer portion of the grain after the husk (ipa) has been removed.

In polishing, the embryo is usually knocked off and is included in the darak. The embryo and the outer part of the grain proper are the most nutritious parts of the rice and both are rich in protein, fat, and vitamins. The inner portion of the grain is composed largely of starch and is very deficient in vitamin B so that a diet composed largely of polished rice often results in the disease known as beriberi.

Sometimes the husk (ipa) is ground in special machines and mixed with the darak as an adulterate. The pure and not the adulterated darak is recommended for human food.

#### TIKITIKI-MALAGKIT MUSH No. 1

$\frac{1}{2}$ cupful tikitiki flour	2 cupfuls coconut milk
$\frac{1}{2}$ cupful ground glutinous rice (malagkit)	1 cupful sugar
2 cupfuls water	$\frac{1}{2}$ teaspoonful salt

Mix the coconut milk, water, sugar, and salt, and bring to a boil. Strain through a piece of cloth, and place in a pan. Add the rice and tikitiki flour and boil until the rice is soft. Serve with coconut cream and sugar.

#### TIKITIKI-MALAGKIT MUSH No. 2

$\frac{1}{2}$ cupful tikitiki flour	1 cupful sugar
$\frac{1}{2}$ cupful malagkit rice (glutinous rice)	3 tablets of chocolate
2 cupfuls water	2 cupfuls milk $\frac{1}{2}$ teaspoonful salt

Mix the water and milk and dissolve the chocolate, sugar, and salt. Bring to a boil and strain. Place in a pan and add

the rice and tikitiki flour and cook, stirring constantly, until the rice is soft and the mixture thick.

### DARAK POTO

$\frac{1}{2}$ cupful tikitiki flour	6 teaspoonfuls baking powder
$1\frac{1}{2}$ cupfuls rice	1 cupful sugar
$\frac{3}{4}$ cupful coconut milk	

Wash the rice, soak in water for a short time, and grind in a stone grinder. Let the flour settle to the bottom and drain off the water. Add coconut milk to the ground rice. Sift the tikitiki flour with the baking powder and sugar and mix well with the rice flour and coconut milk. Fill muffin pans nearly full of this mixture; cook in a pan of boiling water, or by steam. When cooked set in a pan of cold water for a few minutes. Remove the poto from the pan and serve with shredded coconut.

### TIKITIKI BIBINGKA WITH GLUTINOUS RICE (MALAGKIT)

$\frac{1}{2}$ cupful tikitiki flour (darak)	$1\frac{1}{4}$ cupfuls brown sugar
	1 coconut
1 cupful glutinous rice (malagkit)	$\frac{1}{2}$ teaspoonful salt
	$\frac{1}{2}$ teaspoonful powdered anise

Grate the coconut. Extract the milk by pressing between the hands. Work it with  $\frac{1}{2}$  cupful of water, and press again. Filter the milk, and set aside.

Extract the remaining juice of the coconut with 3 cupfuls of water, using 1 cupful in each extraction. Filter, add 1 cupful of brown sugar, bring to a boil, and filter again. Then add the glutinous rice, salt, and tikitiki flour, and cook in a pan until the rice is soft. Line a bibingka mold with banana leaf and fill with the rice mixture to  $\frac{1}{2}$  inch thickness.

Dissolve the sugar ( $\frac{1}{4}$  cupful) in the milk first extracted from the grated coconut. Add the powdered anise, and pour this over the rice-darak mixture. Cover the mold with a thin metal sheet and place red-hot charcoal underneath the mold and on top of the metal sheet, and cook until the top is brown.

If an oven is available, the boiled rice and tikitiki bran may be placed in a shallow dish, the coconut milk poured on top and the pan placed in the oven.

## RICE BRAN

## TIKITIKI-MALAGKIT KALAMAY No. 1

$\frac{1}{2}$ cupful tikitiki flour	2 cupfuls coconut milk
1 cupful ground malagkit	1 cupful brown sugar

Mix the above ingredients in a pan, and cook over a moderate fire, stirring constantly, until the mixture becomes sticky and the rice very soft.

Line a plate with a piece of banana leaf, place the mush on it and sprinkle with a few tablespoonfuls of toasted grated coconut.

## TIKITIKI-MALAGKIT KALAMAY No. 2

$\frac{1}{2}$ cupful tikitiki flour	1 teaspoonful vanilla
$\frac{1}{2}$ cupful ground malagkit	A few pinches of salt
4 cupfuls water	2 tablespoonfuls butter or lard
$\frac{1}{2}$ cupful roasted linga	

Boil the tikitiki flour and ground rice in water until the rice is soft. Add the salt, sugar, linga, and vanilla and cook until thick. Fry in a pan containing the hot butter or lard.

