

Window Into Time

Story & Art by Rich Guyette
Ashland, Missouri



© RICH GUYETTE 1974

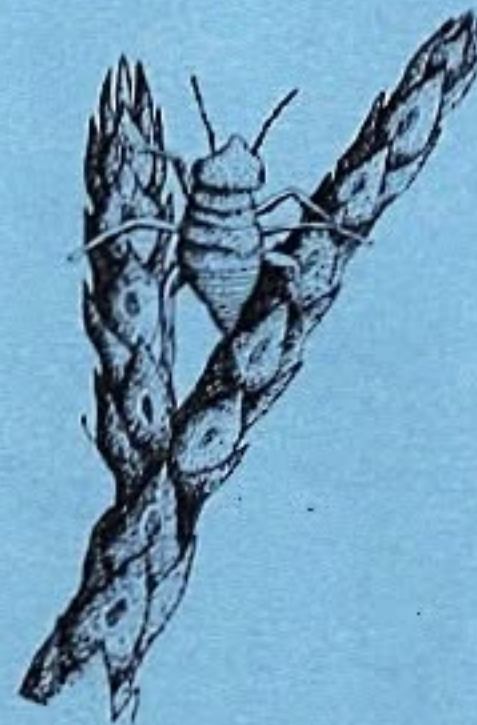
THERE IS A STORY TOLD in every tree, a natural history that is written in branches about a particular place and a particular time. In Missouri, the eastern red cedar takes on a variety of forms in response to the state's different environments. Across field, glade and prairie, the red cedar invades the grassland with its familiar tear-drop silhouette. Here, unhindered by competition for light it presents its most revealing genetic form. On dry and rocky southwest slopes, cedar forests produce tall straight trees. Red cedars growing in pastures and in fence rows often reflect periods of grazing in the shapes of their crowns. The cedars of our creek and river bluffs are the most expressive of all.

These gnarled and twisted trees grow slowly in the harsh environment of the bluff. They survive at the limit of their species' tolerance for moisture and soil conditions. Some red cedars on particularly "poor" bluff sites put on as little as one inch of wood every hundred years, and grow to be four hundred years old.

Growth of these trees is limited by many possible factors. South-facing bluffs cause micro-thermals — small upward currents of air — that can raise temperatures to levels too high for optimum photosynthesis in the summer and cause desiccation in the winter. High winds accentuate both temperature and drying which can limit growth. Severe drought can kill less har-



Magnified about eight times, the male cone resembles tiny toadstools lined up on four sides; the female flower below looks like a pair of open claws and, below right, an immature leaf hopper feeds on a cedar leaf.



EASTERN RED CEDAR

juniperus virginiana



male cones
bear pollen

seeds



split and
enlarged

fruit on female trees



smooth

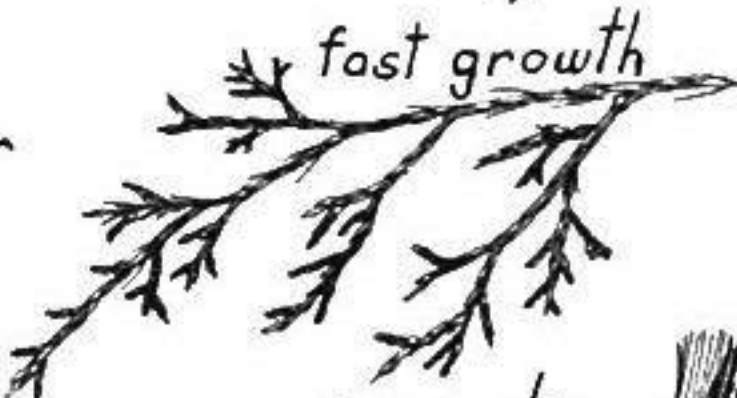
foliage
on tree

2-5 years

weather
pruned
slow
growth



prickly
younger



fast growth

sapsucker
holes



wood - aromatic,
rot resistant,
red heartwood
used for fence
posts, clothes
chests and
closets



