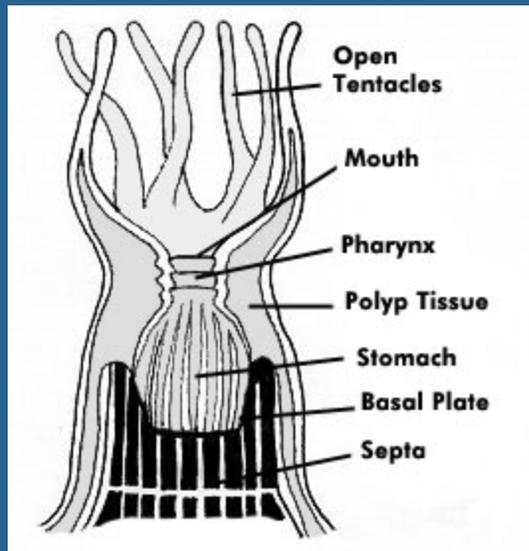




# A tutorial to assist observers in the field identification of corals

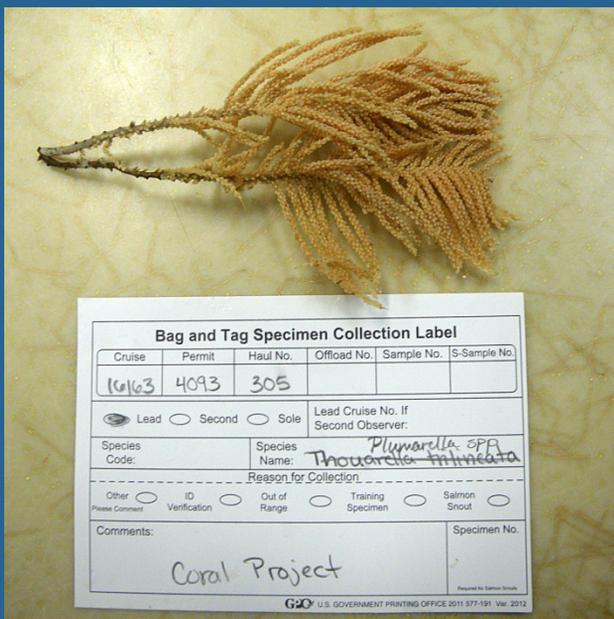
This short presentation is designed to assist groundfish observers in identifying corals to the order level in the field. It is essentially a more detailed version of the two-page coral guide provided as part of the observer identification manual. Representative specimens are on display in the glass case near the observer training room.

Corals are primarily colonial organisms classified in the phylum Cnidaria, along with jellyfishes, sea anemones, hydroids, and others. A coral colony usually consists of hundreds of individual polyps, variously arranged on a hard or soft skeleton. This guide includes the six major groups of corals commonly encountered as bycatch in the groundfish fisheries of Alaska. Although many of the corals of Alaska are quite distinctive at this level, more specific identification can be quite difficult in the field. In addition, some other groups of benthic invertebrates, including bryozoans and sponges, can sometimes be difficult to distinguish from corals.



Structure of a coral polyp

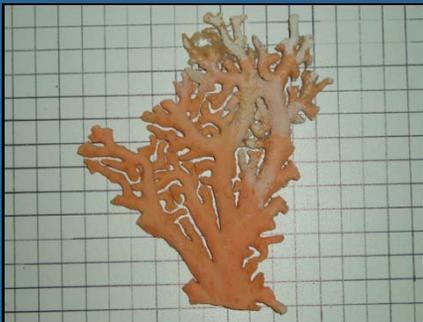
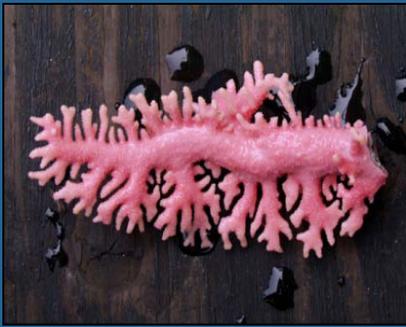
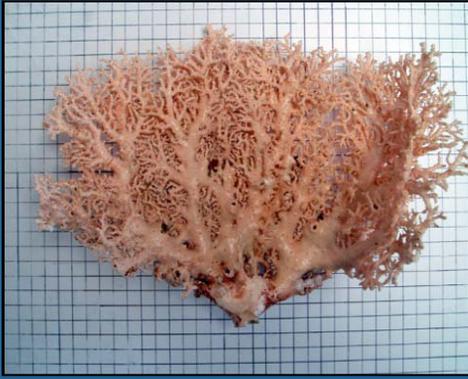
If possible, **identify all corals in your sample to the appropriate order.** If you are unsure, the “coral unidentified” code (32) is still available. As with fishes, photographs are always helpful (see example), and **representative specimens should be labeled and collected whenever possible.**



