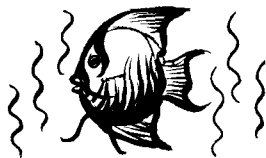


These fish flakes have a pleasing flavour and a high food value and can be used for making fried fish cakes, in soups, or mixed with coconut cream. They can be kept for a long time in bottles, tins or bamboo tubes.




FISH PRESERVATION SIMPLIFIED

by

H. VAN PEL
Fisheries Officer
South Pacific Commission

Illustrated by
ESME G. ELLIS

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Introduction

Sometimes a person catches more fish than he can use quickly; but if he has to keep his fish for a long time they will go bad and so the fish will be wasted.

This book describes some simple ways to keep fish good for a long time. There are four chief ways of doing this:-

- . You can salt the fish.
- . You can dry the fish.
- . You can smoke the fish.
- . You can cook the fish.

Whatever way you use, it is called "curing" the fish.

Sometimes you can combine these methods. For example you can first salt the fish and then dry it, or you can first salt it and then smoke it. This book tells you many easy ways of keeping your fish.

The title of this book is "Fish Preservation". To "preserve" a thing means to keep it in such a way that it will not go bad.

There are many ways of preserving fish; this book describes four ways that are easy and cheap; but they are good ways. There are many other ways, and anyone who wishes to know about them may write to the South Pacific Commission, Noumea, New Caledonia.

4. Light a fire under the drum and boil the water for about half an hour or until the fish are cooked.

5. Lift the baskets out of the drum and drain off the water. You can then use the baskets for carrying the fish.

Note 1. The water left in the drum can be used three times, but you may have to add more water and salt each time to fully cover the baskets.

Note 2. When you have finished cooking the fish, a good fish paste can be made by evaporating the water left in the drum over a fire or in the sun.

FISH FLAKES

You can make fish flakes using fish cooked for half an hour in a mixture of 3 parts sea or fresh water and one part coconut water. After cooking the fish remove the flesh from the bones and dry the fish by placing it on an iron plate placed 3 feet from the ground with a small fire under it. The iron plate can be made from a flattened drum.

How to—

COOK FISH

Cooking is an easy way to preserve fish; if properly done the fish should keep good for about 2 to 3 days. You should cook the fish this way.

1. Get a small drum, such as an oil drum, and clean it well.

2. Partly fill the drum with water, and mix in one part of salt to each 4 parts of water used.

3. Fill some small suitable baskets made of bamboo or leaves with fish. Place the baskets on top of each other in the drum, and make sure the top basket is fully covered by the water. You may have to add some more salt and water.



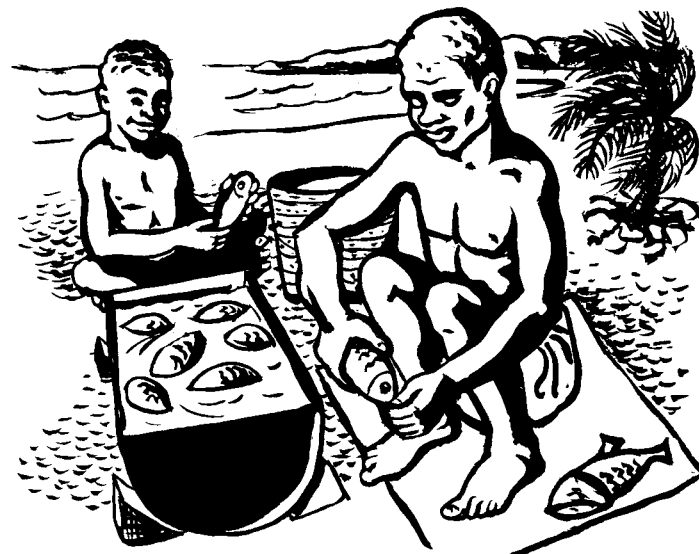
COOKING FISH IN A DRUM.

How to—

SALT FISH

If you can get a lot of salt into the flesh of a fish, the fish will keep good for quite a long time. This is called "salting" the fish.

There are two ways of salting fish; one is called "WET SALTING" and the other is called "DRY SALTING".



WET SALTING FISH.