genetic variations

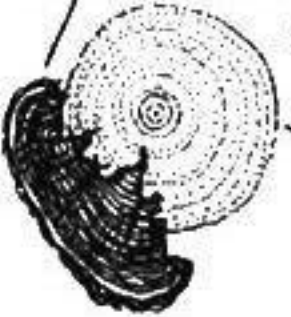


forest

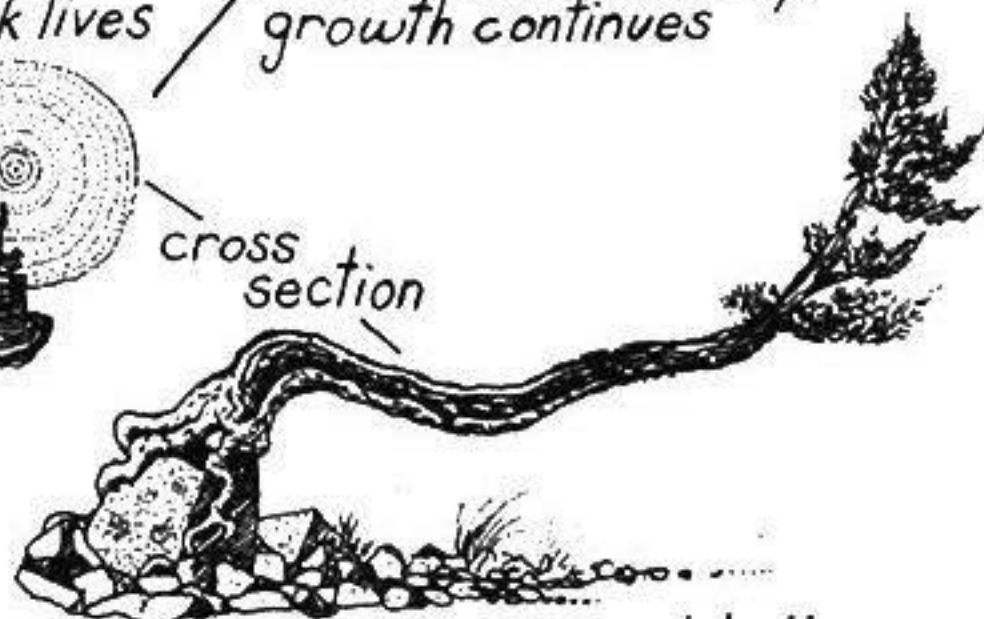
habits - pioneer of
field, prairie, and
dry rocky slopes

only a strip
along the
trunk lives

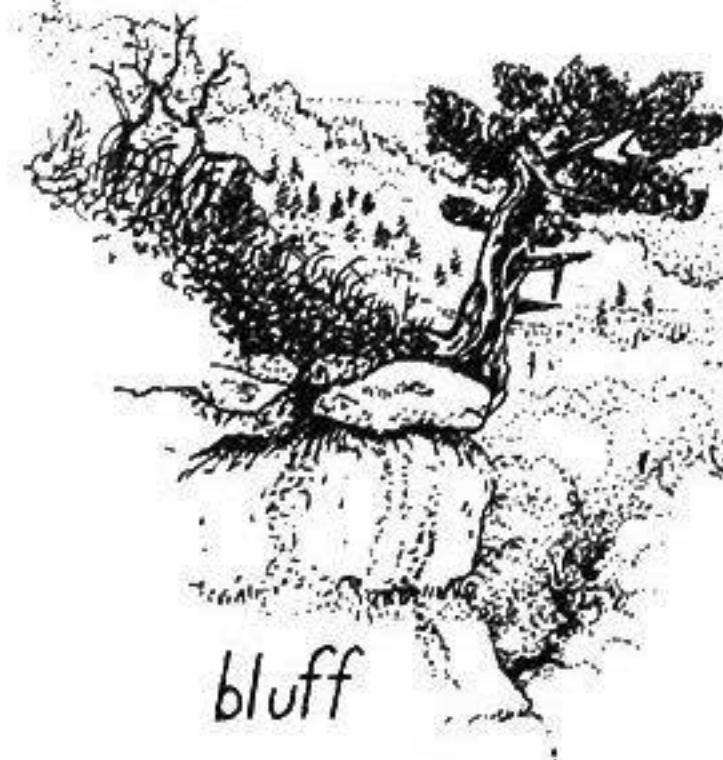
although original core
has weathered away,
growth continues



