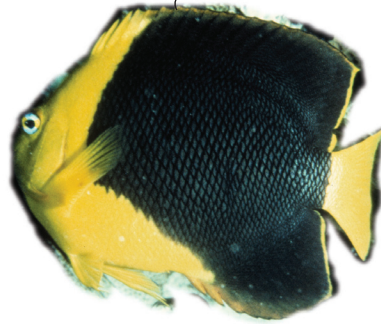
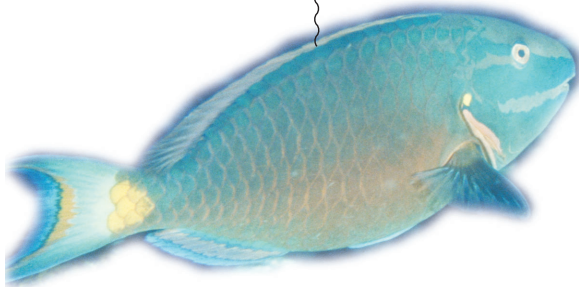


Motion from the Ocean



How many different kinds of fish are in the ocean? Scientists estimate that there are about 20,000 fish species. But most of the ocean is unexplored, so there may be many more!

Fish are a major source of food for many people living on Earth. In the U.S. alone, more than 9.6 billion pounds of fish were landed by commercial fishermen in 2004. Fishing is also a hobby for millions of people, and recreational fishing is an important part of coastal tourism. Fish are a major part of complex marine ecosystems, and play an important role in maintaining balance in these systems. For example, excessive fishing around coral reefs often leads to an overgrowth of seaweeds that can damage reef-building corals.

Here's a way to enjoy some of the bright colors and interesting shapes of ocean fishes.

What You Will Do

Make a mobile of ocean animals

What You Will Need

- One or more copies of fish "Patterns for Fish Mobiles"
- Crayons, colored markers, or colored pencils
- Thin cardboard (such as from a cereal box) or poster board
- Plastic lid or round piece of cardboard, at least 4 inches diameter
- Yarn, string, ribbon, or fishing line, at least 10 feet
- Scissors
- A nail, or woodworking awl

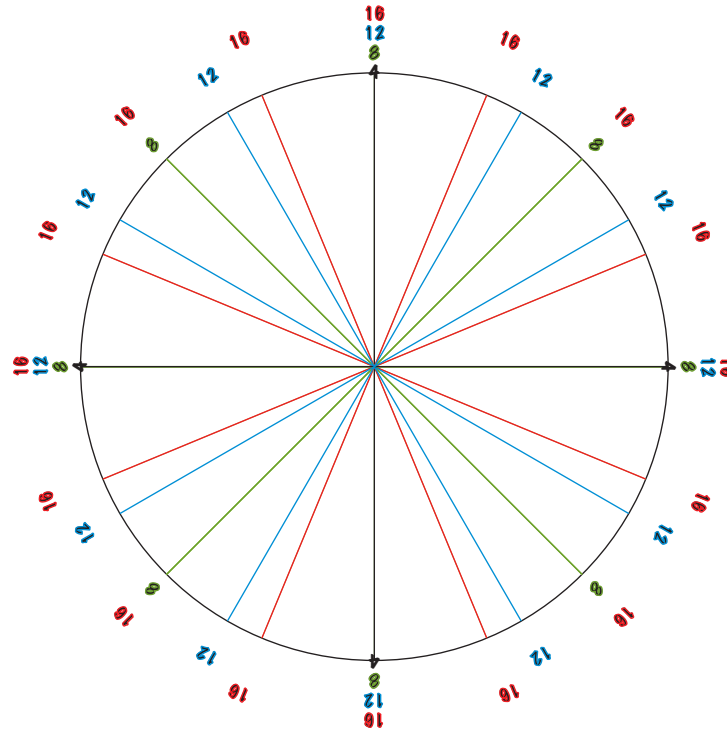
Warnings

- Be careful with the nail or awl and scissors; they are sharp!