WET SALTING

1. Get a container that does not leak, like a large tin, empty drum, barrel, or canoe etc. (Clean it well).

2. Mix in the container 4 parts of clean water (sea water or fresh water will do) and one part of salt. Stir well. (If the salt is coarse, it should be ground fine first.) This mixture of salt and water is called "brine". To be good, your fish must float in it. If the fish sinks, add more salt.

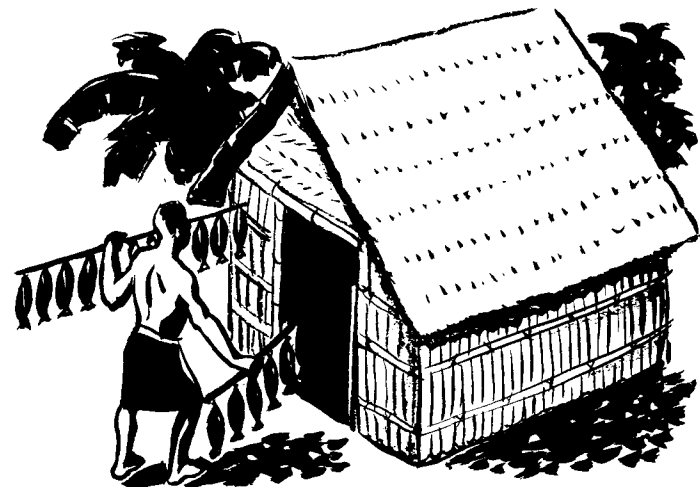
3. Now you must prepare the fish. It is best to cut off the head, take out the gut, and clean the fish.

Small fish. Can be salted whole, without cutting off the head and cleaning them.

Large fish. Cut them open and take out the backbone.

Scaly fish. Fish which have thick and hard scales should have these taken off.

General. Cut very large fish into small pieces; when the flesh is very thick make cuts in it with a knife.



PLACING FISH IN A SHED FOR LONG SMOKING.

3. When you have put all the fish into the shed, close any openings and then light a fire on the floor of the shed. Make this fire from coconut husks and see that it burns very slowly with a lot of smoke.

4. Smoke the fish for about two days; after this time the flesh should be quite dry, and it can be stored away until needed.

Note 1. If you want to send this fish to other places, pack it in small lots and wrap in dry leaves, strengthened with bamboo or sticks.

After this time the fish is ready to eat, or it can be kept in good condition for about 2-3 days under tropical conditions.

LONG SMOKING

If you want to keep fish good for a long time, then you should "long smoke" it. Fish "cured" in this way will keep for 2 or 3 months or even longer, and you can carry it over long distances. You must remember, however, to preserve only fish which is not oily, or it will not keep good.

This is the way to preserve fish using the long smoking method:-

1. Make a small closed shed, using palm leaves or other easy-to-get materials. This shed should be at least six feet high and long enough to hold all the fish to be smoked.
2. Next, build in the shed, wooden racks to hold the fish. These racks should start about three feet up from the bottom of the shed and go right up to the roof. The fish can be either hung from the racks or laid on them. Hanging the fish on spits from the racks is probably the best, but it will be all right if you put them on loosely woven matting placed on the racks.



ALWAYS CLEAN LARGE FISH BEFORE SALTING.

4. Now clean the fish or pieces of fish well, and put it into the brine. Cover the fish in the container with a piece of wood or matting, and weight it down with stones so that the fish is completely covered with the brine.
5. These salted fish, if not fat, can be kept in the brine for at least two weeks in a cool place. When fat, the fish must be consumed after three days, but remember:
 1. Most fishes from tropical waters are not fat.

2. When the fish is too salty, you can take away the salty taste by soaking the fish in fresh water before it is cooked or fried.

DRY SALTING

For this method you need more salt than you need for wet salting. But it is a good method if you have no containers to hold brine.

1. Cut off the heads and tails of big fish; take out the entrails, and backbone.
2. Cut the flesh into small slices.
3. Get half as much salt as you have fish; spread some of the salt on the bottom of a box, or on a mat, or in an old canoe.
4. Take a piece of fish; rub plenty of the remaining salt into it; then place the fish in the salt which you have put in the box or on a mat, etc.
5. Do this in turn with several more pieces of fish, and place them closely beside each other on the bottom of the box, or on the mat.

