LIVING GUIDE-POSTS OF THE PAST

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THROUGHOUT the Mississippi Valley and Great Lakes regions, may be seen numerous curiously bent trees. The casual observer views them merely as deformed freaks; but careful observation and comparison of the nature of the deformities indicate that these trees did not acquire their strange shapes simply by accident.

These trees exhibit an acute or right-angled bend in their main trunks, usually from two to five feet above their bases. Rising vertically from the bent trunks are one or more lateral stems, or secondary trunks, bearing the branching structure and leaves. Ages of the trees range from somewhat more than a hundred to two, and three, hundred years.

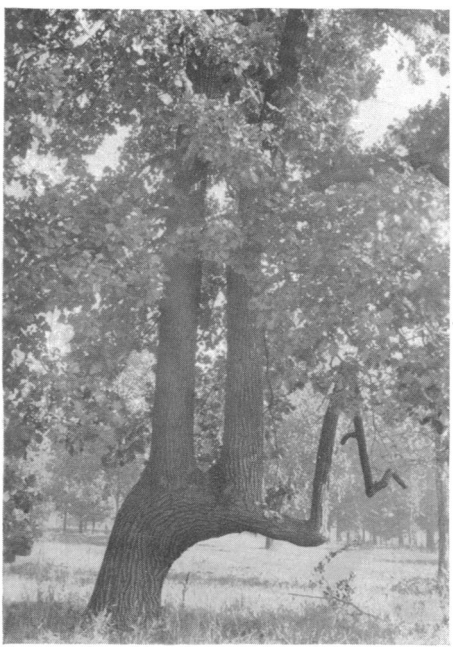

FIG. 1. STURDY OLD BURR OAK
ALTHOUGH ABNORMALLY CONTORTED, IT EXHIBITS ALL THE STATELINESS OF ITS SPECIES. IT IS SITUATED NEAR THE CHICAGO RIVER, NORTH OF GLENVIEW, ILLINOIS.

Although these trees have been growing in their respective situations for long periods of time, no reference concerning them may be found in previous scientific literature. Scattered historical references, however, indicate that trees were sometimes bent by the Indians to mark trails through the forests. Consequently, a study was carried on over a period of several seasons for the purpose of determining whether such trees still standing might have been deformed intentionally by Indians who formerly inhabited mid-western America.

This study indicated that the use of trees for trail markers was a custom apparently inaugurated by the forest inhabiting natives of North America long before the advent of the white man. The custom arose, no doubt, because trees were the most accessible and most easily adaptable materials at hand. Because of their flexibility, living trees could be contorted into unnatural shapes, and being rooted they could not easily be removed. Also, by using a few trees out of many, the Indians could make these markers as conspicuous or as inconspicuous as desired; hence trees made ideal guide-posts.

In order to establish certain trees as markers, the Indians inhabiting wooded regions developed the custom of bending saplings and fastening them in position in such a way that they became permanently deformed. A long line of similarly bent trees could thus be followed by proceeding from one bent tree to the next. Once a trail was established, the Indians could follow these markers through swamplands or across difficult

terrain without unnecessary delay, and could maintain their direction while traveling long distances through densely wooded and unfamiliar territory.

Observation had taught these primitive people that trees do not heighten *en masse* nor turn on an axis. They noticed, too, that trees when once deformed maintained their deformities throughout subsequent periods of growth. Thus it became possible to deform trees deliberately in order to distinguish them from the ordinary trees of the forests. In bending the young trees, care was taken so as not to break them. As a result they did not die, but continued to grow in the deformed positions. Whether by accident or intention, by deforming living trees, the Indians left behind them a series of permanently marked trails. Although a hundred years and more have elapsed since the Indians were forced westward from the Mississippi Valley by the advancing white man, their old trail markers may still be growing just as they were when first established so long ago.

