

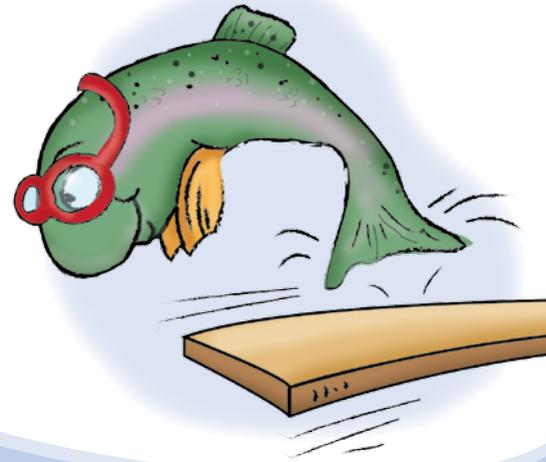
PLAY



Spring
2018

Pennsylvania • League • of • Angling • Youth

Water Water Read All About It



Aquatic animals are not much different from other animals when it comes to survival. They have several basic needs and one of them is water. It protects organs and tissues. It regulates temperature. It dissolves and carries nutrients and oxygen to cells. It even flushes waste.

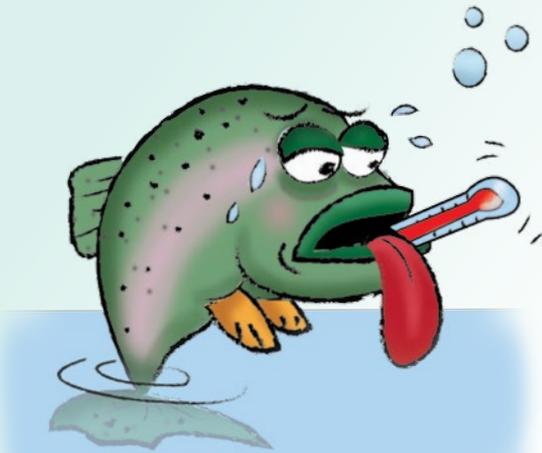
Aquatic critters live in the water. Anything that affects the water will affect them, so the quality of the water is important.

Understanding **water quality** will also make you a better angler.

Vocabulary *(Watch for these words!)*

- **Acid rain** - rainfall made acidic by atmospheric pollution, caused by burning of fossil fuels
- **Alkalinity** - measure of water's ability to resist a decrease in pH, also known as buffering capacity
- **Carbonates** - come from limestone and other rocks that contain calcium carbonate (CaCO_3) and that dissolve in water
- **Dissolved oxygen** - measure of how much oxygen is dissolved in the water
- **Organic matter** - debris from once living plants and animals
- **Water quality** - the healthiness and cleanliness of the water
- **pH** - measure of the water's acidity
- **Plankton** - microscopic plants (algae) and animals that drift in the water
- **Turbidity** - measure of how cloudy the water is depending upon suspended particles
- **Saturation** - when water dissolves all the oxygen it is capable of holding at a given temperature

Water Temperature



Water temperature affects the amount of oxygen that can dissolve in the water. It also affects the metabolism, reproduction and life cycle of an aquatic animal.

Different fish may need different water temperatures to stay healthy. Fish can be put into groups based on their preferences. Trout need cold water to survive. Sunfish prefer warmer water to reproduce.

If you want to catch a Brook Trout, travel to a stream on a shady forest mountainside. If you would rather catch a Bluegill, head to a local farm pond.

