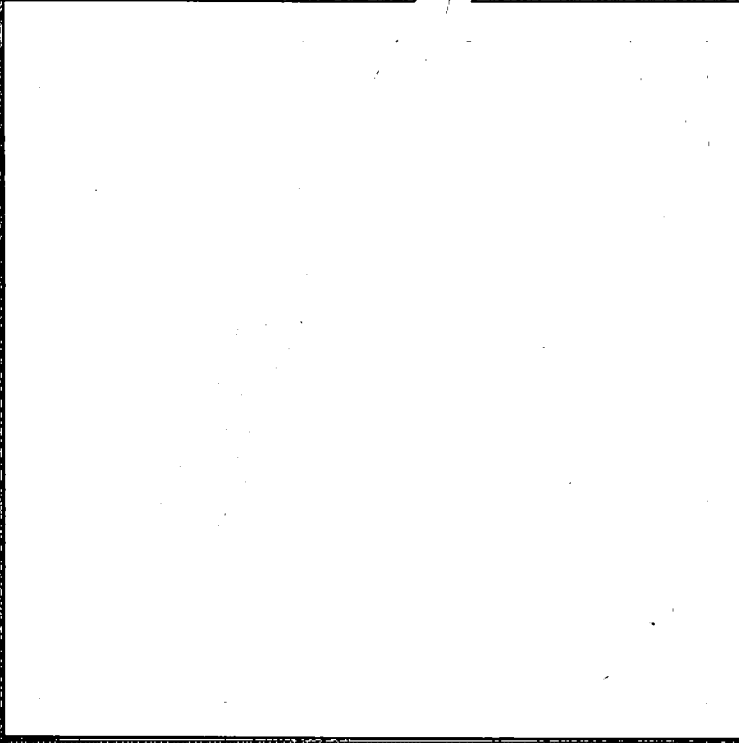


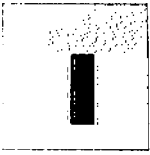
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Flaking Fish

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If you've ever eaten tuna salad, you've eaten fish flakes. They're no different than a cooked fillet. They're just in a form that's more suitable for certain dishes.

The fish are usually poached or steamed. Then the meat is flaked away from the bone for use in other dishes.

Peruvians ate marinated and spiced fish flakes in pre-Inca times. And early American settlers made them into fish cakes.

Today, fish flakes provide additional ways to enjoy the nutritional benefits of seafoods. They are high in protein, but low in fat, calories, cholesterol and sodium.

You can use fish flakes as the primary ingredient in dishes such as salads and chowders or as an extender in preparations such as deviled crab. Or create tasty spreads, appetizers, sandwiches, patties, casseroles and sauces.

Making your own fish flakes is economical; a one-pound, dressed fish yields about 1 1/2 cups of flakes. And the flakes can be stored in the freezer for up to three months. Just measure the amount you will need for recipes and freeze in air-tight pouches. Enhance the flavor and improve the frozen quality by adding a small amount of the cooking broth (about 1/2 cup per 1 1/2 cups flakes) to each package.

Any fish can be flaked, but moderately flavored ones are usually preferred. It is most economical to use a less expensive species. To avoid the problem of removing small bones, use fish that weigh 1 1/2 to 2 pounds.

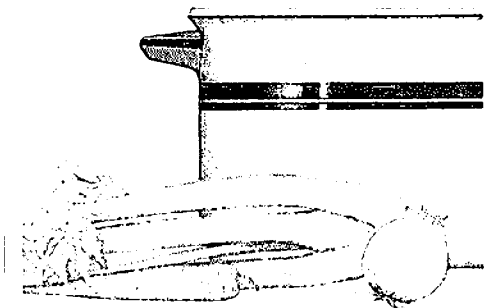
You can use fresh or frozen fish. Whole fish, dressed, with the heads left on, give maximum flavor and yield. But you can also use fillets or steaks.

Fish can be poached, steamed, baked or microwaved for flaking. Or you can use leftovers from an earlier meal.

For delicately flavored fish flakes and broth, follow these steps:



Use scaled, eviscerated and degilled fish. Leave heads on, but be sure body cavity and head are free of membrane and blood.



2

Melt 1/4 cup of margarine in an electric skillet or pan on stove. Lightly sauté a bed of cut onions, carrots and celery in the margarine, adding garlic powder, freshly ground black pepper and a bay leaf.

3

Place fish on vegetable bed. Add enough water to half submerge the fish. Cover and bring to a boil. Reduce heat and steam until fish flakes easily with a fork.