It has been found that various methods of securing the saplings in position were used, depending on the materials at hand and the custom or ingenuity of the individual performing the task. Sometimes the trees, after being bent, were weighted down with a rock if one could be found nearby. Occasionally they were staked; sometimes a pile of dirt was used. But more frequently the trees were tied in position with a strip of rawhide, bark or tough vine (see Fig. 3).[1] In each case the trees were fastened so that the direction of bend was parallel to the direction of the trail to be followed. Each tree was thus a pointer directed toward, or away from, the next marker in the trail.

As might be expected, the deformation of saplings had a serious effect upon their subsequent development. The trunk and branches which had previously held the leaves up to the sunlight were suddenly distorted earthward, and hence could no longer function normally. Compensation for this unnatural position, and resumption of normal growth, occurred only after new vertical branches—secondary stems—began to appear along the bent primary trunk. During this readjustment period, growth was much retarded, normal development being restored only after the new stems and branches became well established. The extremities of the original bent-over trunks usually atrophied and decayed away, leaving the trees with a sort of "arm and elbow" appearance (Fig. 4). But occasionally the original trunk tip took root at its point of contact with the ground. When this happened, the tree functioned thereafter with two sets of roots (Fig. 6). Observations of growth rings on trail trees showed that they

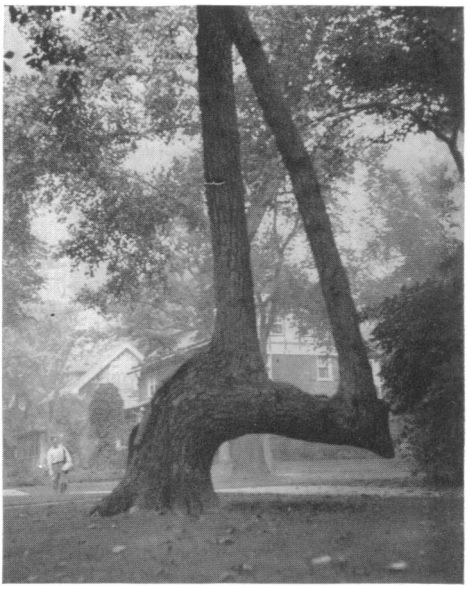

FIG. 2. AN INDIAN MARKER
IN WILMETTE, ILLINOIS. IN REGIONS WHERE INDIAN MARKERS STILL EXIST, THEY MAY OFTEN BE SEEN ALONG THE STREETS OF TOWNS.

[1] The latter method is reported to be in use at the present time among the jungle natives of the Philippine Islands. Personal communication from Dr. Fay-Cooper Cole, University of Chicago.

