Hawaii residents may order single copies of publications free of charge from county offices. Out-of-State inquiries or bulk orders should be sent to the Agricultural Publications and Information Office, College of Tropical Agriculture and Human Resources, 2500 Dole Street, Krauss Hall Room 107, Honolulu, Hawaii 96822. Price per copy to bulk users, $.20 plus postage.
In Hawaii, fish are important in family meals. The wise homemaker knows how to serve them in different and appetizing ways—whether they are fresh, dried, frozen, or canned.

Fish in the Diet
Fish are an excellent source of protein. Most Hawaiian varieties have a protein content of 20 percent or more. Pork, beef or lamb contain 15 to 19 percent protein. Fish also are a fine source of vitamins A and B complex and minerals such as copper, iron, phosphorous and magnesium. Deep-sea fish furnish iodine. The bones of canned fish are soft and should be eaten for the calcium they contain.

Fish may be classified by their fat content. Fish with more than 3 percent fat are classed as fat fish. Hawaiian varieties considered fat by analyses made in the Agricultural Experiment Station, Foods and Nutrition Department,* are: ahi (big eye), albacore, aholehole, kumu, mullet and u’u. All other well-known varieties were found to have low fat content, making the caloric values of Hawaii fish less than that of an equivalent weight of meat. The high protein values and the low calorie content make fish an ideal food for use in planning high-protein, low-fat diets.

When fish are smoked, fried, or broiled, there is a loss of moisture and an increase in the protein and fat contents; but even when fried, a low-fat fish, such as aku, has much less fat than a red-muscle meat such as beef, pork, or lamb.

The sodium content of Hawaii fish varies, even within one variety, but is comparable to that of Mainland fresh and salt water fish. Treatments, such as soaking in salt water in preparation for smoking, or marinating in shoyu, increase the sodium content approximately 10 to 50 times. Persons with hypertension (high blood pressure) or cardiac problems (heart ailments) should not use fish treated in this way.

Selection, Care and Handling

Hawaii offers a wide variety of fish at reasonable prices if bought in season. Fish spoil quickly, so they must be handled properly to prevent spoilage. When you are shopping, look for these signs of freshness in fish.

- **Flesh firm and elastic, especially along the backbone.**
- **Gills reddish-pink and have a fresh odor.**
- **Eyes bright and full.**
- **Scales cling to the skin.**
- **Fish has no pronounced odor.**

If you catch your own fish, you must handle it properly to keep it fresh. Do not bruise the flesh or expose it to the sun. If ice is not available, remove the entrails and sprinkle the cavity with salt. At home, keep fish on ice or in the coldest part of the refrigerator. Save the heart, roe and liver. Never refreeze thawed fish. Fish heads and bones may be cooked and used for chowders.

To Cut and Dress Fish

1. **Gutting** — Lay fish on board with head toward you and belly up. Locate point X. Start cutting at one side of point X, making shallow cut to avoid breaking intestines, and with one stroke cut to point Y. Separate the nape (gill bones) by pulling apart with the hands. Scoop the intestines from the tail forward and sever the head at the gills. The entire intestines and the head may be removed in one piece. During the whole operation a steady stream of water should play over the fish. When gutting fish such as salmon for butterfly fillets, open at the backbone instead of the belly. Be careful not to pierce the intestines.

2. **Finning** — To remove the dorsal (back) fin, cut into the flesh at the base of the fin, as shown in sketch. Start at the head and cut toward the tail (broken line AB). Hold the knife along the back of the blade to prevent cutting too deeply. Grasp the rear part and give a sudden pull toward the head. Both fin bones and fins will come off. Do not trim with a knife. Belly fins may be removed at surface of meat.

3. **Scaling** — If desired, use a cutting board and hold the fish by the tail. Use a heavy strong knife or curry comb, and clean by scraping against the scales. Let water run over fish and board while scaling.
4. **Skinning** — If you want to remove the skin, strip it from head toward tail, or tail toward head, depending on kind of fish. Use plenty of water.

