

# Gyotaku: Japanese Fish Printing

## History

*Gyotaku* means fish rubbing (gyo = fish, taku = rubbing). Fish printing originated in Japan or China in the early 1800's. (Plants have been printed in Europe since the 1400's.) In Japan, gyotaku is practiced by sportsmen to preserve records of their catches. A fish print never lies, but fishermen do!

In the United States, it has been practiced as an art form for about 25 years; the late Mrs. Janet Canning was an American pioneer in gyotaku. Fish printing has become especially popular in the U.S. since the 1960's.

Practicing the art of gyotaku (pronounced gio-TA-koo) is a good way to gain appreciation of the beauty and great variety of marine organisms. You can also use this technique for making prints of shells, rocks, flowers, and other objects of nature.

## Materials

**1. Obtain a very fresh fish.** If you catch the fish yourself, keep it cold and try to print it within 24 hours. Otherwise, freeze the fish; it will print well when thawed. Be sure that the fish's fins or body are not severely damaged. You can gut the fish if you want to and then fill the body cavity with paper towels.

If you buy the fish at a market, select one with bright red gills, clear eyes, and a fresh smell. Look for fish with large rough scales, spines, reasonable size (6 to 18 inches), and a flat shape. Rockfish, flounders, bass, and perch are good beginning choices.

**2. Thick, water-based inks** are best for beginning. Traditionally, the Japanese have always ground sticks of carbon-based sumi ink. Another excellent ink is the water-based type used to print linoleum blocks—it's easy to use, too. Black is a good color to work with, but you may want to try other dark colors like brown, red, green, or blue.

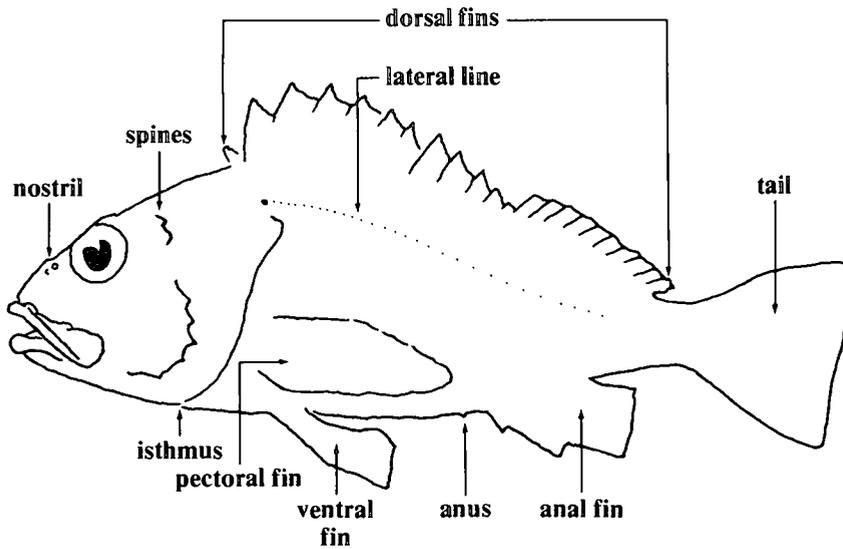
**3. You'll need several brushes,** ranging from size 00 for painting in the eyes to 1 inch for applying ink to the fish. The larger brushes should be fairly stiff because you want to get a very thin coat of the thick block-printing ink on the fish.

**4. Use moisture-tolerant paper** for printing. If you're a beginner, newsprint and sumi-e painting and sketch paper are recommended. Handmade Oriental papers ("rice" paper) will give the best results, as you gain experience.

**5. You'll also need newspaper,** plastic modeling clay, and straight pins.



Staghorn sculpin  
(*Leptocottus armatus*)



## Making your print

The first things you do—selecting, cleaning, and setting up the fish—are important. *Take your time with them, and your prints will turn out well.*

**Step 1.** Clean the outside of the fish with soap and water to remove dirt and mucus. Dry it well. Be careful not to damage the fins or to dislodge too many scales. Plug the anus with a small piece of paper to ensure that the fish won't "leak" onto your printing paper.