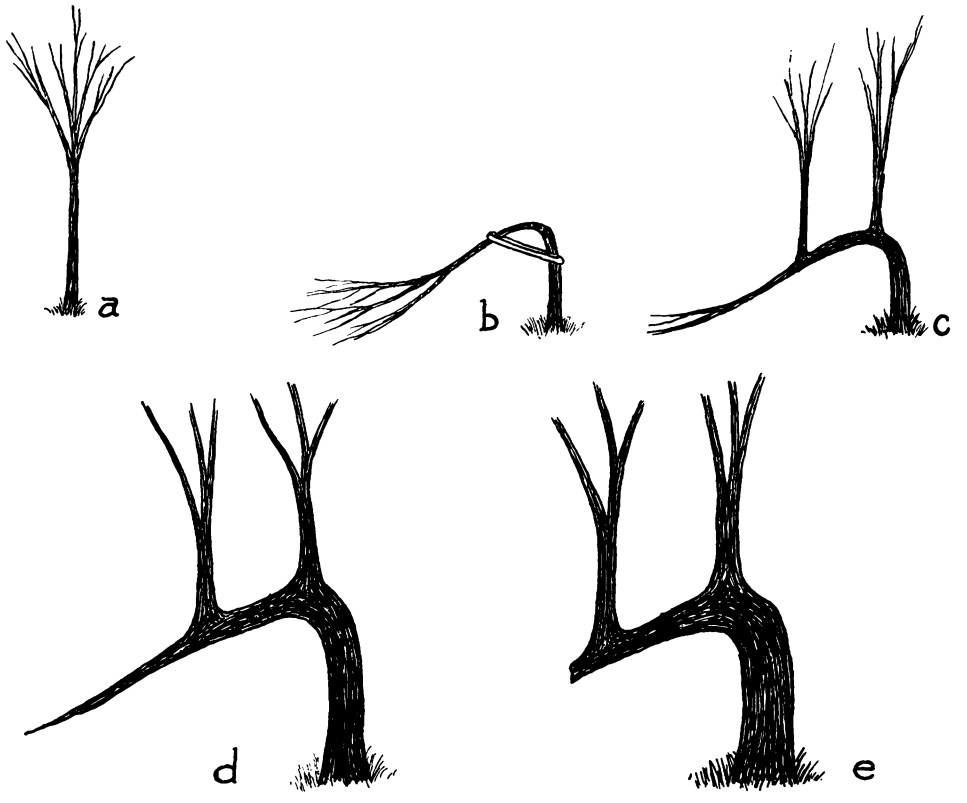

FIG. 3. COMMON METHOD OF ESTABLISHING TRAIL TREE MARKERS

a. SAPLING, YOUNG ENOUGH TO WITHSTAND ACUTE BENDING NEAR BASE. *b*. TREE BENT AND HELD IN POSITION BY HITCHING WITH RAWHIDE. *c*. LATER, SECONDARY STEMS APPEAR ALONG THE BENT TRUNK, REPLACING THE ORIGINAL BRANCHING STRUCTURE. *d*. SEVERAL SEASONS LATER, THE NEW BRANCHING STRUCTURE HAS MADE CONSIDERABLE PROGRESS, WHILE THE ORIGINAL, PROSTRATED BRANCHES HAVE DISINTEGRATED. *e*. YEARS LATER, THAT PORTION OF THE TREE BEYOND THE POINTS OF EMERGENCE OF THE SECONDARY STEMS HAS ENTIRELY ATROPHIED AND DECAYED AWAY.

were severely stunted by such treatment. Their sizes, therefore, are not as great as normal trees of the same ages.

The question naturally arose as to whether or not the Indians used any kind of selection in their use of trees for trail markers. The wide variation in tree types constituting trail markers indicates that any apparent selection was purely coincidental. The Indians necessarily had to limit their selections of markers to whatever types of trees happened to be growing along the proposed route. Some species of trees are more easily bent at sharp angles without breaking than are others. Deciduous trees, such as oaks, elms, hickories and maples, are best suited for this purpose. Hence, the custom of using tree markers was limited largely to regions wherein the dominant forest growth at that time consisted of such broad-leaved trees. Bent tree markers seem never to have been used in localities of high altitude or latitude where the less supple coniferous trees are dominant. On the other hand, tree markers were used quite widely in many parts of the Mississippi Valley, the lower Great Lakes region and eastward, where deciduous timber constituted the dominant forest growth.

Even a deciduous tree, however, must be quite young in order to permit its main stem to be bent at a sharp angle

near the ground without being broken. Occasionally no tree young enough for this purpose happened to be growing in a spot where a trail marker was desired. In such a case the Indians resorted to the bending of the lowermost branch of an older tree (Fig. 8). The effect upon that particular branch was similar to that upon the main stem of a young sapling—the branch put forth new secondary branches which extended upward at an odd angle in relation to the main branch.

It is easy to see that an Indian trail, extending across country for many miles, might contain markers consisting of various species of trees, as well as of trees bent in either manner. The species of tree was of no concern whatever as long as it was suitable for bending. The manner of bending, as has been seen, was dependent upon the age of the tree, the materials at hand, and the custom or ingenuity of the individual performing the work. Of extreme importance, however, was the direction of the bend. The trees were always bent so that they pointed parallel to the direction of the trail to be followed.