## DARAK PALITAO No. 1

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{8}$ teaspoonful salt
$\frac{1}{2}$ cupful ground glutinous rice (malagkit)	2 tablespoonfuls sugar

Wash the rice and soak overnight in plenty of cold water. Grind in a stone grinder. Place in a pan and let stand for a while undisturbed. Drain off as much water as possible by decanting it. Add the tikitiki flour and salt, and shape 1 tablespoonful portions of the mixture into long, flat, thin, tonguelike cakes. Drop in boiling water and cook until they rise and float on top. Remove from the boiling water and drop in cold water, then drain well. Cover with a mixture of equal proportions of finely shredded coconut, toasted linga, and sugar.

## TIKITIKI PALITAO No. 2

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{2}$ cupful coconut milk
$\frac{1}{2}$ cupful rice flour	2 green coconuts
$\frac{1}{2}$ cupful sugar	A pinch of salt

Sift the tikitiki flour, add to the wet rice flour, and mix well. (The rice flour may be made by soaking the rice overnight and

grinding it in a stone grinder.) Add the salt, and knead the dough. Shape 1 tablespoonful portions into thin, long, tongue-like cakes. Drop in boiling water and remove when they rise and float on top. Set aside to drain.

Boil the coconut milk with sugar, and when thick add the finely grated green coconut, then the drained palitao, and cook 3 minutes.

#### PININDOT WITH BANANA AND SWEET POTATO

$\frac{1}{4}$ cupful tikitiki flour	1 medium-sized sweet potato,
$\frac{1}{4}$ cupful wheat flour	cut into small cubes
2 pinches of salt	1 cupful coconut milk
2 ripe saba bananas, cut to small cubes	2 cupfuls water
$\frac{1}{4}$ cupful coconut cream	$\frac{1}{3}$ cupful sugar
	1 tablespoonful sago

Sift the tikitiki flour, wheat flour, a pinch of salt, and 2 tablespoonfuls sugar, twice. Add just enough water to form a soft dough. Form into small balls, and drop these into the mixture of coconut milk and water brought to a boil. When the balls float, add the sweet potato, banana cubes, and then the sago. Boil until the potato and banana are tender. Sweeten with the rest of the sugar, add a pinch of salt, and just before serving add the coconut cream.

#### TIKITIKI FRITTERS No. 1 (MADUYA)

$\frac{1}{2}$ cupful tikitiki flour	1 egg
$\frac{1}{4}$ cupful wheat flour	$\frac{1}{6}$ cupful milk
$\frac{1}{2}$ teaspoonful baking powder	$\frac{1}{2}$ cupful shredded green co-
A pinch of salt	conut
3 tablespoonfuls sugar	

Beat the egg. Add the sugar, milk, and the flour, previously sifted with salt and baking powder. Mix thoroughly. Then add the shredded coconut. Drop 1 teaspoonful portions in hot deep fat, and fry until brown. Serve with thick syrup.

#### TIKITIKI FRITTERS No. 2

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{2}$ teaspoonful vanilla
$\frac{1}{2}$ cupful wheat flour	1 egg
$1\frac{1}{2}$ teaspoonfuls baking pow- der	$\frac{1}{3}$ cupful soy-bean milk
2 pinches of salt	$\frac{1}{4}$ cupful sugar

Sift the flours, baking powder, and salt, twice. Dissolve the sugar in milk. Gradually add to this the dry ingredients, and mix thoroughly. Then add the lightly beaten egg and vanilla. Drop by spoonfuls in hot, deep fat and fry until brown. Roll in sugar after draining of excess fat.

### DARAK-BANANA FRITTERS

$\frac{1}{2}$ cupful tikitiki flour	1 egg
$\frac{1}{2}$ cupful flour	$\frac{3}{4}$ cupful milk
5 ripe saba bananas	2 tablespoonfuls sugar
1 $\frac{1}{2}$ teaspoonfuls baking powder	1 tablespoonful lemon juice
	$\frac{1}{4}$ teaspoonful salt

Sift the dry ingredients together, except the sugar; add the beaten egg and milk and beat until smooth. Peel the bananas and cut them into thin slices, lengthwise. Sprinkle sugar and lemon juice over the sliced bananas. Dip each slice in the batter, and fry in deep, hot fat until brown. Drain of excess fat and sprinkle with sugar (powdered sugar is best).

### TIKITIKI ESPASOL

$\frac{1}{2}$ cupful tikitiki flour	1 cupful sugar
$\frac{1}{2}$ cupful roasted glutinous rice ground to a fine flour	$\frac{1}{2}$ cupful evaporated milk
$\frac{1}{2}$ cupful coconut milk	A pinch of ground anise seed

Roast the darak flour and sift it with the rice flour. Add the coconut milk and mix thoroughly. Boil the sugar and milk, add the mixture of flours and coconut milk, and boil until thick. Lastly add the ground anise seed, and cook a few minutes longer. Place on a board covered with toasted glutinous rice flour, pat, roll to  $\frac{1}{4}$  inch thickness, and cut to desired pieces. Roll in toasted rice flour (malagkit) and keep in a closed container.