5. **Filleting** — Lay the fish flat on its side. Locate the backbone at the head end. With a sharp knife, cut the entire side of the fish from the backbone. Turn fish over and remove the other side in the same manner. The two fillets will contain the nape bones and the rib bones, which may be pulled off if desired. This method of filleting gives more meat per fish than the commercial method of cutting above the rib bones.

6. **Final washing** — Wash the fish again. Fish refuse and scraps make good fertilizer if buried in the garden.

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**FISH COOKERY**

**General Directions**

Allow 1/3 to 1/2 pound of fish for each person. Since fish is a tender protein food, it needs little cooking. Long cooking toughens it.

To give the best flavor, juiciness, and tenderness, cook fish at a moderate temperature (350 to 375 F). That means baking at moderate temperatures, or simmering instead of boiling. When the fish loosens from the bone, it is done. Fish is sometimes wrapped in cheesecloth or parchment paper so that it will hold its shape when simmered or steamed. Handle it carefully so that it will not fall to pieces.

Fat fish need little if any additional fat. Lean fish may be marinated in French dressing, overlaid with strips of bacon, or basted with melted fat during baking.

Shrimps are washed and cooked without removing the shell. When a coral pink color, they are done. Remove the shell and the back intestinal vein on the outer curve. They may be fried, served hot, or served cold in salads and cocktails.

Live lobsters should be plunged head first into boiling water. This kills them instantly. Simmer them for the remainder of the cooking period.
BAKING
Both fat and lean fish may be baked. Hawaiian fish especially desirable for baking include awa, moi, mullet, weke, kumu, red snapper, opakapaka, papiopio, uku, and uhu. Remove head, tail and backbone, if desired. Bone as described under the dressing of fish. Wipe with a damp cloth, sprinkle the inside with salt. Let stand 10 minutes before baking. Sauces or stuffings may be served with baked fish.

Stuffed and Baked Whole 3- to 5-pound fish  
Yield: 6 to 8 servings
Rub prepared fish inside and out with salt (unless fish is already salted). Fill with stuffing and sew loosely or wind with string. Lay two or three pieces of salt pork or bacon on a well-oiled rack in a baking pan. Lay fish on this and put strips of pork or bacon on the fish. Bake in a moderate oven (325–350 F). Allow 10 minutes per pound. If fish does not brown enough, increase the heat. Lift carefully to a hot platter and remove string. Serve with lemon sauce and garnish with watercress and green pepper rings.
Note: A piece of oiled cheesecloth or ti leaves in the bottom of the baking pan make it easy to move the fish.

Stuffing for Fish
1 teaspoon minced onion
1 teaspoon minced parsley
1 tablespoon fat
1/2 teaspoon salt
1/8 teaspoon pepper
1 cup small bread cubes
1/4 cup milk
Combine the ingredients and mix. Stuff lightly into fish cavity. Sew loosely or wind with string.

Baked Fish  
Yield: 6 servings
1/2 teaspoon salt

1 cup milk (canned milk, fresh whole milk, or coconut milk)

6 fish steaks – 2 inches thick

Fine bread crumbs
Minced parsley, paprika, mustard
Lemon or pepper (if desired)
Ti leaves (if desired)

Add salt to milk. Dip fresh steaks in milk and then in bread crumbs, and place on an oiled baking pan or on ti leaves. Dot each piece with bits of fat. Add seasoning. Bake in moderately hot oven (375 F) until golden brown and well done (about 35 minutes). Serve with parsleyed potatoes, harvard beets, watercress salad with lemon cuts, mango brown betty, and coffee.

Fish in Ti Leaves
Place strips of bacon or pork inside the cavity and wrap fish in ti leaves* as for broiling. Bake in a moderate oven (375 F). Mullets about 8 inches long will bake in about 45 minutes, larger fish will take longer.

*Ti leaves may be softened by dipping in boiling water.

FRYING
Ahi, ono, ulua, mahimahi, hapuupuu, uhu, opakapaka, pualu, weke and u'u are good when fried.