Although remaining tree markers are relatively few and far between, it appears that they were originally spaced at varying intervals, depending upon the density of the forest and other conditions encountered along the proposed route. Sometimes they were only a few hundred feet apart. At other times they may have been separated by distances as great as a half mile. North of Chicago there is a marked trail extending from the shore of Lake Michigan to the site of a former Indian village in the Skokie Valley five miles away. This trail crosses the central part of the town of Highland Park, Illinois. Thirty years ago there were eleven markers along this

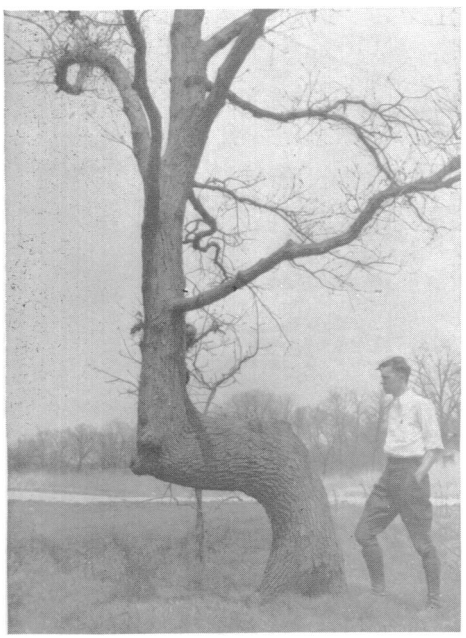

FIG. 4. "ARM AND ELBOW" ASPECT
SUBSEQUENT GROWTH, WITH THE ISSUANCE OF A SINGLE SECONDARY STEM, CAUSES THE MARKERS TO ASSUME THIS SORT OF APPEARANCE. THIS ONE STANDS NEAR FOX LAKE, ILLINOIS.

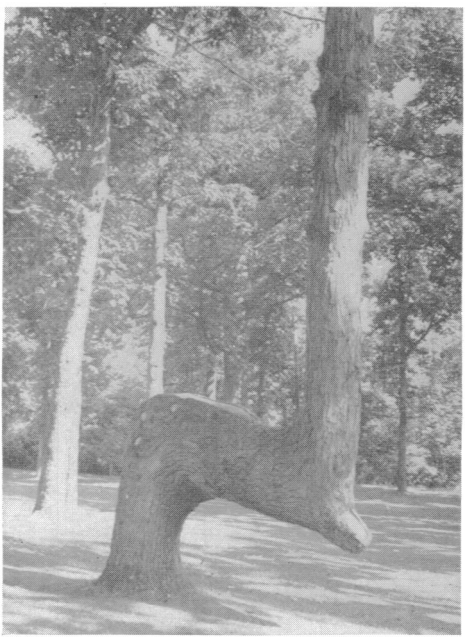

FIG. 5. KNOB CLEARLY SEEN
THE SMALL KNOB, MARKING THE POINT OF ATROPHY OF THE ORIGINAL TRUNK TIP IS CLEARLY SEEN IN THIS MARKER. TREE SURGERY HAS AIDED IN PROLONGING THE TREE'S LIFE.

FIG. 6. THIS MARKER NOW FUNCTIONS WITH TWO SETS OF ROOTS
THE TREE BECAME ROOTED AT ITS POINT OF SECONDARY CONTACT WITH THE GROUND. IT IS ONE OF A LINE OF SEVERAL TREES MARKING A FORMER TRAIL THROUGH HIGHLAND PARK, ILLINOIS.