### TIKITIKI GOLLORIA

$\frac{1}{2}$ cupful tikitiki flour	2 egg yolks
$\frac{1}{2}$ cupful wheat flour	1 teaspoonful sugar
$\frac{1}{2}$ teaspoonful baking powder	Water enough to moisten
1 $\frac{1}{2}$ tablespoonfuls butter	

Sift the dry ingredients (tikitiki flour, wheat flour, baking powder, and sugar) twice.

Work in the butter with the tips of the fingers. Add the egg yolks and mix thoroughly with enough water to form a soft dough. Transfer the dough to a floured board and knead until a fine, smooth dough is obtained. Roll out to a thin sheet and cut into small pieces  $1\frac{1}{4}$  inches long and  $\frac{1}{2}$  inch wide. Lift on a fork and fold over to bring the two ends together. Fry in deep, hot fat until brown. Make a syrup of 3 parts sugar to 1 part water and, while boiling, drop in the fried golloria. Continue boiling over a slow fire, stirring constantly, until the fried dough is covered with a thin coating of sugar. Cool and keep in a well-closed container.

### TIKITIKI OKOY

$\frac{3}{4}$ cupful tikitiki flour	$\frac{1}{2}$ cupful sprouted mung beans (taugui)
$\frac{3}{4}$ cupful cornstarch	
1 teaspoonful salt	1 head sliced garlic
1 teaspoonful baking powder	1 tablespoonful green onion
1 egg	cut to fine pieces
$\frac{1}{2}$ cupful sliced shrimps	$1\frac{1}{2}$ cupfuls shrimp soup

Mix the tikitiki flour, cornstarch, salt, and baking powder and sift twice. Add the shrimp juice, the well-beaten egg, the green onion, and mung-bean sprouts. Drop small amounts in deep, hot fat to fry. When the flakes are half cooked, place on each portion a few slices of sliced shrimps and garlic, and continue frying until brown. Serve with vinegar and a small amount of garlic, chopped fine.

### TIKITIKI MASAPODRIDA No. 1

$\frac{1}{4}$ cupful tikitiki flour	$\frac{1}{8}$ cupful shortening
$\frac{1}{4}$ cupful wheat flour	$\frac{1}{8}$ teaspoonful salt
$\frac{1}{8}$ cupful sugar	2 egg yolks

Sift the flours and salt twice and work in the shortening. Beat the egg yolks, add the the sugar, and continue beating until thick. Gradually add the egg mixture to the flour and knead. A small amount of water may be added, if necessary. Place on a floured board. Pat and roll out to  $\frac{1}{4}$  inch thickness. Cut with a biscuit cutter, brush each piece with egg yolk, and sprinkle over it a few grains of sugar. Bake in a hot oven until brown.

## RICE BRAN

## TIKITIKI MASAPODRIDA No. 2

$\frac{1}{2}$  cupful tikitiki flour  
 $\frac{1}{2}$  cupful wheat flour  
 6 tablespoonfuls sugar

6 tablespoonfuls butter or  
 shortening

Brown the tikitiki and wheat flour in an oven. Add the sugar and sift twice. Work in the shortening with the finger tips. Add just enough water to make the dough cling together. Mold to desired shape, place on a baking sheet, and bake from 5 to 10 minutes.

## TIKITIKI PASTE

1 cupful tikitiki flour	$\frac{1}{2}$ cupful sugar
$\frac{1}{2}$ cupful soy-bean milk or milk	Vanilla or grated orange peel

Mix the above ingredients and cook in a shallow, wide pan until it forms a solid mass that no longer sticks to the fingers. Add the flavoring and mix well.

Toss on a board covered with sugar, roll out to  $\frac{1}{4}$  inch thickness and cut to desired pieces. Roll in sugar and wrap in candy wrappers.

## TIKITIKI-SWEET-POTATO CROQUETTES

$\frac{1}{2}$ cupful tikitiki flour	6 tablespoonfuls sugar
$\frac{1}{2}$ cupful glutinous rice (ma- lagkit)	1 medium-sized camote

Sift the tikitiki flour and add to it the freshly ground malagkit (glutinous rice). The rice is first soaked in water and then ground between 2 flat stones. The flour-water mixture is allowed to stand. The flour settles to the bottom, with the water on top. The water may be carefully poured out of the container by decantation. Add 3 tablespoonfuls sugar and knead well.

Boil the sweet potato; mash and add 3 tablespoonfuls sugar. Make little balls of this dough, flatten them to small, thin circles and fill with sweet potato filler. Fold over to close the opening, flatten the croquettes, and fry in hot, deep fat until brown.

### TIKITIKI SOY-BEAN FRIED COOKIES

$\frac{3}{4}$ cupful tikitiki flour	2 tablespoonfuls shortening
$\frac{1}{4}$ cupful soy-bean flour	2 eggs
$\frac{1}{4}$ cupful wheat flour	A pinch of salt
2 tablespoonfuls sugar	1 tablespoonful water

Sift the flours with the salt and work in the shortening. Beat the eggs and add the water and sugar. Gradually add this to the flour and knead well. A small amount of flour may be added while kneading, if necessary. Roll out to a very thin sheet, as thin as can be made. Cut in rectangles 4 inches long and  $\frac{3}{4}$  inch thick. Cut an opening at the middle and make a bow by inserting the two ends through the hole. Fry in deep, hot fat until brown, and drain of excess fat. Then roll in powdered sugar.