Fish may be fried in either shallow or deep fat. They may be fried by the method given below or in fat from finely chopped salt pork. The fish may or may not be dipped into flour. Seasoning may be added.
Salt
Fish cut in serving portions
Slightly beaten egg or milk
Bread or cracker crumbs, cornmeal, or flour
Fat for frying

For shallow-fat frying, use a heavy frying pan with about 1/4 inch of fairly hot fat. Salt both sides of fish and let stand for 10 minutes. Dip into milk, beaten egg, or water. Roll in crumbs, meal, or flour. Place fish in pan, cover, cook at moderate heat until golden brown, turn, and cook other side. Place on hot platter and garnish with olives. Serve with tartar sauce.

For deep-fat frying, use a deep but heavy kettle with a frying basket and enough fat to cover fish. Heat fat to moderate temperature. (A piece of bread will brown in it in 40 seconds.)

Salt both sides of fish and dip into liquid, roll in crumbs or flour. Place one layer of fish in basket. When fat is hot, lower basket into fat and cook until fish is golden brown (about 5 minutes). Drain on absorbent paper and serve hot with lemon wedges or tomato sauce.

Fried fish with green pepper rings, creamed potatoes, tomato and lettuce salad, Hawaiian ambrosia, and tea make a tempting meal.

**BROILING**

Fish that fry well also broil well. Dip fish in French dressing, oil, or other fat. Preheat broiler fairly hot for small fish and medium hot for thick, large slices. Brush the rack with fat and place fish steaks or whole fish on rack. Broil about 5 minutes, turn, and broil for 5 or more minutes on other side. The skin should be bubbly and golden brown. Large, thick pieces may be baked for 15 minutes and then transferred to broiler.

**Fish with Coconut (cooked out of doors)**

Fish for broiling
Ti leaves
Coconut juice

Salt fish (mullet or moi). Pour coconut juice in cavity of fish and tie up in ti leaves. Broil on coals out-of-doors.

**Fish Broiled in Ti Leaves**

Salt fish well and wrap separately in several green ti leaves. Bind both ends of the leaves with split halves of ti leaves.

**STEAMING AND SIMMERING**

Mullet, moi, awa, kumu, weke, opelu, aholehole, u’u, kala, aku, and ono are excellent when cooked with moisture—either steam or water.

Cut into suitably sized servings and salt. Place fish in a wire basket or wrap in cheesecloth to keep it from breaking apart while cooking. Hang it over boiling water and allow to steam until flesh loosens from bones. Time required varies according to type of steamer and size of pieces.

To simmer the fish, lower the basket or cheesecloth with fish directly into the water. Simmer until flesh loosens from bones.
Plain salted water may be used for simmering the fish. Lemon juice or vinegar may be added for flavor. Milk may be used for simmering the fish, and this stock may later be used for soups or chowders.

With steamed fish, try serving a tomato sauce, brown rice, panned watercress, grapefruit and avocado salad, guava ice cream, and milk.

**COOKING FROZEN FISH**

Frozen fish may be put on to cook before thawing, if you increase the time for cooking by 10 to 15 minutes. If fish has been frozen and thawed, cook it immediately because it spoils more quickly than fresh fish. Never refreeze thawed fish.

**COOKING DRIED OR SALTED FISH**

Place fish on a rack or in a wire basket; lower into fresh cold water and soak overnight. If prepared for a chowder with a white sauce or egg sauce, a souffle, a casserole, or a dish with vegetables, no other salt need be added. This fish should always be cooked slowly.

**WAYS OF USING COOKED AND CANNED FISH AND SHELLFISH**

Canned fish is a standby when other fish are not available. Some popular canned fish and shellfish are salmon, tuna, cod, sardines, oysters, shrimp, crab, and lobster.

Both canned and cooked fish, particularly boiled or steamed fish and large baked fish, may be made into a great variety of delicious dishes such as omelet, timbales, baked loaf, souffle, scallop, curry, salads, or simply creamed fish on toast. By combining with other foods, even small quantities of leftover fish may be stretched to serve the whole family.

Separate the cooked fish from skin and bones or any hard pieces; then flake it by breaking it with fork or fingertips into small bits. Then use it in any of the familiar ways that canned salmon, tuna fish, or other canned fish flakes are used.