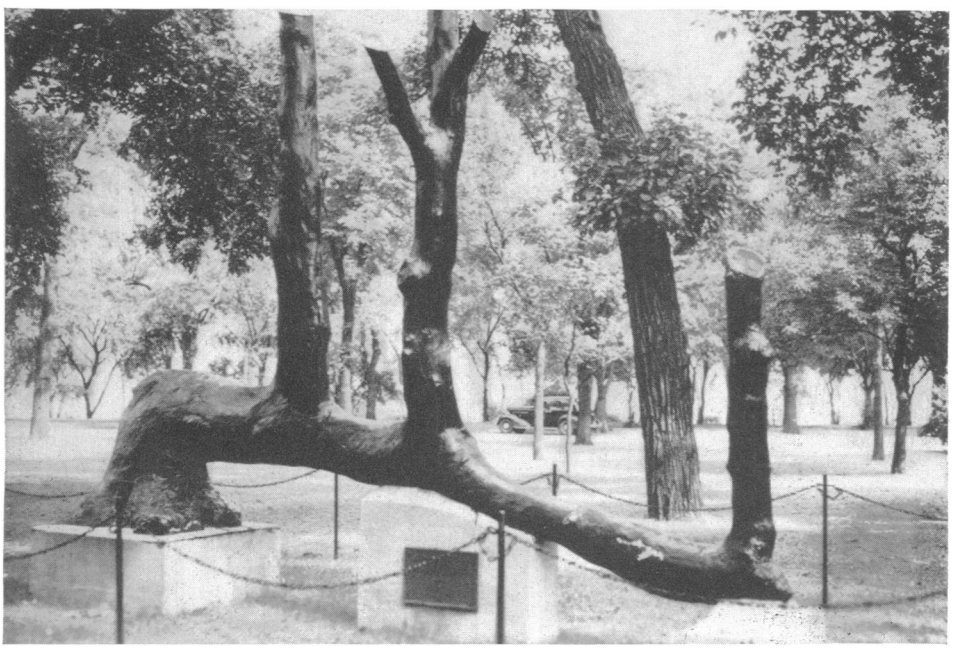

FIG. 7. A SORT OF MONUMENT IN A PUBLIC PARK
WHEN PROPERTY IMPROVEMENT NECESSITATED THE REMOVAL OF THIS TRAIL MARKER, THE LOCAL D. A. R. CHAPTER RELOCATED IT AS IT APPEARS HERE AT EVANSTON, ILLINOIS.

route—to-day only seven remain. In this trail the closest markers are less than two hundred feet apart, and the farthest more than a half mile. Undoubtedly, they were originally spaced at relatively close intervals. Construction of buildings and civic development have since taken their toll from the original line of markers.

In the course of the study, attempts were made to locate additional unknown markers by plotting known ones on the maps and extending their bearings as indicated by compass readings. In several cases, additional markers were thus located. In other instances the sites of former markers were confirmed through interviews with old settlers and property owners.

Local interest in these trail markers has recently inspired many property owners with the desire to preserve as long as possible these living monuments

FIG. 8. LOWER BRANCH BENT
WHEN NO CONVENIENT SAPLING HAPPENED TO BE GROWING AT A LOCATION WHERE A TRAIL MARKER WAS REQUIRED, THE INDIANS RESORTED TO THE BENDING OF A LOWER BRANCH ON A LARGER TREE.

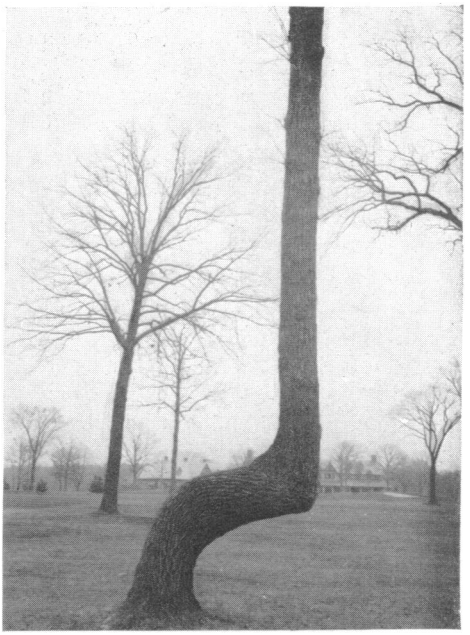

FIG. 9. LOCATED ON GOLF COURSE
HAVING ONCE STOOD IN THE MIDST OF A THICK WOODS, THIS MARKER IS ONE OF A FEW TREES ALLOWED TO REMAIN WHEN THE LAND WAS CLEARED FOR AN EXCLUSIVE SUBURBAN GOLF COURSE.

on their lands. Consequently, timely tree surgery has prolonged the lives of many of these old trees. In a few instances, clubs and civic organizations have placed bronze markers on, or near, such trees (Fig. 7).

