WILD Kids

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What is Riparian Habitat?

Before you start to read this article, get a map of the state of Arizona (a road map is good). Take a good long look at the map. Notice all of the rivers, streams, lakes, and springs that are identified. Arizona may not have as many water sources as some of the other states, but there are quite a few.

Today, many people are concerned about the loss of riparian habitat. Why? Well, first you have to know something about riparian habitats. **Riparian habitats** are those areas surrounding or near bodies of water. The bodies of water can be rivers, lakes, streams, ponds and springs. (Riparian habitat is also associated with seas and oceans, both of which are absent in Arizona). Plants in riparian habitats are distinctly different than the surrounding vegetation. Cottonwood trees, for example, only grow in riparian areas. These huge trees cannot exist without a constant supply of water. Only a few hundred feet away there can be desert or chaparral vegetation. The desert and chaparral vegetation cannot survive in areas with too much water.

Riparian vegetation changes with the type of soil, temperature, elevation and seasonal water changes. Riparian habitats along desert waterways can have sycamore, willow, cottonwoods, ash, and black walnut trees. Or the habitat could be a mesquite **bosque**. Bosque is a Spanish word for forest. Mesquite bosques can be so thick with mesquite trees that in some places light does not reach the ground. At higher elevations, the dominate trees become big tooth maple, Gambel oak, chokecherry and narrowleaf cottonwood. Riparian vegetation can extend away from the water source for a few feet or even a mile. It all depends on the availability of water both on and below the surface.

Plants are not the only organisms dependant upon riparian habitat for survival. As much as 60% of the resident wildlife in Arizona depends on riparian areas for food, water, shelter and space for reproduction and/or survival. Migrating birds such as ducks, geese, cranes and **raptors** (hawks, eagles, kites, falcons and osprey) also depend heavily on riparian habitat for food and resting places along their migration routes. Riparian habitats also have higher densities of wildlife than surrounding areas. This difference can be due to the better availability of water, food and hiding places for the wildlife than the surrounding habitat.

Riparian habitats act as “highways” for many animals. Highways of riparian habitat are also refered to as **riparian corridors**. Some animals, such as beaver, cannot live very far from water. If an area of riparian habitat becomes concentrated with individuals, some move or disperse into other areas. Riparian habitats act as a highway for these dispersing animals to follow on their way to find new, less crowded areas to live in.

Water is critical to riparian habitats. Without water plants die and animals that depended on the water and vegetation also die. But the water does not need to be present on top of the ground or even all year. Some riparian plants can grow roots as long as 100 feet to find underground water. Other riparian plants need standing water - their roots are shallow and need to be covered with water at all times (for example, cattails and bulrushes). Thus the composition of riparian vegetation can change if water availability changes. But if the water source changes too quickly or disappears altogether, the vegetation cannot keep pace. In those cases, riparian habitat disappears.

At one time, riparian habitats in Arizona coverd vast expanses of land. The Colorado River from Davis Dam (just north of Bullhead City) to the Sea of Cortez was covered with 5,000 acres of riparian vegetation consisting of cottonwood and willow forests. This same area now has less than 200 acres of these forests. That is a 94% reduction in riparian habitat in this area of the Colorado River alone. The Nature Conservancy has estimated that Arizona has lost over 90% of its desert riparian habitats in the last 100 years. What can cause this lost of vital habitat?

There are many factors contributing to the loss of riparian habitat. Overuse of water by cities, towns,

industry, and agriculture can drastically reduce the amount of water flowing in a river. (Consider the Colorado River. This river used to flow all the way to the Sea of Cortez. Now with all the dams, Central Arizona Project, and municipal and agricultural uses, the Colorado River does not flow to the Sea of Cortez year round.) Riparian areas are also considered good agricultural lands. The existing riparian vegetation is destroyed and crops grown in its place. Dams flood riparian habitat, drowning vegetation. Cattle tend to congregate near riparian areas for access to water and food. Too many cattle can cause irreplacable damage in riparian habitats. Also, humans tend to overuse riparian areas for recreational purposes. Nine out of ten outdoor recreational events in Arizona occur within or just adjacent to riparian areas.

So what can you do? First, if you do visit a riparian area while on an outting, pick up not only your own trash, but that of thoughtless others. When you are hiking in these areas, stay on the paths or trails and do not destroy vegetation (even carving your name in a tree can harm the tree) or deface rocks with graffiti. Next, keep informed about issues concerning riparian habitat in your area. When legislation is introduced concerning riparian habitat, let your legislator, Senator or Representative, know your feelings. You can also become involved and support the work of local environmental organizations. Some of these organizations in Arizona are: the Nature Conservancy, the Riparian Council, and the Arizona chapters of the Wildlife Federation, Audubon Society, and Sierra Club. You do not need to be an adult to get involved. For most, your time and muscles can be of more help than money.

Activity I: Aquatic Times (adapted from the Aquatic Project WILD activity by the same name).

Obtain a copy of your local newspaper. Look at the various sections: national news, local news, sports, comics, advice, cooking, life-styles, editorials, commentary, entertainment, want ads, advertisements, etc. Divide your class into enough groups of 3 to 5 students so that each group can become the staff for at least one section. Your class will be putting together a newspaper that deals only with aquatic issues.

First come up with a name for the newspaper and for each section. Be creative (for example, your advice column could be called *Dear Abalone*, or a commentary column could be called *Chew On This* by M. Beaver). Each section staff should then decide on the amount of space required for articles. Assign each member of the staff a job to do (research, picture taking/drawing, typing, editing, etc.)

Next begin researching and writing your articles. You can use existing articles from newspapers, magazines, news shows and educational TV. But remember, each article must have an aquatic theme. The more local the better. Your staff could interview the local hydrologist or some grandparents about the local changes in water or wildlife dependent on water. Do not forget to acknowledge your source(s). If you cannot find anything of interest to your staff, make it up - but it must be based on fact! For example: fish race to spawning grounds, water strider upset about too many soap bubbles, age your goldfish by counting the rings on its scales (complete with how to instructions and pictures), local razorback sucker loses its hump.

Share your ideas for articles with the other sections so they can get ideas or maybe even collaborate on a story (example: *an overabundance of carp plugging up streams* article with one on carp recipes).

The next step is layout and design of your newspaper. A small group may be assigned this job, but should get input from everyone. If possible, all articles should be typed or written neatly in a specified column format - 3.5 or 4 inches works best. The layout and design group can then neatly put the newspaper together.

If possible, make enough copies of the newspaper for not only your class but to share with the rest of the school - or post copies of the newspaper on the school bulletin boards for everyone to read.

Have Fun!