### TIKITIKI BALLS

$\frac{1}{3}$ cupful tikitiki flour	$\frac{1}{2}$ cupful roasted peanuts,
$\frac{1}{3}$ cupful ground glutinous rice (malagkit)	chopped very fine
$\frac{1}{8}$ cupful evaporated milk	$\frac{1}{4}$ cupful sugar

Soak the rice overnight and grind in a stone grinder. Let stand and drain of as much water as possible. Add to the wet flour the tikitiki flour,  $\frac{1}{4}$  cupful chopped peanuts,  $\frac{1}{8}$  cupful sugar, and enough milk to permit the mixture being formed into little balls. Drop these in boiling water and when the balls float take them from the boiling water and drain. Roll in the mixture of the remaining sugar and chopped peanuts.

### TIKITIKI EMPANADITAS

$\frac{1}{2}$ cupful tikitiki flour	2 egg yolks
$\frac{1}{2}$ cupful wheat flour	Roselle jam
3 tablespoonfuls butter	Water, enough to moisten

Sift the flours and work in the butter. Add the egg yolks and mix thoroughly. Add enough cold water to make a thick dough, knead, and roll out to a thin sheet. Cut in small circles. Fill one side of the circle with 1 teaspoonful of roselle jam, fold over

the other side and bring the edges together. Press the sides down with the tip of fork, and fry in hot, deep fat until brown.

### TIKITIKI BUNUELOS

$\frac{1}{4}$ cupful tikitiki flour	2 egg yolks.
$\frac{1}{4}$ cupful wheat flour	$\frac{1}{2}$ cupful water
1 tablespoonful butter or lard	$\frac{1}{8}$ teaspoonful salt

Boil the water, salt, and butter. Add the sifted flour and remove from the fire. Stir with a wooden spoon. Then add the egg yolks and mix thoroughly. Drop by teaspoonfuls in hot deep fat and fry until brown. Serve with thick syrup.

### TIKITIKI PUDDING

$\frac{1}{4}$ cupful tikitiki flour	1 cupful milk
$\frac{1}{2}$ cupful boiling water	2 eggs
2 tablespoonfuls sugar	A pinch of salt
1 small package of seedless raisins	A pinch of cinnamon

Cook the tikitiki flour and salt in water for 10 minutes. Strain through a piece of sinamay. Beat the eggs lightly in a pan. Add the sugar and milk, and mix thoroughly. Stir in the cooked tikitiki flour and mix to a thin, smooth paste. Add the cinnamon and pour in a pan lined with thick caramelized syrup; cook in boiling water until it reaches the consistency of custard. Place in an oven to brown the top, or use a sheet of metal with live charcoal over it, as in Tikitiki Custard.

### TIKITIKI CUSTARD

$\frac{1}{4}$ cupful tikitiki flour	$\frac{1}{2}$ cupful soy-bean milk
$\frac{1}{2}$ cupful milk	$\frac{1}{4}$ cupful sugar
3 egg yolks	1 teaspoonful grated lime peel

Beat the egg yolks with sugar. Add the milk, soy-bean milk, the grated lime peel and mix thoroughly. Add the tikitiki flour and beat well until smooth. Line a mold with a thick caramelized syrup and when the syrup has dried out, pour in the mixture. Place the mold in a pan of boiling water and cook until the pudding solidifies. Brown the top by placing the mold in the oven or by placing a piece of sheet metal on top and covering it with live charcoal.

## TIKITIKI BISCUITS No. 1

$\frac{1}{2}$ cupful tikitiki flour	2 tablespoonfuls shortening
$\frac{1}{2}$ cupful flour	$\frac{1}{2}$ cupful milk
2 $\frac{1}{2}$ teaspoonfuls baking powder	$\frac{1}{2}$ teaspoonful salt

Mix the dry ingredients and sift 3 times. Work in the shortening, and add the milk. Roll out to  $\frac{1}{3}$  to  $\frac{1}{2}$  inch thickness and cut with a biscuit cutter. Do not knead. Place on an oiled baking sheet, brush the top with white of egg and water, mixed, and bake in a moderate oven from 12 to 15 minutes.

## TIKITIKI BISCUITS No. 2

$\frac{1}{2}$ cupful tikitiki flour	2 egg yolks
$\frac{1}{2}$ cupful flour	4 tablespoonfuls butter or
2 teaspoonfuls baking powder	shortening
$\frac{1}{4}$ teaspoonful salt	Enough milk to make $\frac{1}{2}$ cup-
1 tablespoonful sugar	ful with the egg yolk

Mix the dry ingredients and sift three times. Work in the butter and add the well-beaten yolk and milk. Do not knead. Place on a buttered baking sheet, sprinkle flour over it, and roll out to  $\frac{1}{3}$  to  $\frac{1}{2}$  inch thickness. Brush the top with egg yolk. Bake in a moderate oven from 12 to 15 minutes.