**Seafood Salad**

Yield: 6 to 8 servings

1 can tuna, salmon, or crab
1 can shrimp
2 tablespoons French dressing
1 cup diced celery
1/2 cup sliced cucumber
1/2 cup mayonnaise
Salt, pepper, paprika
2 green onions, chopped
Lettuce or other greens

Flake tuna, remove black line from shrimp. Add French dressing to shrimp and tuna, and let stand for about 15 minutes. Add vegetables and seasonings and toss lightly. Place mixture on bed of greens and serve immediately. Lemon or lime wedges and extra slices of cucumber may be used as a garnish. Pass the mayonnaise.

This is excellent when served at a luncheon with hot toasted buns, guava jam, and milk.
Fish Loaf

Yield: 6 servings

1 tablespoon lemon juice
2 cups flaked fish
1/4 cup fat
1/2 cup flour
1 cup milk
1/2 cup chopped celery
1/2 cup bread crumbs
1 tablespoon chopped parsley
1 teaspoon minced onion, if desired
3/4 teaspoon salt

Add lemon juice to fish. Melt fat, stir in flour, then milk, and cook until mixture is smooth and thick. Allow to cool. Add fish flakes, celery, bread crumbs, parsley, and salt, and mix until well blended. Mold into a loaf with the hands, and place on oiled paper on a rack in an open roasting pan. Bake about 45 minutes in a moderate oven (350 F). Serve with tomato sauce, if desired.

Scalloped Fish

Yield: 6 servings

3 tablespoons fat
2 tablespoons flour
1 teaspoon salt
2 cups milk
2 cups cooked fish
2 cups bread crumbs mixed with about 1 tablespoon melted fat

Make a white sauce using fat, flour, salt and milk, or use canned white sauce. In a baking dish, place a layer of fish, then a layer of bread crumbs and about one-third of the white sauce. Repeat, finishing with a layer of bread crumbs on top. Bake in a moderate oven (375 F) until brown. Variation: Add a layer of sliced hard-cooked eggs.

Salmon Casserole with Parsley Biscuits

Yield: 6 to 8 servings

3 tablespoons butter
3 tablespoons flour
1/2 teaspoon salt
1 1/2 cups milk
1 large can (No. 1 tall) salmon

Melt butter and stir in flour to form a smooth paste. Add salt and milk, and cook over low fire until slightly thickened, stirring constantly. Flake salmon and add. Pour into a greased 1-1/2 quart casserole. Top with parsley biscuits; use standard baking powder biscuit mixture and add 2 tablespoons chopped parsley. Bake at 425 F until biscuits are golden brown (about 20 minutes).

Tahitian Raw Fish (la Ota)

Yield: 3 cups

This dish is excellent as an appetizer for buffet supper, or for those eager to try foreign dishes.

1 pound fresh ahi, cut into 1/2-inch cubes
1 clove garlic, crushed
1 medium onion, chopped fine
1 cup lime juice (fresh or frozen)
1 medium fresh tomato, chopped
2 medium stalks celery, chopped
1/2 fresh cucumber, chopped
3 sprigs watercress, chopped
1 hard-cooked egg, chopped
1 cup thick coconut cream
1/2 teaspoon salt

Marinate raw cubed fish, garlic and onion in lime juice at least 2 hours, or until meat appears white and as if cooked. Drain off lime juice and add chopped tomato, celery, cucumber, watercress and
egg. Mix with coconut cream and season with salt. Serve as pupus or appetizers.

Epicurean Fish

Yield: 4 servings

1 pound fish fillets (swordfish, mahimahi, ahi, ulua)
Juice of 1 lemon
3 tablespoons melted margarine
3 tablespoons mayonnaise
1 tablespoon chopped parsley
1 tablespoon chopped green onion
3 tablespoons parmesan cheese

Dip fish in lemon juice, then in margarine. Broil 3 inches from flame for 5 minutes. Brush fish with lemon juice and margarine; turn and brush again. Combine mayonnaise, parsley and green onion; spread over fish and sprinkle with cheese. Broil 5 to 7 minutes.