How to Do It

1. Using page 113 as a reference, color both sides of each fish pattern and cut them out (it's easier to color them before you cut them out).
2. Glue one side of each colored fish to a piece of thin cardboard or posterboard, then cut it out again.
3. Glue the matching side of each fish to the other side of the images mounted on cardboard.
4. Punch a small hole near the top of each fish.
5. Tie different lengths of yarn, string, ribbon, or fishing line to each fish.
6. Punch holes in a plastic lid or round piece of cardboard. Try to space the holes as evenly as possible so the mobile will stay level when it is hung up. Don't worry if there is a slight tilt – it just adds interest! The "Mobile Support Marking Template" can help you punch evenly spaced holes for mobiles with 4, 8, or 12 images.
7. Tie the lines from each fish to the lid or cardboard.
8. Hang your mobile so it is free to rotate, and enjoy!

Mobile Support Marking Template



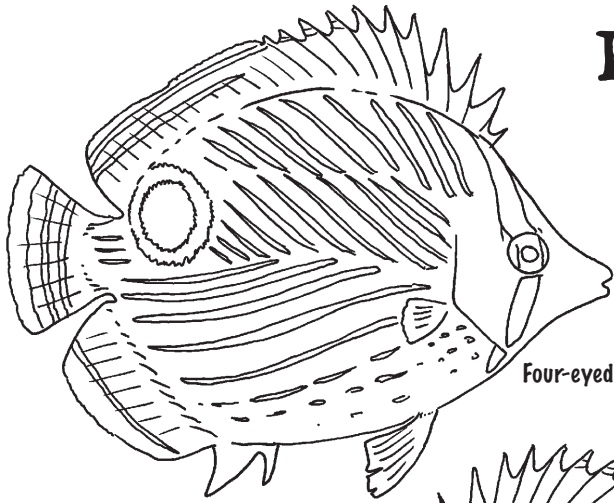
Want to Do More?

- Visit the NOAA's Ark Photo Gallery URL for many more pictures of fishes and other ocean animals.
- See NOAA's New England Fishery Science Center Fish FAQ Web page, <http://www.nefsc.noaa.gov/faq/> to find out more about fish.

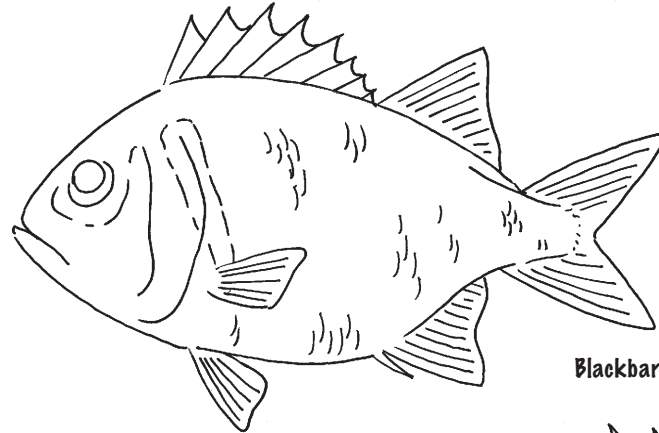
- Visit NOAA's "Encyclopedia of the National Marine Sanctuaries" Web page, <http://www8.nos.noaa.gov/onms/park/> for photos, streaming video and biological information about more than 100 marine species found in the National Marine Sanctuaries

Portions of this activity were adapted from "Fish Mobile," http://pbskids.org/readingrainbow/seaya/fish_mobile.html

