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by Carl Richardson

WATER TEMPERATURE AND FISH

COLDWATER FISHES	COLDWATER TRANSITION FISHES	COOLWATER FISHES	COOLWATER TRANSITION FISHES	WARMWATER FISHES
 Brook Trout	 Brown Trout	 Northern Pike	 Walleye	 Largemouth Bass
 Slimy Sculpin	 Blacknose Dace	 Muskellunge	 Smallmouth Bass	 Bluegill
 Rainbow Trout	 Longnose Dace	 Fallfish	 Chain Pickerel	 Common Shiner
COLDWATER FISHES <i>Group of fishes that thrives and reproduces in water temperatures less than 70 degrees. The preferred temperature range for these fishes is between 50 and 65 degrees.</i>		 Creek Chub	 Grass Pickerel	 Channel Catfish
COOLWATER FISHES <i>Group of fishes that thrives and reproduces in water temperatures less than 80 degrees but warmer than 60 degrees. The preferred temperature range for these fishes is between 65 and 70 degrees.</i>		 Northern Hog Sucker	 Rock Bass	 Yellow Bullhead
WARMWATER FISHES <i>Group of fishes that thrives and reproduces in water temperatures warmer than 80 degrees. The preferred temperature range for these fishes is between 70 and 85 degrees.</i>		 Tessellated Darter	 Redbreast Sunfish	 Carp
		 Yellow Perch	 Margined Madtom	

Habitat influences the species and numbers of fish found in a waterway. If the habitat meets a fish's needs, it can survive there. If the habitat doesn't meet the fish's needs, it won't be found there. One very important habitat factor is water temperature. The temperature of a waterway is determined by many variables. Water temperature is influenced by the time of year, the amount of sunlight reaching the water, the amount and speed of the water (flowing water and currents), the source of the water (springs or runoff), and the amount of material suspended in the water.

Fish can't maintain their body temperature at a constant level as humans and other warm-blooded animals can. They are what biologists call "ectotherms." The temperature of their surroundings influences their body temperature and bodily functions. This is why water temperature is such an important habitat factor for fish.

Each fish species has a specific range of water temperatures in which it can live. If the water is outside that range, it can't survive. Within that range is a narrower range of temperatures. This is called a fish's "preferred temperature." Fish can live, grow and reproduce when they are within their preferred temperature range. The preferred temperatures are ideal for the fish's survival.

Biologists group fish with similar temperature preferences into three groups: Cold, cool and warm. Fish in a group often have other similar habitat needs. The groups do overlap, however. They overlap because temperature preferences among groups overlap. The habitats where they overlap are called "transition waters." Transition waters may be ideal for one group, but not for both. Brown trout, for example, are considered coldwater fish. However, they can tolerate warmer water than brook trout. Because they can tolerate higher water temperatures, they may be found with coolwater fish and in transition waters. ☐