4

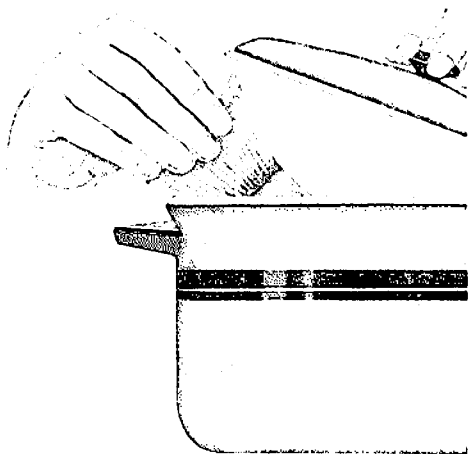
Remove fish and let it cool enough to handle. Scrape off skin. Remove dark meat and rib portion. Gently flake meat from the backbone with a fork.

5

You can use the broth as it is. To make richer broth, return backbone and head to skillet, cover and continue to cook until liquid is reduced by half.

6

You can place the cooked vegetables in a food processor or use a potato masher to squeeze them if you want to add them as a puree to the broth. Or you can use the vegetables just as they are. Cool broth in refrigerator until it congeals. Then remove solid fat layer from the top. Strain broth before using.



DATE: MAR. 29 1988

Now try one of these recipes using fish flakes. For more ideas, contact the Sea Grant office at the North Carolina State University Seafood Laboratory, P.O. Box 1137, Morehead City, N.C. 28557. Or call 919/726-7341.

Deviled Crab with Fish

- 1/2 pound fish flakes
- 1/2 pound crab meat
- 2 tablespoons chopped onion
- 2 tablespoons margarine
- 2 tablespoons flour
- 3/4 cup skim milk
- 1/4 teaspoon salt
- 1/8 teaspoon freshly ground black pepper
- 1/2 teaspoon powdered mustard
- 1 teaspoon Worcestershire sauce
- 1/2 teaspoon sage
- 1/16 teaspoon cayenne pepper (or to taste)
- 1 tablespoon fresh lemon juice
- hot pepper sauce to taste
- 1 egg or 1/4 cup liquid egg substitute
- 1 tablespoon chopped fresh parsley
- 1 tablespoon margarine, melted
- 1/4 cup dry bread crumbs

Remove any shell or cartilage from crab meat. Cook onion in margarine until tender. Blend in flour. Add milk gradually and cook until thick, stirring constantly. Add seasonings and lemon juice. Stir a little of the hot sauce into egg; add to remaining sauce, stirring constantly. Add parsley, crab meat and fish flakes. Place in greased, individual crab shells or baking dishes. Combine margarine and crumbs; sprinkle over top of each. Bake in moderate oven, 350 F, for 15 to 20 minutes or until brown and bubbly. Serves 6 to 8.

UNC Sea Grant Publication UNC-SG-87-05

This brochure was prepared by Joyce Taylor, UNC Sea Grant's seafood education specialist. For more information, contact her at the North Carolina State University Seafood Laboratory, P.O. Box 1137, Morehead City, NC 28557.

For a copy of this brochure, write UNC Sea Grant College Program, Box 8605, NCSU, Raleigh, NC 27695-8605. Ask for publication number UNC-SG-87-05.

Crab meat contains a moderate amount of cholesterol. By substituting fish flakes for half of the crab, you can substantially reduce the cholesterol. You can also use liquid egg substitute instead of egg to reduce the cholesterol in dishes such as deviled crab.

Fish Flake and Macaroni Salad

- 1 1/2 cups fish flakes
- 4 ounces shell macaroni
- 1/4 teaspoon salt
- 1/2 cup chopped celery
- 1 hard boiled egg, chopped (optional)
- 1 small onion, chopped
- 1/4 to 1/2 green pepper, chopped
- 1 small jar chopped pimento, drained
- 1/2 cup low-calorie mayonnaise (or to desired consistency)
- 1 8-ounce can sweet peas, drained
- 1/2 teaspoon celery seed
- 1/4 teaspoon freshly ground black pepper
- paprika

Cook macaroni according to package directions. Drain. Rinse with cold water. Drain while cutting up celery, egg, onion and pepper. Mix all ingredients except paprika together lightly but thoroughly. Chill well before serving. Arrange on lettuce leaves. Sprinkle with paprika. Garnish with cherry tomatoes. Serves 8 to 10. (Excellent when made one day and served the next.)

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