Among the many crooked trees encountered, only a few are Indian trail markers. The casual observer often experiences difficulty in distinguishing between accidentally deformed trees and those which were purposely bent by the Indians. Deformities may occur in many ways. A large tree may fall upon a sapling, pinning it down for a sufficient length of time to establish a permanent bend. Lightning may split a trunk, causing one portion to fall or lean in such a way as to resemble an Indian marker. Wind, sleet, snow or depredations by animals may cause accidental deformities in trees. However, such injuries leave scars which are apparent to

the careful observer, and these may serve in distinguishing such trees from Indian trail markers.

Observations have shown that the fall of a large tree upon a young one will cause the latter to bend in a wide arch beginning from the tree base. Indian trail markers are never bent from the base. The bend is usually from one to five feet above the ground and forms a rather sharp angle. Also, unless trail trees have been subsequently injured, they do not bear scars other than the knob left by the decay of the original trunk tip. Such knobs might be called remnant-scars as compared to injury-scars. In any event, a line of similarly bent trees, spaced at intervals, and all directed parallel toward or away from each other, would preclude the possibility of accidental deformity.

There is a popular notion that the Indians possessed an infallible sense of direction, and consequently required no trail markers. Even though it be granted that the savage possessed a keener sense of direction than his white brother—whether it were a natural instinct or the result of practice in the ability to read and interpret natural phenomena—it does not necessarily follow that a mere knowledge of the right direction is the only information needed to travel readily from place to place. There are numerous reasons for marking a trail, even though the general direction to be traveled is known. A direct route from one locality to another might be obstructed by natural barriers such as unusual elevations or depressions, non-fordable bodies of water, treacherous swamps or dense thickets of thorny underbrush. To facilitate travel, a marked detour might be advisable. Then, too, a hunting party in search of game might wish its route to be followed by the squaws who could collect the game and bring it back to camp. Scouts

FIG. 10. SUBSEQUENT GROWTH AFTER BENDING

THAT PORTION OF THE TREE IN THE NEAREST DIRECT LINE WITH THE ROOTS HAS BEEN FAVORED. SUCH GROWTH IS COMMON TO MARKERS WHICH HAVE PRODUCED MORE THAN ONE SECONDARY STEM.

FIG. 11. MARKER NEAR WISCONSIN RIVER AT WISCONSIN DELLS
THIS IS ONE OF TWO SUCH TREES STILL STANDING IN THAT LOCALITY.

sent out in advance of a raiding party might wish to mark their trail so that the warriors might follow them into unfamiliar territory. Various other reasons may suggest themselves. However, long-established and important routes of travel probably were not marked, inasmuch as the paths themselves, worn well into the ground, were readily followed. The trail markers were undoubtedly placed along routes which were temporary or less frequently used than the main thoroughfares of Indian travel, or along new routes which later became heavily traveled.

Only for the past hundred years has the Mississippi Valley, in its entirety, been the undisputed home of the white man. During the preceding centuries it was, in turn, the domain of some of the strongest tribes of the North American continent. Much of the Indian history of those early days must, of necessity, remain forever unknown; but a portion of that history is simply told by the old trail markers which may still be found growing in numerous localities.

Because of the longevity of trees, many of these old trail markers, now gnarled with age, still stand as living reminders of the time when mid-western America was a favorite hunting ground of the savage red man. A few more years, perhaps, and the last of them shall be gone forever—as are the Indians who bent them.