**Step 2.** Place the fish on a newspaper-covered table. Spread the fins on plastic modeling clay. If necessary, pin the fins to the clay to keep them in position.

**Step 3.** Brush a thin coat of ink on the fish, using a ½- to 1-inch brush. If the ink is too thick (especially in hot weather), you may want to thin it slightly. However, thin, watery inks don't work well. When you first apply the ink, stroke your brush from head to tail. Leave the eye blank and paint it in later with a small brush (step 7).

After you cover the entire fish with ink, brush *from tail to head*. By reversing the direction of your brushing, you catch the ink under the edges of the scales and spines and improve your print.

**Step 4.** Place the moisture-tolerant paper carefully over the top of the fish. Press the paper firmly with your fingers over the entire inked fish. Be careful not to wrinkle or move the paper excessively. (With round-bodied fish, you may have to move the paper somewhat to avoid wrinkles.) Excessive paper movement can result in "double prints."

**Step 5.** Rub the entire fish.

**Step 6.** When you finish rubbing, gently remove the paper. Then study your results for mistakes, reink the fish, and do another print. A good fresh fish can yield three to ten good prints.

**Step 7.** With a small brush, paint in the eye.

**Step 8.** Wash off the fish and prepare it for dinner.

## Fish anatomy

For good printing results, it's useful to understand fish anatomy.

**1. Fins.** Most fish have at least one dorsal fin, a tail fin, an anal fin, a pair of ventral fins, and a pair of pectoral fins. Often the first dorsal fin will have hard, sharp spines, while the others will have soft, flexible fin rays. The fin spines and rays are connected by a thin, fleshy material that readily collects excess mucus and ink—which you'll need to wipe off. Some fish (trout and salmon) have a small, fleshy adipose fin that's difficult (but important) to print.

**2. Scales.** Fish scales vary in structure and reproduction quality:

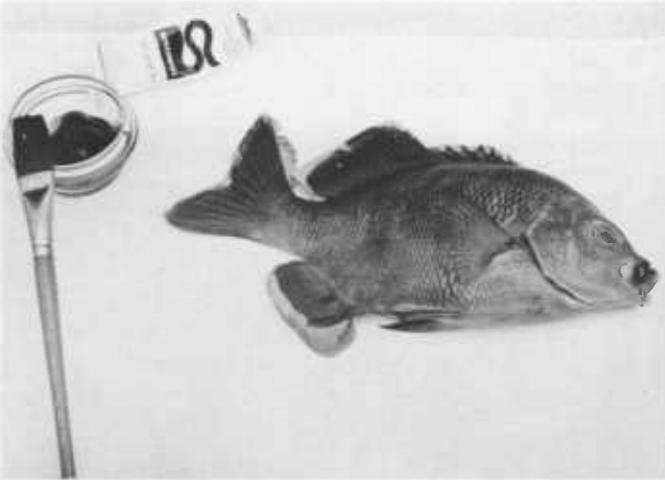
- Sharks have sandpaperlike scales that are really modified teeth. They're difficult to print and require an extra thick coating of ink.
- Trout, salmon, and smelt have delicate "deciduous" scales that are difficult to print. Sometimes, it's best to remove all scales and print the scale pockets that the scales lie in.
- Many fish have hard, rough scales (perch and rockfish, for instance). Their scales will turn out well in prints, and these fish are the easiest to work with.

**3. Lateral line.** Most fish have at least one. The lateral line is a series of small organs the fish uses to sense turbulence and pressure changes. If you print correctly, the lateral line will be very striking in your prints.