## TIKITIKI KUNDOL BISCUITS

$\frac{1}{2}$ cupful tikitiki flour	2 tablespoonfuls shortening
$\frac{1}{2}$ cupful flour	$\frac{1}{3}$ cupful finely chopped can-
2 $\frac{1}{2}$ teaspoonfuls baking powder	died kundol
$\frac{1}{2}$ teaspoonful salt	$\frac{2}{3}$ cupful milk

Sift the flours, salt, and baking powder three times. Work in the shortening. Add the milk and chopped kundol, and toss on a floured board. Pat and roll out to  $\frac{1}{4}$  inch thickness. Place on a well-greased baking sheet and brush the top with a mixture of egg white and a small amount of water. Bake in a moderate oven for from 12 to 15 minutes.

## TIKITIKI CRISP BISCUITS

$\frac{1}{2}$ cupful tikitiki flour	1 egg yolk
$\frac{1}{2}$ cupful flour	1 teaspoonful butter
$\frac{1}{8}$ teaspoonful salt	Milk, enough to moisten
1 teaspoonful sugar	

Sift the dry ingredients three times. Work in the butter with the finger tips. Add the egg yolk and enough milk to make a stiff dough. Knead until smooth. Roll out on a floured board to a very thin sheet. Cut with a biscuit cutter, prick with a fork, brush with egg white and water, and bake in a slow oven for from 12 to 15 minutes, or until brown and crisp.

### TIKITIKI CRACKERS

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{4}$ teaspoonful salt
$\frac{1}{2}$ cupful flour	1 teaspoonful sugar
$\frac{1}{2}$ cupful butter or shortening	Milk, enough to moisten (a few tablespoonfuls)
1 teaspoonful baking powder	

Mix the dry ingredients and sift twice. Work in the butter with the finger tips. Add enough milk to make a stiff dough. Place on a floured board and knead lightly. Roll out to  $\frac{1}{8}$  inch thickness and cut with a biscuit cutter dipped in flour. Place on a buttered sheet and bake in a hot oven for about 10 minutes.

### TIKITIKI RICH COOKIES

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{3}$ cupful sugar
$\frac{1}{2}$ cupful flour	1 egg well beaten
$\frac{1}{2}$ cupful butter	$\frac{1}{2}$ grated lime rind

Cream the butter; gradually add the sugar, well-beaten egg, flour, and grated lime rind. Spread thinly on a buttered sheet, 2 inches apart, 1 teaspoonful portions of the cookie dough. Bake in a moderate oven until brown.

Pili nuts, raisins, or sliced candied fruits may be placed on each cookie before baking.

### TIKITIKI SUGAR COOKIES

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{3}$ teaspoonful salt
$\frac{1}{2}$ cupful flour	$\frac{1}{3}$ cupful shortening
$\frac{1}{3}$ cupful sugar	1 egg
$\frac{2}{3}$ teaspoonful baking powder	$\frac{1}{8}$ cupful milk
	$\frac{1}{2}$ teaspoonful vanilla extract

Cream the shortening. Mix well with the sugar; add gradually the beaten egg and the flours, sifted 3 times with the salt and baking powder, alternating with the milk. Add the vanilla.

Roll out thin, cut to desired shape, and sprinkle with sugar. Bake in a moderate oven until brown.

### TIKITIKI COCONUT COOKIES

$\frac{1}{2}$ cupful tikitiki flour	$\frac{1}{6}$ cupful grated coconut, partially dried
$\frac{1}{2}$ cupful flour	
1 teaspoonful baking powder	$\frac{1}{3}$ cupful sugar
$\frac{1}{3}$ teaspoonful salt	$\frac{1}{3}$ cupful thick cream
1 egg	

Beat the egg until light; add the sugar, coconut, cream, and the flours, previously sifted with salt and baking powder. Chill. Place on a floured board and roll out to  $\frac{1}{2}$  inch thickness. Sprinkle with coconut; roll out to  $\frac{1}{4}$  inch thickness and cut out with a round cutter. Bake on a buttered sheet, in a moderate oven, until brown.

### TIKITIKI IMPERIAL COOKIES

$\frac{3}{4}$ cupful tikitiki flour	$\frac{1}{2}$ cupful sugar
$\frac{3}{4}$ cupful flour	1 egg
$\frac{3}{4}$ teaspoonful baking powder	1 tablespoonful milk
$\frac{1}{4}$ teaspoonful grated nutmeg	$\frac{1}{3}$ teaspoonful extract of lemon
$\frac{1}{4}$ teaspoonful salt	
$\frac{1}{3}$ cupful butter	

Cream the butter and sugar. Add the well-beaten egg, milk, and lemon extract. Sift the dry ingredients and add to the first mixture. Place on a floured board and chill. Roll out as thinly as possible and cut out with a desired cutter. Place on a buttered sheet and bake in a moderate oven for from 8 to 10 minutes.