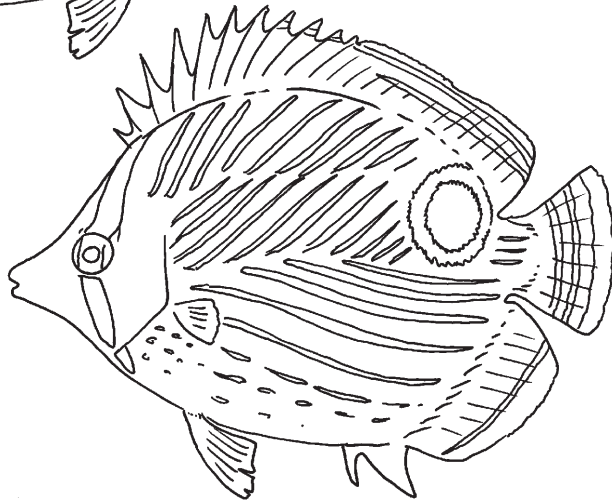
Patterns for Fish Mobile



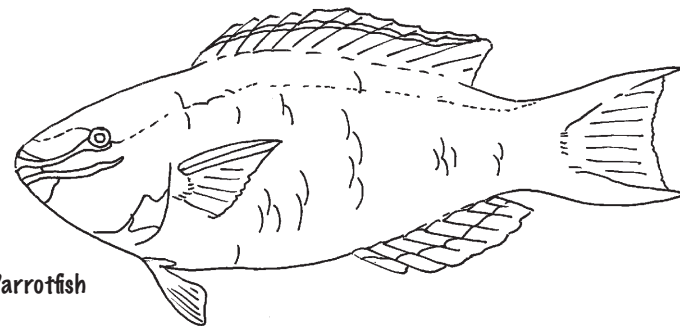
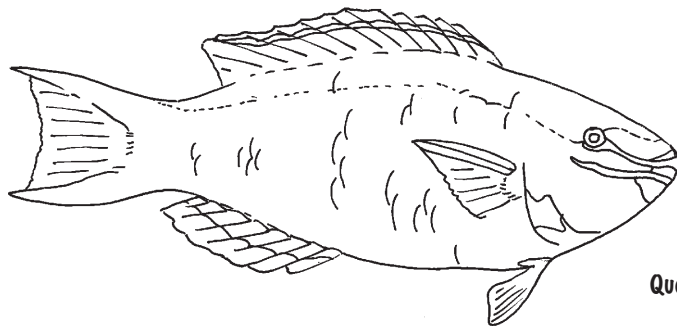
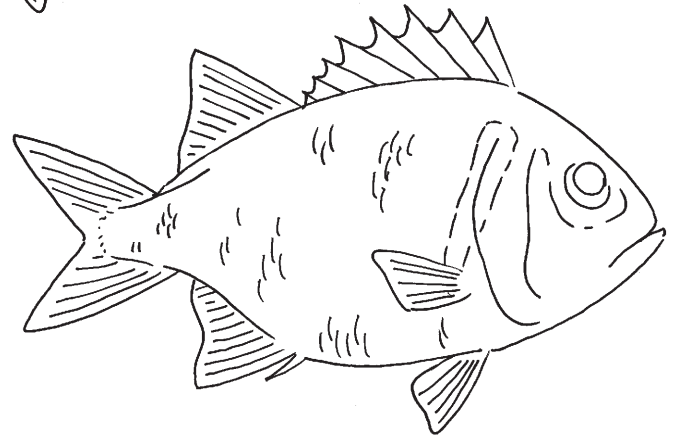
Four-eyed Butterflyfish



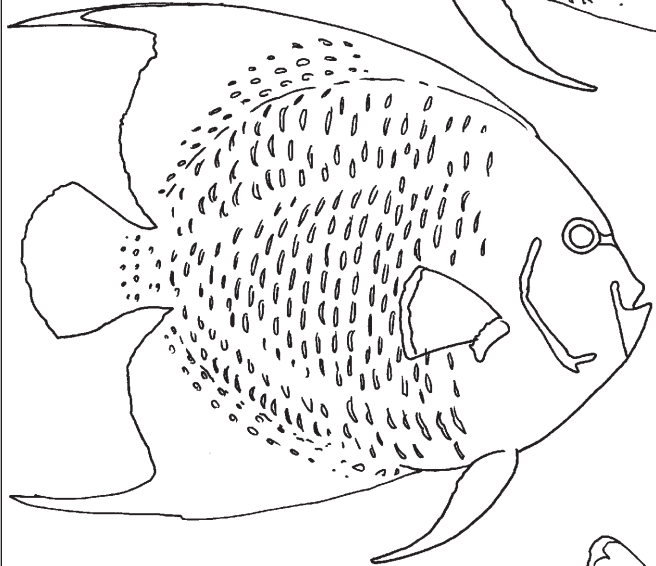
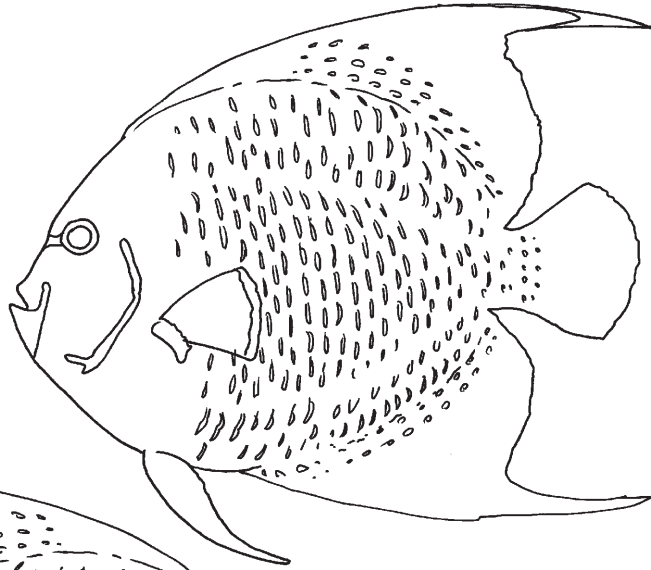
Blackbar Soldierfish