The method of smoking the fish is as follows:-

1. Make a fire of hardwood or coconut husks in the drum. As soon as it is burning well, adjust the fire control door so that there are no flames.
2. Place the fish on the spits and cover with a sack or palm fronds laid as close together as possible.
3. The fish should be ready to eat in about half an hour; when cooked, the skin of the fish will be a golden-yellow colour.

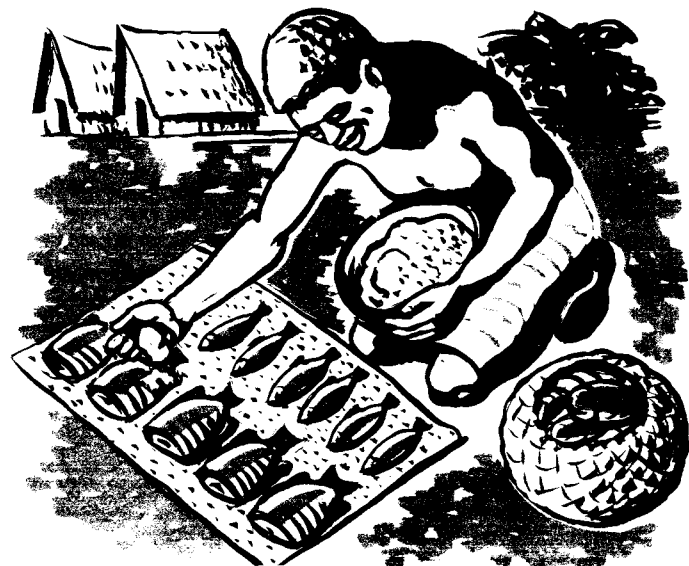
SPLIT BIG FISH

If the fish are big, say $1\frac{1}{2}$ to 2 feet long, then you should first split them in halves along the backbone. Fix each half fish between two flat bamboo slats or stocks and then rest it head down on racks built about four feet above the ground.

Light a fire of hardwood or coconut husks under the rack. If you are smoking a lot of fish you may need to make more than one fire. For best results, you should start off with a slow fire for about half an hour, followed by a hotter fire for about one hour. Then keep the fire just smoking for another six hours.



HOT SMOKING FISH USING AN OIL DRUM OVEN.



YOU CAN DRY SALT FISH ON A MAT.

6. When you have done several pieces like this, spread plenty of salt all over them, and then do some more pieces in the same way, but place them on top of the first lot.
7. Go on doing this, making a layer of fish, a layer of salt, a layer of fish, a layer of salt, until you have finished all the fish.
8. Keep the salted fish in a cool dark place if you can.

Note 1. Some people like the salty taste of fish which has been prepared in this way; other people do not. You can take away the salty taste by soaking the fish in fresh water before eating it.

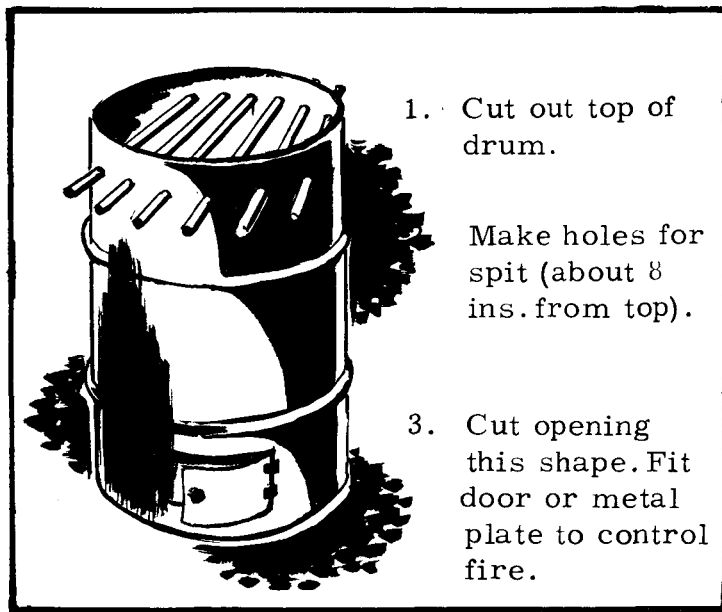
Note 2. Fish can easily be dry salted while you are still out at sea in the boat; this will keep them good until you get back to land. With small fish you take out only the entrails.