### TIKITIKI DOUGHNUTS No. 1

$\frac{3}{4}$ cupful tikitiki flour	2 eggs
1 cupful flour	$\frac{1}{3}$ cupful milk
2 teaspoonfuls baking powder	$\frac{1}{2}$ teaspoonful salt
$\frac{1}{2}$ cupful sugar	$\frac{1}{8}$ teaspoonful, each, of ground cinnamon and nutmeg
1 $\frac{1}{2}$ tablespoonfuls butter	

Cream the butter, and add  $\frac{1}{4}$  cupful sugar. Add the remaining sugar to the lightly beaten eggs, and add this to the creamed butter and sugar. Add the mixture of flours sifted with salt, baking powder, and spices, and more flour if necessary to make a dough stiff enough to roll. Place on a floured board, knead

very lightly, pat, and roll out to  $\frac{1}{4}$  inch thickness. Cut with a doughnut cutter, fry in deep, hot fat until brown, drain, and roll in sugar.

### TIKITIKI DOUGHNUTS No. 2

1 cupful tikitiki flour	$\frac{1}{2}$ teaspoonful salt
1 cupful flour	$\frac{1}{3}$ cupful sugar
2 $\frac{1}{2}$ teaspoonfuls baking powder	1 $\frac{1}{2}$ tablespoonfuls shortening
der	1 egg
1 pinch of each: cinnamon, clove, mace.	$\frac{1}{3}$ cupful milk

Sift the flours with salt, baking powder, and spices three times.

Cream the shortening and sugar. Add the well-beaten egg and milk and mix well. Then add the flour and mix well. Add more flour to make a stiff enough dough to roll. Place on a floured board and knead lightly. Pat and roll out to  $\frac{1}{3}$  inch thickness and cut with a doughnut cutter. Fry in deep, hot fat until brown. Drain, and roll in powdered or granulated sugar.

### TIKITIKI DOUGHNUTS No. 3 (WITHOUT SHORTENING)

1 cupful tikitiki flour	$\frac{1}{2}$ teaspoonful baking soda
1 cupful flour	$\frac{1}{2}$ teaspoonful salt
$\frac{1}{2}$ cupful sugar	$\frac{1}{4}$ teaspoonful grated nutmeg
1 teaspoonful cream of tar- tar	1 egg
	$\frac{3}{8}$ cupful milk

Mix the dry ingredients and sift three times. Add the well-beaten egg and milk, and knead very lightly. Place on a floured board and roll out to  $\frac{1}{4}$  inch thickness. Fry in hot, deep fat until brown. Drain and roll in sugar.

### TIKITIKI MUFFINS No. 1

1 $\frac{1}{4}$ cupfuls tikitiki flour	$\frac{3}{4}$ teaspoonful soda
1 cupful flour	1 teaspoonful salt
1 cupful sour milk	2 tablespoonfuls butter
$\frac{1}{3}$ cupful molasses	

Mix the dry ingredients and sift three times. Mix thoroughly the molasses and milk, and add this to the dry ingredients. Lastly add the butter. Fill well-greased muffin pans, and bake in a moderate oven for about 20 minutes.

## TIKITIKI MUFFINS No. 2

1 cupful tikitiki flour	2 eggs
$\frac{3}{4}$ cupful flour	1 cupful milk
4 teaspoonfuls baking powder	3 tablespoonfuls melted butter
$\frac{1}{2}$ teaspoonful salt	
$\frac{1}{4}$ cupful sugar	

Mix the dry ingredients and sift three times. Add gradually the well-beaten eggs, milk, and melted butter. Fill well-greased muffin pans and bake in a moderate oven from 20 to 25 minutes.

## TIKITIKI MUFFINS No. 3

$\frac{3}{4}$ cupful tikitiki flour	2 tablespoonfuls sugar
$\frac{3}{4}$ cupful flour	1 egg
3 teaspoonfuls baking powder	$\frac{3}{4}$ cupful milk
$\frac{1}{2}$ teaspoonful salt	1 tablespoonful melted butter

Mix the dry ingredients and sift three times. Add the milk gradually, then the well-beaten egg, and the melted butter. Fill buttered muffin pans and bake in a moderate oven from 20 to 25 minutes.

## TIKITIKI HOT CAKES No. 1

$\frac{1}{2}$ cupful tikitiki flour	1 tablespoonful sugar
$\frac{1}{2}$ cupful flour	2 eggs
3 teaspoonfuls baking powder	1 tablespoonful melted butter
$\frac{1}{4}$ teaspoonful salt	$\frac{1}{2}$ cupful milk, or more

Mix the dry ingredients and sift twice. Beat the eggs and beat the milk into them. Add this mixture gradually to the dry ingredients. Then add the butter. Drop by spoonfuls on a greased pan or griddle. Cook on one side until puffed and full of bubbles. Turn over and cook the other side. Serve hot with butter and syrup (usually maple syrup).