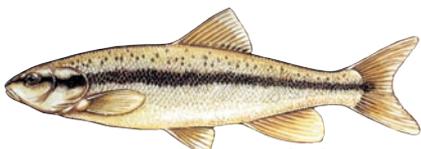
Temperature and Fish Communities

COLDWATER FISH

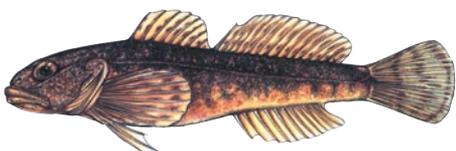
Fish that require water temperature **less than 70 degrees F** to grow and reproduce



Brook Trout
(*Salvelinus fontinalis*)



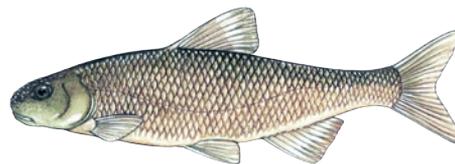
Blacknose Dace
(*Rhinichthys atratulus*)



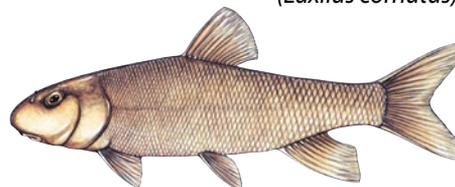
Slimy Sculpin
(*Cottus cognatus*)

COOLWATER FISH

Fish that require water temperatures **higher than 65 degrees F but less than 70 degrees F** to grow and reproduce



Common Shiner
(*Luxilus cornutus*)



White Sucker
(*Catostomus commersonii*)



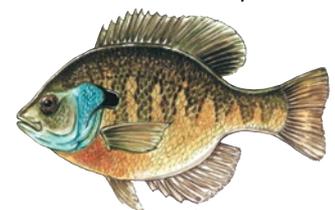
Smallmouth Bass
(*Micropterus dolomieu*)

WARMWATER FISH

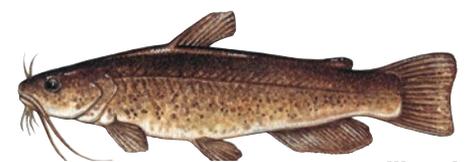
Fish that require water temperature **higher than 75 degrees F** to grow and reproduce



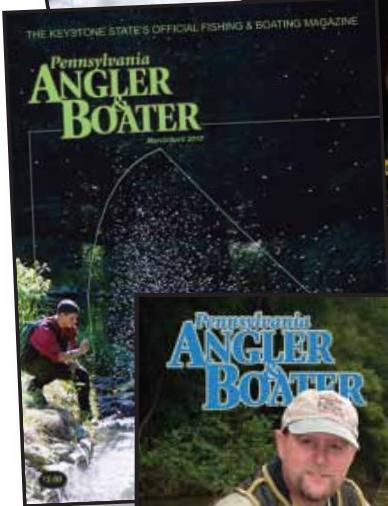
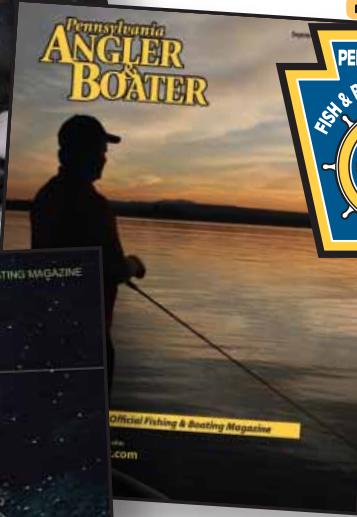
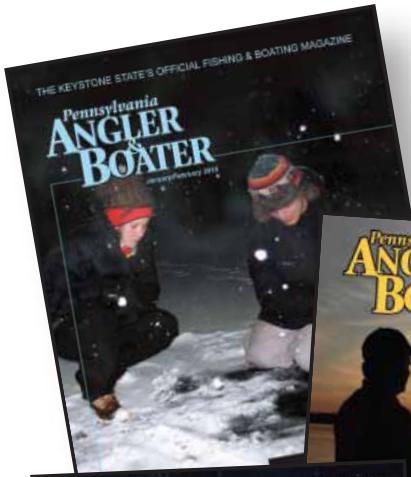
Largemouth Bass
(*Micropterus salmoides*)



Bluegill
(*Lepomis macrochirus*)



Brown Bullhead
(*Ameiurus nebulosus*)



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