WHAT KIND OF SALT?

Some kinds of salt are better than others; but in many islands there is no choice; but you can salt your fish with whatever kind of salt you have.



HOW TO MAKE A SIMPLE OVEN



1. Cut out top of drum.

Make holes for spit (about 8 ins. from top).

3. Cut opening this shape. Fit door or metal plate to control fire.

1. Get a suitable oil drum and cut out the top (end).

2. Next make some holes about 8 inches below the top of the drum to hold the spits on which the fish is placed.

3. Cut a rectangular opening near the bottom of the drum. Close this opening with a suitable metal door or a piece of steel plate; this is to control the fire.

roasting. Any fish not eaten can be kept good for another 12 hours by smoking and roasting it again.

This is the way to smoke and roast fish -

1. Make a small wood or coconut husk fire.
2. Put the fresh unsalted fish on a rack over the fire and keep turning it over every five minutes.
3. In about half an hour the fish will be cooked and ready to eat. If you intend keeping the fish for a while before eating, then put it in a covered, airy container.

HOT SMOKING

If you do not want to eat the fish for 1-2 days, then you should "cure" the fish by using the hot smoking method. This is a little more difficult to do than simple smoking and roasting, as you will need a stove, made from an old oil or similar drum.

This is the way to make the stove (see drawing) -

How to—

DRY FISH

Freshly caught very small fish can also be "cured" by placing them out in the sun to dry. With this method you need not use any salt, or only a little.



SUN DRYING IS AN EASY WAY TO "CURE" FISH.

Small fish can easily be dried by putting them on mats. If the fish are large, they have to be salted first for one night (see Dry or Wet Salting) and then they have to be hung up or put on mats in the sun. Before drying, wash the fish first in water.

When drying fish on mats, make sure the fish is turned over every two hours, so that it will dry out quickly.

After about three days in the sun, the fish should be ready dried.

If you have more dried fish than you can eat at once, it can be kept good by putting it in a dark dry place. Keep the fish off the ground, using wooden boards, and cover with a sack or mat.

Every two weeks put the fish out in the sun again for one or two hours and store away again as before.

How to—

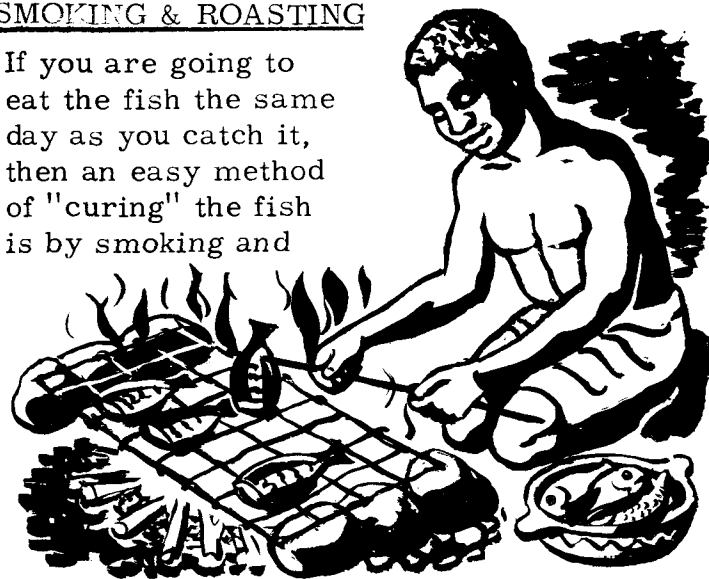
SMOKE FISH

You can preserve most kinds of fish by smoking it over a small fire. There are three main ways of doing this:-

- . You can smoke and roast the fish, or
- . You can hot smoke the fish, or
- . You can long smoke the fish.

SMOKING & ROASTING

If you are going to eat the fish the same day as you catch it, then an easy method of "curing" the fish is by smoking and



SMOKING FISH OVER AN OPEN FIRE.