## TIKITIKI HOT CAKES No. 2

$1\frac{1}{4}$ cupfuls tikitiki flour	$\frac{1}{2}$ teaspoonful salt
1 cupful flour	2 cupfuls sour milk
1 egg	$1\frac{1}{4}$ teaspoonfuls baking soda

Sift flours, salt, and soda. Gradually add the sour milk and the well-beaten egg.

Cook as in Tikitiki Hot Cakes No. 1.

## TIKITIKI HOT WAFFLES

$\frac{3}{4}$ cupful tikitiki flour	1 tablespoonful sugar
$\frac{3}{4}$ cupful flour	2 eggs
$\frac{1}{2}$ teaspoonful salt	1 cupful milk
3 teaspoons baking powder	1 tablespoonful melted butter

Mix the dry ingredients and sift three times. Add the milk gradually, the well-beaten eggs, and the melted butter. Pour in hot waffle iron and cook until both sides are brown. Serve with butter and syrup.

## TIKITIKI CREAM WAFFLES

$\frac{1}{2}$ cupful tikitiki flour	1 tablespoonful sugar
$\frac{1}{2}$ cupful flour	1 cupful cream
3 teaspoons baking powder	2 eggs
$\frac{1}{2}$ teaspoonful salt	

Beat the egg whites and yolks separately, and mix the beaten yolks into the cream. Sift the dry ingredients and gradually add this to the beaten egg yolks and cream. Fold in the egg whites, beaten stiff, and bake in a hot waffle iron until brown. Serve with butter and syrup.

## TIKITIKI COCONUT ROLL

$\frac{1}{4}$ cupful tikitiki flour	2 tablespoonfuls cornstarch
$\frac{1}{4}$ cupful flour	Juice of 1 calamansi
1 teaspoonful baking powder	1 tablespoonful water
$\frac{1}{2}$ cupful sugar	1 teaspoonful grated manda-
3 eggs	rin or lime rind
$\frac{1}{8}$ teaspoonful salt	

Mix and sift three times, both kinds of flour, cornstarch, baking powder, and salt. Beat the egg yolks until thick and lemon colored. Gradually add the sugar, beating constantly while adding. Add the calamansi juice, water, and  $\frac{1}{2}$  teaspoonful of grated mandarin peel. Add the flour mixture gradually from the sifter. Fold in the egg whites beaten stiff, to which has been added  $\frac{1}{2}$  teaspoonful of the grated mandarin rind. Pour the batter in a rectangular shallow pan and bake in a moderate oven about 12 minutes. Take out of the pan while hot and place on a piece of paper. Spread with coconut preserve. This is made by shredding green coconut and adding

for each cupful of coconut 1 cupful of sugar and  $\frac{1}{4}$  teaspoonful vanilla. Cook until it becomes very thick and color pink with certified food coloring. Roll the cake while hot. Cut crosswise to  $\frac{1}{4}$  inch thickness before serving.

### TIKITIKI MANGO ROLL

$\frac{1}{2}$ cupful tikitiki flour	3 eggs
$\frac{1}{2}$ cupful flour	1 tablespoonful milk
1 teaspoonful baking powder	$\frac{1}{2}$ teaspoonful milk $\frac{2}{3}$ cupful sugar

Sift the flours and baking powder three times. Beat the eggs until very light. Add the milk and sugar and beat until creamy. Lightly stir in the flour mixture, and lastly the vanilla. Pour the batter in a shallow, rectangular cake pan and bake in a moderate oven for about 10 minutes. Take out of the pan while hot, turn out upside down on a sugared paper and spread with warm mango jam. Roll up firmly. Cut crosswise into  $\frac{1}{4}$  inch thick pieces before serving.

Other similar rolls may be made using ube jam, guava butter, guava jelly, and other jams, jellies, and fruit butters made from native and foreign fruits.

### TIKITIKI PLAIN CAKE

$\frac{3}{4}$ cupful tikitiki flour	$\frac{2}{3}$ cupful milk
$\frac{3}{4}$ cupful flour	$\frac{3}{4}$ cupful sugar
2 teaspoonfuls baking powder	$\frac{1}{3}$ cupful butter or shortening
$\frac{1}{8}$ teaspoonful salt	1 teaspoonful vanilla 2 eggs

Sift the flours with baking powder and salt. Cream the butter and sugar; add the well-beaten yolks of the eggs and vanilla. Beat until creamy. Add alternately the flour mixture, and the milk. Fold in the well-beaten whites of the eggs. Bake in buttered layer-cake pans. Any jam, jelly, or frosting may be used.