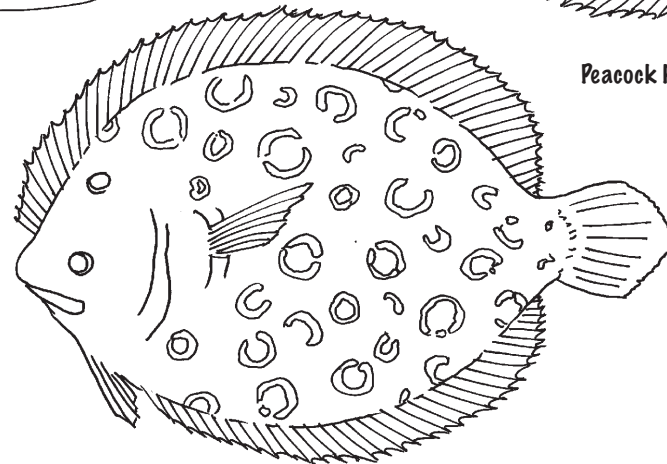
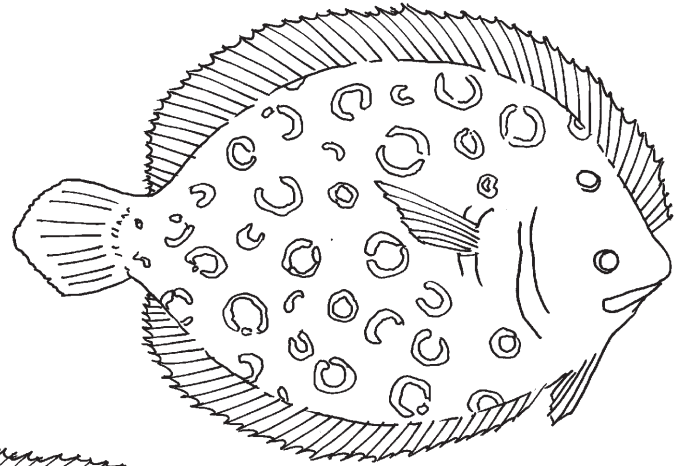
Queen Parrotfish



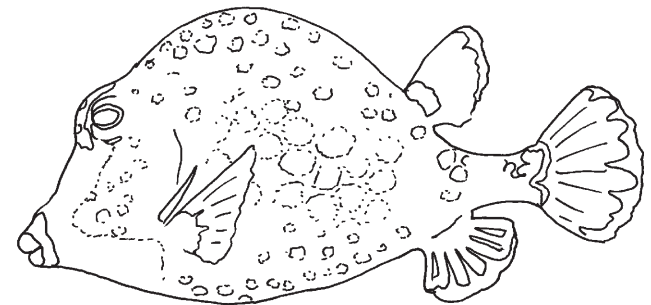
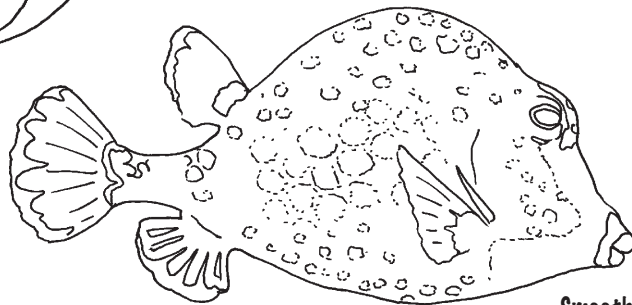
French Angel

