

PLUGGED IN

FUN FOR KIDS

A COOPERATIVE PROJECT OF THE SANTA BARBARA NEWS-PRESS AND THE MUSEUM EDUCATORS' ROUNDTABLE TO PROMOTE LEARNING AMONG YOUNG READERS IN NATURAL SCIENCE, HISTORY, TECHNOLOGY AND ART.






This Month's Theme: Natural History

Great American Fish Count



Fishy Facts

By Carol Peterson
Channel Islands National Park

-  There are more fish on Earth than birds or mammals. There may be 28,000 different fish species and more than 900 of these occur in the waters off the Pacific Coast.
-  The Garibaldi is the state marine fish of California.
-  The lifespan of many species of fish is 5-20 years. Some rockfish may live as long as 148 years.
-  Giant Sea Bass are fish that can be seen in the waters surrounding the Channel Islands. They can grow to 7 feet in length and weigh up to 540 pounds!
-  Flatfish like the California Halibut are born with eyes on both sides of their heads. After about two weeks, the skull grows so that one eye is "pushed" over to the other side of the head. That allows both eyes can look for prey and predators from above.

By Laura Francis
Channel Islands National Marine Sanctuary

The Great American Fish Count (GAFC) is an annual event coordinated by the Reef Environmental Education Foundation (REEF) that is held during the month of July each year. The GAFC encourages volunteer divers and snorkelers to learn more about fish and take part in a fish count. The purpose of the GAFC is to make people aware of marine fish populations and habitats. Divers attend a training seminar to learn how to count and identify local fishes.

Once identification methods are learned, counting fish is easy and fun. Fish counters use the following categories for counting fish. S = Single (1 fish), F = Few (2-10) fish, M = Many (11-100) fish and A = Abundant (more than 100 fish). The category tells the total number of fish seen at that location. You can learn to identify local fish by attending a training class, studying the fish listed in the guidebooks listed below or reviewing the online fish gallery on the web at: <http://reef.org/webres/gallery/pac/gallery2.htm>

You can find out more about local training classes at www.fishcount.org

Divers and snorkelers participate in the Great American Fish Count each July. Copyright © Brad Doane.



GET connected connected

GET CONNECTED WITH THE MEMBERS OF THE MUSEUM EDUCATORS' ROUNDTABLE:

 **Channel Islands National Marine Sanctuary**
805-966-7107; www.cinms.nos.noaa.gov
Dive in to the Great American Fish Count this July


 **Santa Barbara Mission Museum**
805-682-4149

Tour includes historical art, artifacts, gardens, church and cemetery. Children free, Adults \$4.

 **Santa Barbara Trust for Historic Preservation**
805-965-0093; www.sbtph.org

Encourages the preservation and interpretation of historic buildings and sites in Santa Barbara County

 **Santa Barbara Botanic Garden**
805-682-4726; www.sbbg.org
Summer Nature Camp, spaces and scholarships still available.

 **Channel Islands National Park**
805-658-5730; www.nps.gov/chis
Tidepool Programs Saturdays and Sundays, 11 a.m. Ventura Visitor Center

 **Ganna Walska Lotusland**
805-969-3767; www.lotusland.org


Promoting Plant Conservation, Education, and Preservation

 **Goleta Valley Historical Society**
805-964-4407; www.goletahistory.org

Fourth of July Family Fun. 10am-5pm. Adults \$5; Kids free.

 **Santa Barbara Historical Society**
805-966-1601

To promote an appreciation and understanding of Santa Barbara regional history and the importance of history in general.

 **Santa Barbara Museum of Natural History & Sea Center**
www.sbnature2.org; 805-682-4711; 805-963-1067 (Sea Center)
Butterflies Alive! May 29-Sept. 9. Flutter By!

 **Santa Barbara Zoological Gardens**
805-962-5339
www.santabarbarazoo.org

Be sure to visit the Zoo's Theater One Wild program debuting this summer. Performances are free with admission.

 **Santa Barbara Contemporary Arts Forum**
805-966-5373; www.sbcaf.org

In Paseo Nuevo, 2nd level, Arts Terrace. Hours: Tues.-Sat. 11-5, Sun. 12-5. Admission is free.

 **South Coast Railroad Museum**
805-964-3540; www.goletadepot.org


Open Wed. through Sun. 1 to 4 pm. 300 N. Los Carneros Road, Goleta. Come Ride the Train!


Books on Fish Identification

- Gotshall, Daniel W. *Pacific Coast Inshore Fishes*. Monterey, Calif.: Sea Challengers, 1989. 96 pages.
- Human, Paul. *Coastal Fish Identification, California to Alaska*. Jacksonville, FL.: New World Publications, 1996. 205 pages.
- Love, Milton. *Probably More than You Want to Know about the Fishes of the Pacific Coast*. Santa Barbara, Calif.: Really Big Press, 1996. 381 pages.

Where to See Fish in Our Local Area

Try doing your own fish count next time you go snorkeling or visit your favorite marine aquarium. Here are two local places where you can see fish:

 **Sea Center.** Live fish include Garibaldi, Opaleye, and Swell Shark. Located on Stearns Wharf along the Santa Barbara waterfront. Open 10:00 to 5:00 daily. 963-1067. 211 Stearns Wharf, Santa Barbara, Calif. 93101.

 **Channel Islands National Park Visitor Center.** Marine life exhibit with live animals, including fish. At the Ventura Harbor. Open 8:30 to 5:00 daily. 658-5730. 1901 Spinnaker Drive, Ventura, Calif. 93001.



Match these Fish to Their Habitat

By Julie Goodson
Channel Islands National Marine Sanctuary

The ocean is a three-dimensional place and fish live in all parts of it. To be a successful fish counter, you need to know where you might find fish in their watery environment. Fish come in many shapes, colors and sizes. The shape and color of a fish's body can tell you about its habitat and how it lives. Look at the fish pictures below and try to figure out which

habitat best suits each fish. Consider each fish's shape and color scheme when making your choices. What types of food do you think each fish would eat? (Hint: look at the shape of the fishes' mouths — large-mouthed fish most likely eat other fish; small-mouthed fish feed on smaller, tasty morsels like shrimps, snails and worms!). **Answers are below.**



A. Kelp Forest

B. Upper Water Column

C. Crevices in Rocky Reef

D. Sandy Bottom



1. California Halibut



2. Giant Kelpfish



3. California Moray Eel



4. Blacksmith

ANSWERS: 1. California Halibut (Flatfish) - Flatfish with patchy coloration pattern to blend into sandy bottom - eyes on one side - lie-in-wait predator. Feed on anchovies and other schooling fish. 2. Giant Kelpfish (Fishes) - A. Kelp Forest - body shape resembles a blade of kelp and they can match their color to the color of different algae. Feed on shrimps and small fishes. 3. California Moray Eel (Gymnothorax mordax) - C. Crevices in Rocky Reefs - burrow into nooks and crannies of rocky reefs. Feed on octopi, crabs and including copepods, crab and shrimp larvae and eggs. 4. Blacksmith (Chromis punctipinnis) - B. Found in upper water column over most reefs. Graze on plankton

 **Art From Scrap**
805-884-0459
www.communityenvironmentalcouncil.org/afs
Art From Scrap is an environmental education and art program of the Community Environmental Council.

 **Karpelles Manuscript Library and Museum**
805-962-5322
The world's largest private holding of important original documents and manuscripts.

Our Next Issue: July 29 Theme: Pollination