HERE IS WHAT A RIVER NEEDS TO GIVE TO A SALMON OR TROUT...

Oxygen

- *Fish will thrive in oxygen-rich waters.* Most animals cannot exist long without a supply of oxygen

- Wave action, **riffles**, **wind**, and **green plants** all help dissolve oxygen into the water.

- Stagnant, very warm, weed-choked water tends to have less oxygen and, as a result, fewer life forms than cool, clean, moving water.

- **Indicators** - an abundance of riffles in a stream, bright green healthy plants in a pond, or a rich variety of readily seen life forms all indicate a healthy body of water.

illustrations by J. O. Pennanen

Mayfly nymph

Caddisfly nymph

Food

- *A healthy population of fish will exist only where there is a good food supply.*

- Some species have definite dietary preferences and are built to capture and eat a particular type of forage in a specific manner that is easiest for them.

- The main food items of interest to the fly fisher are baitfish of all sizes and shapes;
  crustaceans, such as crayfish and shrimp
  aquatic creatures such as leeches and frogs, as well as insects like mayflies and stoneflies
  terrestrial creatures that fall in the watersomehow, such as worms, caterpillars, and mice, plus insects such as grasshoppers and crickets
  miscellaneous items such as eggs, mullberries, etc.

Shelter

- *In the more confined quarters of lakes, streams, rivers, or inshore habitat, fish will usually be found confidently but cautiously feeding somewhere near an area that will provide them sanctuary if threatened.*

- On streams and lakes, this protection will come in the form of **undercut banks**, **deadfalls** (trees that have fallen into the water), **weed beds**, **sharp drop-offs**, or **rock ledges**.

Comfort

- *A single body of water is likely to have a variety of temperature readings.*

- Fish will choose an area in which to feed that is within a preferred temperature range.

- Freshwater fish are usually classified into either coldwater or warmwater categories.

- Shallow water can change temperature quickly. Sun, wind, cooler evenings, and tide changes all can have a dramatic effect on water temperature in a short time.

- Deeper water will tend to be cooler and maintain a steady temperature longer.

- Temperature will also be affected by the existence of springs, inlets, power plant discharges, dam releases, and currents.
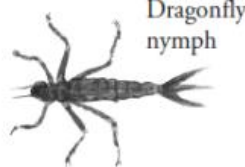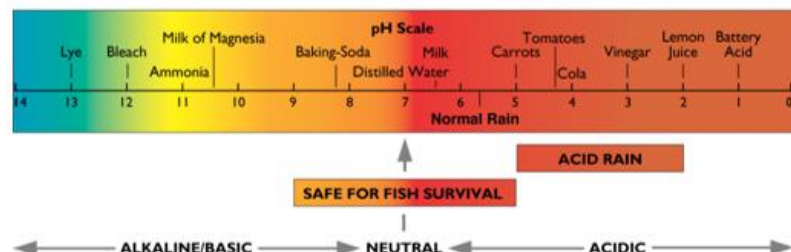
Damselfly adult

Caddisfly adult

Mayfly adult

Dragonfly nymph

pH Scale

| Lye | Bleach | Milk of Magnesia | | Baking-Soda | | Milk | Tomatoes | | Vinegar | Lemon Juice | Battery Acid |
Ammonia ... Distilled Water ... Carrots ... Cola

14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

Normal Rain

ACID RAIN

SAFE FOR FISH SURVIVAL

← ALKALINE/BASIC → NEUTRAL ← ACIDIC →

Water: Temperatures and Levels

Temperature

How warm or how cold the water happens to be on a particular day will affect whether or not a fish will choose to take a fly. In summer, when temperatures reach an excessive level, it is a good idea to choose to fish earlier in the day or in a location that would be cooler for the fish. Similarly, when temperatures are colder, fish will tend to "slow down", particularly in the early morning and late in the day. Fish do not seem to become active until mid-morning to early afternoon.

To become a knowledgeable angler, therefore, is more than being able to cast your line well; it is necessary to read water, and the natural conditions that are present.

It is a good idea to carry a thermometer as part of your fishing gear. If you are unsure whether you should fish on a particularly hot (or cold) day, take a temperature of the water, just to be sure. Water warmer that 23 degrees Celsius is dangerous for salmon, as any excessive energy bursts can leave them at a higher risk of post-release mortality.

Dr. Bruce Tufts, Atlantic Salmon Journal, Summer 2002

Water Levels

During certain times of the year, some rivers will experience lower or higher than normal levels. It is important to recognize when a river's levels are not at the optimum, as this will affect angling.

A few things to keep in mind:

- Salmon will most likely not take a fly when water levels are excessively high; salmon begin to take again when the water begins to drop and they start to hold in pools and runs;

- A salmon will likely take a fly better in shallow to moderate water (2-8 ft) versus deep pools

- If water levels are excessively low, it is probable that salmon will likely be held in pools or runs that have adequate depths.

Bruce Boudreau
http://members.attcanada.ca/~salmon/primer8.htm