### DARAK SPONGE CAKE

$\frac{1}{2}$ cupful tikitiki flour	4 eggs
$\frac{1}{2}$ cupful flour	1 cupful sugar
$\frac{1}{4}$ teaspoonful salt	4 teaspoonfuls lemon juice

Sift the flours with the salt. Separate the whites and yolks of the eggs and beat the yolks until thick and lemon colored. Add the sugar gradually and beat again. Add the lemon juice and mix thoroughly. Fold in the flour, alternately with the stiffly beaten egg whites. (Be careful not to beat the cake at this stage.) Bake in a floured loaf tin in a slow oven for about 40 minutes.

#### DARAK HOT-WATER SPONGE CAKE

$\frac{1}{2}$ cupful tikitiki flour	$\frac{3}{4}$ cupful sugar
$\frac{1}{2}$ cupful flour	2 eggs
$1\frac{1}{2}$ teaspoonfuls baking powder	$\frac{1}{2}$ cupful hot water
$\frac{1}{8}$ teaspoonful salt	1 teaspoonful lime juice

Beat the egg yolks until thick. Add  $\frac{1}{2}$  of the sugar and beat until creamy. Then add the water and lime juice and beat again. Add the other half of the sugar to the whites beaten until frothy, and beat until stiff. To the beaten yolks add the flour little by little and fold this mixture into the whites. Bake in a pan lined with greased paper.

#### TIKITIKI SPONGE CAKE WITH COCOA

$\frac{1}{2}$ cupful tikitiki flour	2 tablespoonfuls cocoa
$\frac{1}{2}$ cupful flour	$\frac{1}{4}$ teaspoonful salt
4 eggs	1 teaspoonful vanilla
1 cupful sugar	

Sift the flour, salt, and cocoa. Beat separately the egg whites and yolks. Beat the yolks until thick and lemon colored. Add the vanilla; gradually add the sugar and beat again. Fold in carefully the flour alternately with the stiffly beaten egg whites. Bake in a floured sheet or loaf tin and bake in a slow oven, from 40 to 60 minutes.

#### TIKITIKI SOY CAKE

$\frac{3}{8}$ cupful tikitiki flour	$\frac{1}{4}$ cupful soy milk
$\frac{3}{8}$ cupful flour	$\frac{1}{2}$ cupful sugar
$1\frac{1}{2}$ teaspoonfuls baking powder	2 eggs
$\frac{1}{2}$ teaspoonful cinnamon	$\frac{1}{4}$ cupful shortening (butter)

Cream shortening; add the sugar, and cream again; add the egg yolks and beat well. Add the flours, sifted with baking powder and cinnamon alternately with soy-bean milk, and fold in the beaten whites of eggs. Bake in a greased pan, in a moderate oven, for about 35 minutes.

#### TIKITIKI COCOA CAKE

1 cupful tikitiki flour	1 cupful milk
1 cupful flour	2 egg yolks
$\frac{1}{2}$ teaspoonful salt	$1\frac{1}{2}$ cupfuls sugar
2 teaspoonfuls baking powder	$\frac{1}{2}$ cupful shortening
der	$\frac{1}{2}$ cupful boiling water
$\frac{1}{4}$ cupful cocoa	1 teaspoonful vanilla

Cream the shortening and gradually add the sugar, beating continuously. Beat in the egg yolks. Add the milk and the flour sifted with salt and baking powder. Make a thin paste of cocoa and a little water, and add the boiling water. Add this to the batter. Lastly, add the vanilla. Bake in a greased pan in a moderate oven.

#### TIKITIKI ANGEL CAKE

$\frac{3}{8}$ cupful tikitiki flour	1 teaspoonful cream of tar-
$\frac{1}{2}$ cupful flour	tar
9 egg whites	$\frac{1}{8}$ teaspoonful salt
1 cupful sugar	1 teaspoonful vanilla

Sift the flours and salt three times. Sift the sugar separately two times.

Beat whites of eggs to a froth. Add the cream of tartar and beat until the eggs are stiff but not dry. Gradually add the sugar, beating after each addition. Fold in the flour and lastly add the vanilla. Bake in an ungreased pan, in a slow oven from 60 to 75 minutes. Do not disturb while baking.

#### DARAK TOASTED POUND CAKE

1 cupful tikitiki flour	$1\frac{2}{3}$ cupfuls sugar
1 cupful flour	5 eggs
1 cupful butter	

## RICE BRAN

Work butter until creamy. Gradually add the sugar while beating constantly; then add eggs one at a time, beating vigorously between the addition of each. When the mixture is of a creamy consistency, fold in the flour, and turn into a buttered and floured bread pan. Bake one hour in a slow oven. Cool, slice crosswise to  $\frac{1}{4}$  inch thickness, and toast until brown.

## TIKITIKI MAMON

$\frac{1}{2}$ cupful tikitiki flour	18 egg yolks
$\frac{1}{2}$ cupful flour	$\frac{3}{4}$ cupful sugar
$\frac{3}{4}$ cupful melted butter	

Beat the egg yolks until thick and lemon colored. Gradually add the sugar, beating while adding, until the mixture becomes creamy. Add the flour gradually and then the melted butter. Bake in a moderate oven.