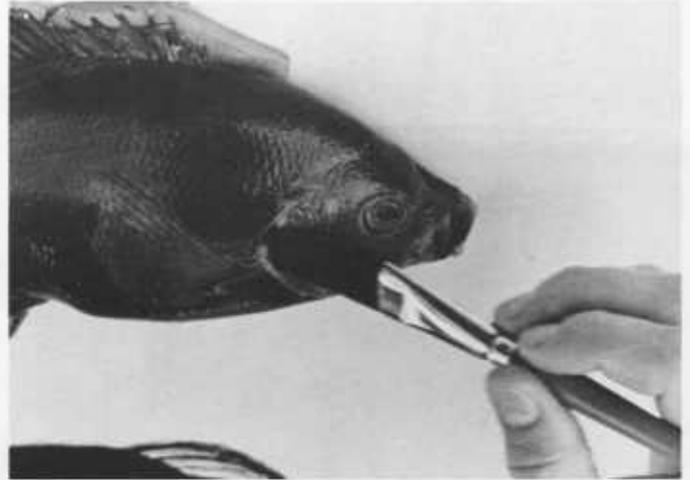
**4. Spines.** Many fish have spines around the head. These can be poked through the paper. If properly printed, most of the fish's spines will reproduce beautifully.

**5. Mucus.** Fish secrete mucus from their bodies to protect themselves from parasites and disease and to help them "slip" through the water easily. The mucus tends to make a fish print less clear and dark in color. For this reason, it's important to remove as much mucus as possible by washing the fish thoroughly. Mucus tends to collect on the fins (and under the pectoral fins) and near the anus, gill cover, isthmus, and nostrils.

**6. Body form.** Fishes' bodies vary greatly in shape. A flat flounder lies on the ocean bottom, while a round, bullet-shaped tuna needs to swim efficiently to capture prey. Generally, the flatter the fish, the easier it is to print.



**Steps 1 and 2.—Prepare your fish properly for printing. Note the clay supporting the fins.**



**Step 3.—Brush a thin coat of ink on the fish from head to tail. For a clear print, make your final brush strokes from the tail toward the head.**



**Step 4.—Place paper carefully over the inked fish.**



**Step 5.—Rub the entire fish with your fingers to transfer the ink to the paper.**



**Step 6. Remove the print carefully from the fish.**



**Step 7. Paint in the eye by hand.**

## For further reading

Bond, Carl E., and Alan J. Beardsley, *Field Guide to Common Marine and Bay Fishes of Oregon*, Oregon State University Extension Service and Agricultural Experiment Station, Extension Manual 4 (Corvallis, revised 1984). Single copy \$1.25 plus 25¢ postage; order from Bulletin Mailing Office, OSU, 97331-4202.

Deweese, Christopher M., *The Printer's Catch: An Artist's Guide to Pacific Coast Edible Marine Animals* (1984). Available from the author, 2424 Rivendell Lane, Davis, CA 95616; \$19.95 a copy.

Hiyama, Y., *Gyotaku—The Art and Technique of the Japanese Fish Print* (Tokyo, Japan: University of Tokyo Press, 1964).

Hiyama, Yoshio (editor), *Gyotaku—An Art of Fish Print* (Tokyo, Japan: Kodansha, 1972). 166 pp.

Little, Robert W., *Nature Printing* (Pittsburgh, PA: Pickwick-Morcroft, 1976). 95 pp.

Marx, David S., and Chester B. Dugdale, *Leaf Prints of American Trees and Shrubs* (Totowa, NJ: Littlefield, Adams and Company, 1974). 190 pp.

---

**The Oregon State University Extension Service** provides education and information based on timely research to help Oregonians solve problems and develop skills related to youth, family, community, farm, forest, energy, and marine resources.

**The Extension/Sea Grant program** provides education, training, and technical assistance to people with ocean-related needs and interests. Major efforts are concentrated in the areas of fisheries and wildlife, marine engineering, food science and technology, economics, business, resource management, education, and recreation.

---

**This publication** is reprinted, with permission, from a University of California Sea Grant Marine Advisory Publication. It was reviewed for use in Oregon by Donald E. Giles, Extension marine education specialist, Oregon State University.

---

Extension Service, Oregon State University, Corvallis, O. E. Smith, director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties.

The Extension/Sea Grant program is supported in part by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

Oregon State University Extension Service offers educational programs, activities, and materials without regard to race, color, national origin, sex, or disability as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. Oregon State University Extension Service is an Equal Opportunity Employer.

---