Ahi Baked Italian Style

Yield: 4 servings

1 pound fresh ahi steak
1 cup tomatoes, drained and chopped coarse
1 clove garlic, chopped
Dash black pepper
1/4 teaspoon oregano
1/4 teaspoon thyme
Pinch rosemary
Dash ground cayenne (optional)
2 tablespoons olive oil

Salt fish lightly and let stand 20 to 25 minutes. Grease baking pan with 1 tablespoon olive oil. Add chopped tomatoes, garlic, seasonings and herbs. Pour remaining olive oil over all. Bake in 350 F oven for 1 hour. Serve hot or cold with rice.

Tuna Au Gratin

Yield: 5 to 6 servings

1 baked 9-inch pie shell and pastry pieces
1 can (10 1/2 ounce) condensed cream of mushroom soup
1/4 cup milk
2 tablespoons flour
2 tablespoons onion flakes
1 package frozen peas, thawed and drained
2 cans (7 ounce each) chunk-styled tuna
1 can (4 ounce) pimiento, chopped
1 cup shredded American cheese

Prepare pastry shell from your favorite recipe or pastry mix. Bake in oven at 450 F, along with leftover pieces, for 10 to 12 minutes or until light brown. Combine mushroom soup, milk, flour and onion flakes in saucepan; cook until thickened. Add drained peas, tuna and pimiento. Bring to a boil. Turn mixture into baked shell. Sprinkle with shredded cheese. Top with browned pastry crumbs and bake in hot oven (425 F) 12 to 15 minutes.

Tuna Molded Salad

Yield: 6 to 8 servings

1 tablespoon (1 envelope) gelatin
1/4 cup cold water
1/2 cup hot water
2 tablespoons lemon juice
1 teaspoon prepared mustard
1/4 teaspoon salt
1/4 teaspoon paprika
1 1/2 cups flaked tuna (two 7-ounce cans)
1 cup chopped celery
1/2 cup mayonnaise
Soften gelatin in 1/4 cup cold water. Dissolve over hot water. Add lemon juice and seasonings. Chill until partially set. Add flaked tuna, celery and mayonnaise. Put mixture into one large mold rinsed with cold water, or individual molds. Chill until firm. Unmold on crisp lettuce. Serve with Cucumber Dressing.

**SAUCE QUICKIES**

**Cucumber Dressing**

Yield: 2/3 cup

- 1/4 cup mayonnaise
- 1/2 cup finely diced cucumber
- 1 tablespoon chopped green pepper
- 1/4 teaspoon onion salt
- 1/4 teaspoon celery seeds (optional)

Combine all ingredients, blend until smooth. Serve with molded tuna salad.

**Egg Sauce**

Yield: 1 cup

- 1/4 cup margarine
- 2 tablespoons flour
- 2 teaspoons prepared mustard
- Few grains pepper
- 1/2 teaspoon salt
- Dash paprika
- 1 cup milk
- 2 shelled, hard-cooked eggs, sliced or sieved

Melt margarine in top of double boiler over boiling water. Add flour, pepper, salt, mustard and paprika; stir until blended and smooth. Add milk slowly, stirring constantly to avoid lumps. Cook, stirring until smooth and thickened. Add sliced or sieved hard-cooked eggs. Serve with fish loaf or poached fish.

**Celery-Mustard Sauce**

- 1 cup condensed cream of celery soup
- 2 tablespoons prepared mustard
- 1/4 cup milk

Combine all ingredients in saucepan; heat and stir until smooth.

**Serving Fish**

Make the fish dish attractive, tasty, and appetizing. The same general principles hold good for fish as for other foods:

**Flavor contrast** — Tart and acid foods are excellent with fish. Lemon, sour sauces, cabbage slaw, pickles, and relishes are good.

**Color contrast** — Light-colored vegetables with red salmon, green and red ones with creamed or steamed white fish, give interest. Garnishes of radishes, tomatoes, pepper strips or rings, and parsley lend color to the plate.

**Interesting texture** — Crisp foods, such as toast and celery, with chowder; fat sauces for lean fish; and French fried potatoes or potato chips with canned salmon give good contrast.

**Correct degree of doneness** — Baked and fried fish should hold their shapes. Fried fish should be golden brown and crisp on the outside, not greasy.

**Note on Fish Odors**

To remove fishy odor from hands, wash in strong salt water, then in hot soapy water. Treat pans the same way, and then scald thoroughly.