Bag and Tag Specimen Collection Label					
Cruise	Permit	Haul No.	Offload No.	Sample No.	S-Sample No.
16163	4093	305			
<input checked="" type="radio"/> Lead <input type="radio"/> Second <input type="radio"/> Sole			Lead Cruise No. If Second Observer:		
Species Code:		Species Name: <i>Plumarella</i> sp. <i>Thouarella mimaata</i>			
Reason for Collection					
<input type="radio"/> Other <input type="radio"/> ID Verification <input type="radio"/> Out of Range <input type="radio"/> Training Specimen <input type="radio"/> Salmon Snout					
Comments: Coral Project					Specimen No.

# Hydrocorals (Anthoathecatae)

All hydrocorals are colonial with a **hard inflexible calcareous skeleton**. Hydrocorals have **very small polyps embedded in skeletal pores**. Colonies may be up to one meter tall and wide but are often highly fragmented on deck as they are extremely fragile. Colonies are typically upright, and may be uniplanar (flat), bushy or variably branched with lamellar (flat blades), flabellate (fan-shaped) or digitate (finger-like) branches. Dead specimens are usually bleached.



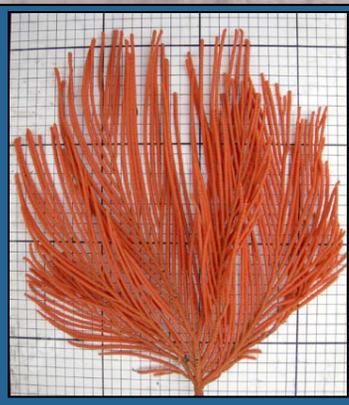
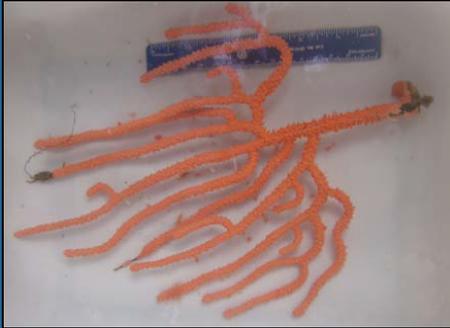
# Stony corals (Scleractinia)

All stony corals in Alaska are small solitary ‘cup’ corals with a hard calcareous skeleton. Polyps are embedded in a calyx (or cup) with septae arranged in a radial pattern from the center of the calyx. Specimens are typically fragile and collected specimens may be fragmented. Live specimens have soft tissue in the calyx that produces mucus when stressed. Dead specimens are often bleached and may be encrusted with sand and other organisms (tube worms etc.). Calyx color is white, light pink or light brown.



# Gorgonians (Gorgonacea)

All gorgonians are colonial, and the colonies may be bushy or uniplanar and quite large (more than 1 m tall or wide). On deck, specimens resemble small trees, fans, or bushes. The internal skeleton is firm but flexible and may be 'woody' (dark protein material) or calcified (white bone-like) to some degree. Healthy colonies always have tissue covering the skeleton whereas dead specimens have exposed skeletons. Polyps are generally small, and most are retractile, with a few exceptions. This group includes the bubblegum coral, red tree coral, bamboo coral, and many others.