cross
section



creek bottom



bluff

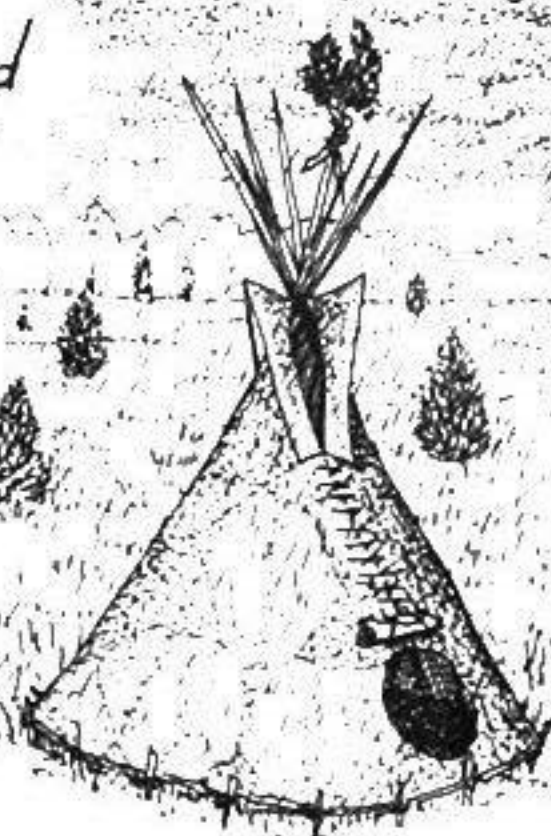


field

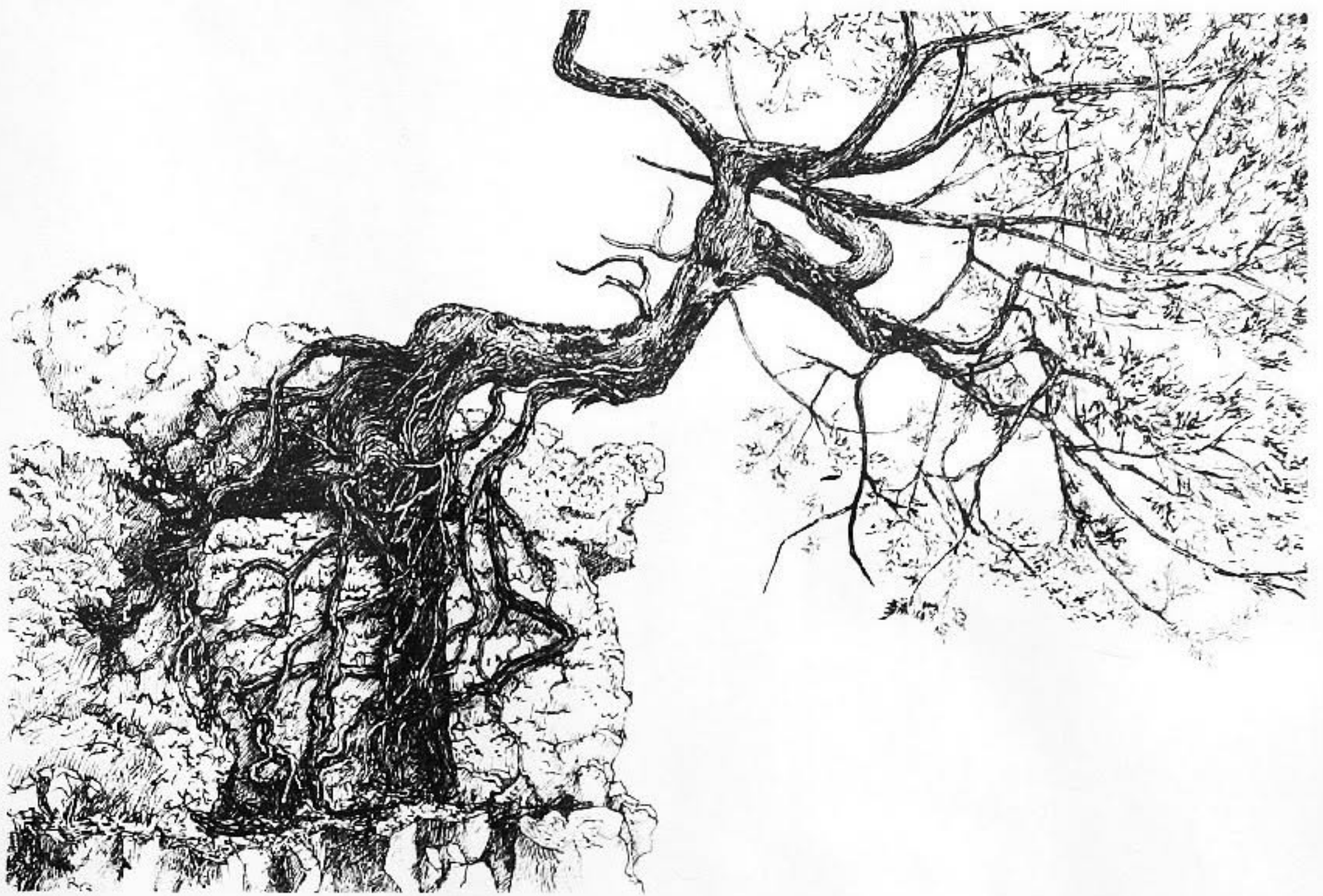


glade

cedar boughs were
used for lightning rods



food for
seed carriers
cedar waxwings
bluebirds
robins
gold finches
pine siskins



It is the cedars of the bluffs along the rivers and creeks that are most expressive of the shaping forces of nature.



dy branches and roots as well as thin the cedars along the almost soilless bluff edge. Lightning plays a large role in the shaping of old cedars. Imagine sitting on a 75-foot promontory through every thunder storm for 300 years. Although lightning usually does not kill bluff cedars (if it did there would be very few left), it does scar, strip bark, and top off the conifers.

Bluff cedars not only reflect their natural history in external form, but in their internal structure as well. Every year a cedar accumulates a layer of wood on its trunk and branches. This growth is made up of two kinds of wood, springwood (lighter colored) and summerwood (darker and denser). Together, seen in a cross section of a tree, they are known as an annual ring, the thickness of which is determined by many factors. Interpreting the meaning of tree ring patterns is the science of dendrochronology. Through statistical analysis of tree ring widths, and biological inferences, information about past climates, sunspots, fire cycles, forest competition and archaeological sites can be reconstructed.

Missouri's bluff cedars are an invaluable window into the past. Fortunately our bluff environments have been relatively undisturbed by man because of their low economic value. Nonetheless, many old cedars have been cut on the most precipitous ledges by daring individuals who were unaware of the trees' significance.

The preservation of these old bluff cedars is basic to our understanding of Missouri's natural history, but perhaps the most important reason for preserving these trees is not science or history, but the wonder and beauty they inspire in the short lives of men. □