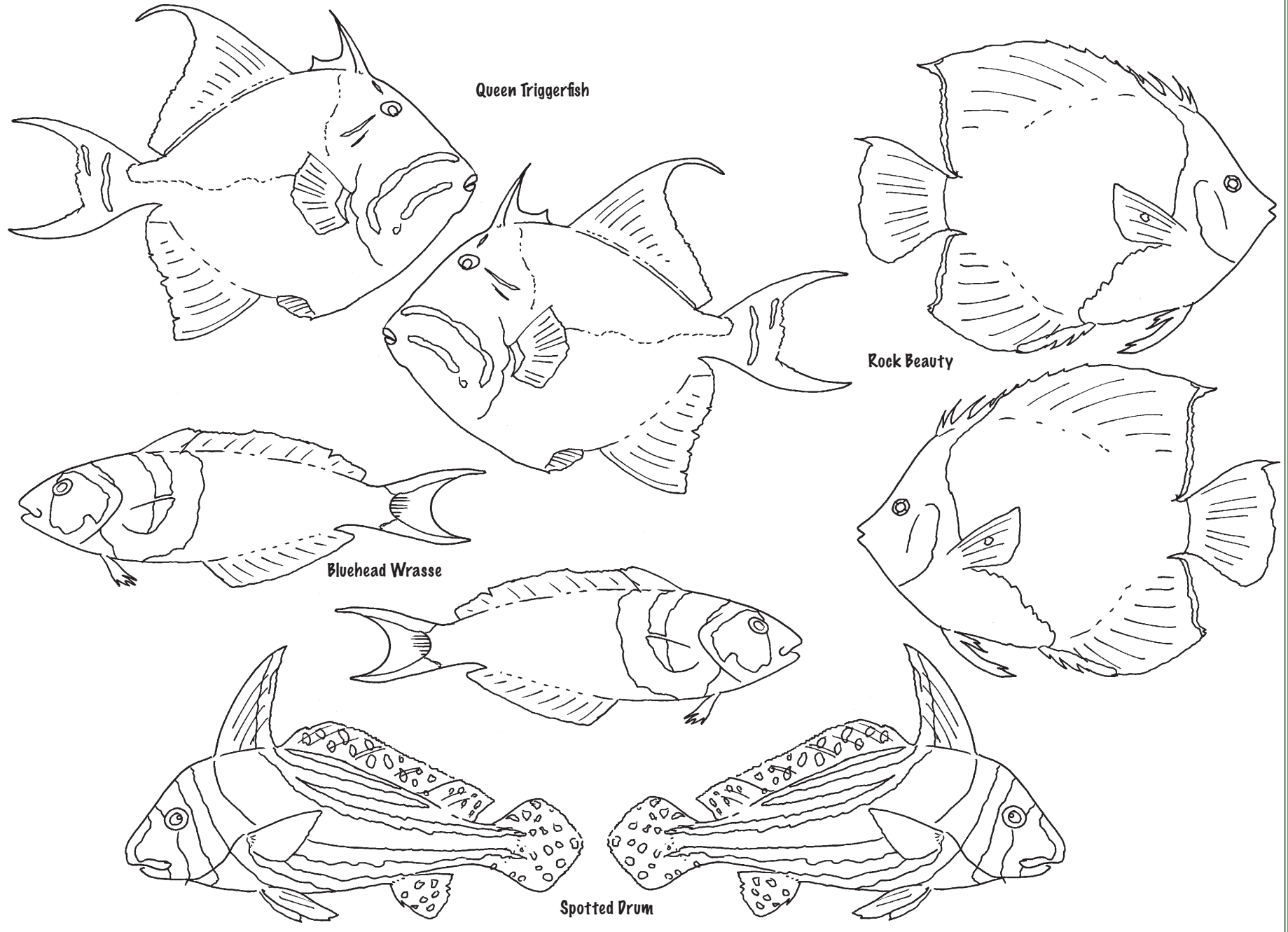


Peacock Flounder



Smooth Trunkfish





Queen Triggerfish

Rock Beauty

Bluehead Wrasse

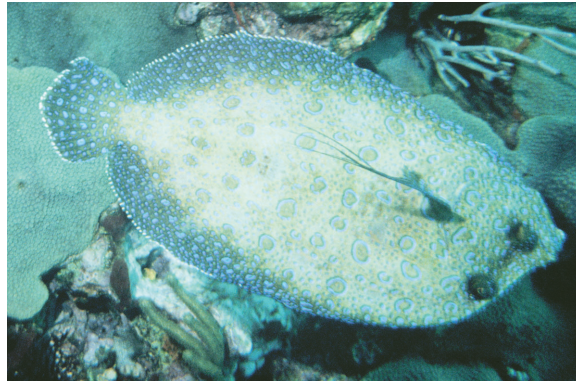
Spotted Drum

Images for Fish Mobile



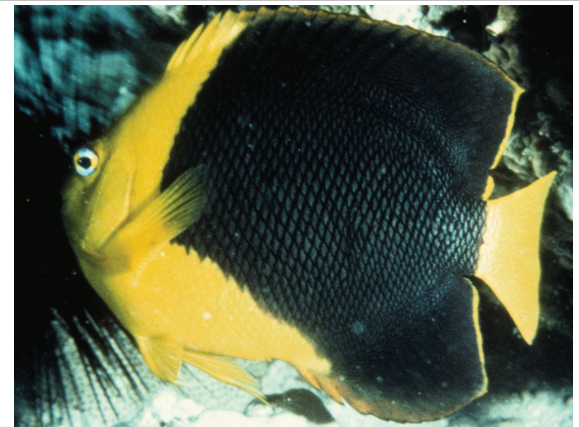
Four-eyed Butterflyfish

Courtesy Mel and Sandy Goodwin



Peacock Flounder

Courtesy Mel and Sandy Goodwin



Rock Beauty

Courtesy Mel and Sandy Goodwin



Blackbar Soldierfish