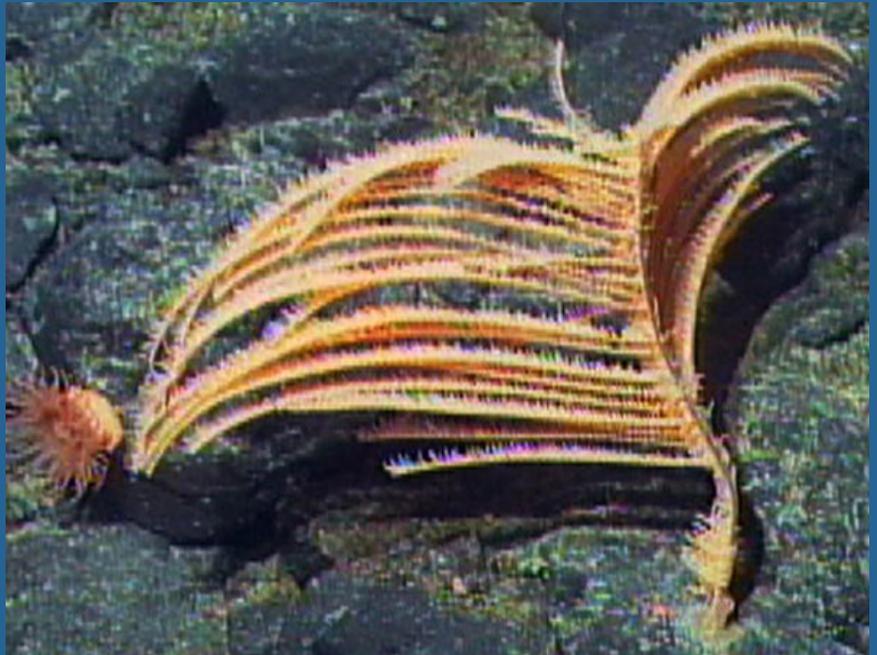
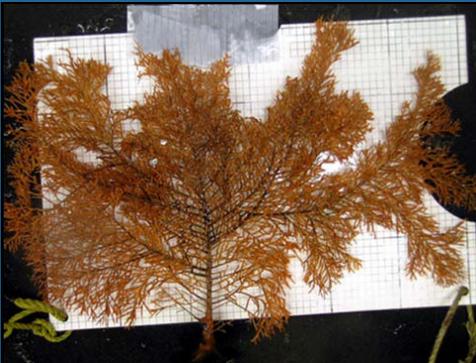
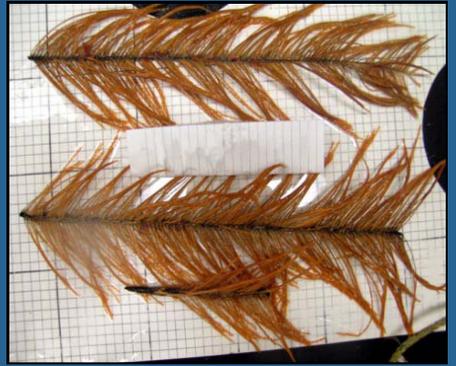


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# Black corals (Antipatharia)

All black corals are colonial. **Axial skeleton is black or dark brown**, highly flexible and covered with small thorn-like projections. Live specimens are covered with a **mucus-rich** soft tissue with small non-retractable polyps. On deck, specimens generally resemble small trees, fans, bushes, or whips. Colonies are often attached to small cobbles, pebbles, or pieces of mudstone. Black corals are primarily deepwater species.



# Soft corals (Alcyonacea)

Soft coral colonies have variably shaped fleshy bodies without an axial skeleton. Polyps are mostly retractile, but not always. Often attached to pebbles, sediment or other corals. **On deck, specimens resemble mushrooms, berries, or cauliflower.** Color is highly variable and may be red, pink, brown, purple, or orange.



# Sea pens and sea whips (Pennatulacea)

Colonies consist of an **elongated fleshy stalk supported by an internal stiff calcium carbonate rod**. The upper part of the main stalk supports rows of polyps or branches with polyps; the lower part bears an enlarged fleshy peduncle without polyps. Sea pens live in soft sediment so are not attached to pebbles, sediment or other corals. Sometimes only the stiff calcium carbonate rod is brought up in the net.



# Other Benthic Invertebrates

Several other groups of benthic invertebrates are commonly confused with corals.

**Sponges:** no internal skeleton, may be branched, usually soft and “squishy”



**Bryozoans:** highly variable in shape and size; no single field characteristic consistently distinguishes them from corals



**Hydroids:** usually small and delicate, without internal skeleton, highly branched