Courtesy Mel and Sandy Goodwin



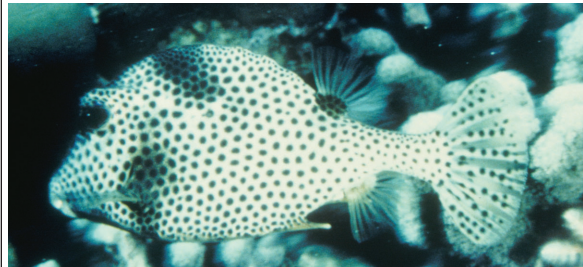
Queen Triggerfish

Courtesy NOAA CCMA Biogeography Team



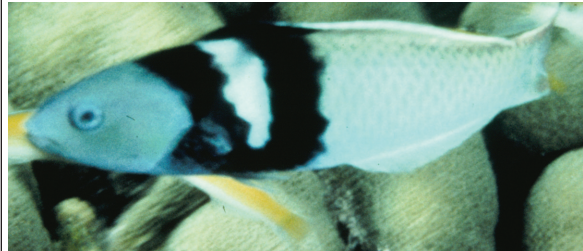
Spotted Drum

Courtesy Mel and Sandy Goodwin



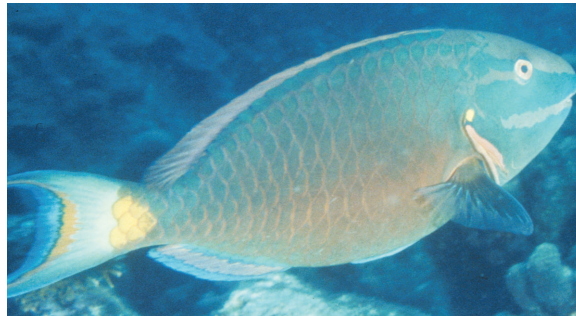
Smooth Trunkfish

Courtesy Mel and Sandy Goodwin



Bluehead Wrasse

Courtesy Mel and Sandy Goodwin



Queen Parrotfish

Courtesy Mel and Sandy Goodwin



French Angelfish

Courtesy Mel and Sandy Goodwin