

manufacturers of lead pencils, and in the neighborhood are rude shanties, cabins and houses, that, viewed with the trees and mounds and water, furnish pretty sketches for the drawing-book.

Not many species of shells can be found upon the beach, though much of interest may be dredged in the deeper water of the channel a few hundred yards from the shore. Upon an old wreck, reached at low tide by means of a boat, a species of *Murex* (*M. rufus*) may be collected, and the very common *Littorina* (*L. irrorata*) may be gathered in quantities, sticking to the marsh grass just above the mud.

The steamer from New Orleans that is to carry us farther South having unexpectedly arrived, we were prevented from making an examination of the adjoining islands, or as thorough an investigation of the mounds as their importance demanded. Early in the afternoon we were "all aboard," and soon after the hawsers were cast loose and the steamer was under way; slowly feeling the course through a crooked and insufficient channel an hour passed away before we were in water deep enough to admit of greater speed. The water is so shallow that vessels are compelled to keep a long distance from shore, and the land being flat, but little can be seen from the deck. The mildness of the temperature, the clear sky and smooth sea, made it a delightful trip; and we shall ever remember with pleasure the down voyage from Cedar Keys to Tampa Bay.

THE SAGE BRUSH.

BY W. W. BAILEY.

IN every account of Western travel we meet with this name. It is as common in the vernacular of Nevada and Utah as the word grass is with us, and for the like reason that the plant to which the title is applied is everywhere

present. Readers at the East generally have an entirely incorrect idea of the shrub. If they think of it at all they are misled by its popular name, and consider it synonymous with, or nearly related to the common sage (*Salvia*) of the gardens. The title, however, is not bestowed upon it on account of any actual relationship to that genus of the mint family (*Labiatae*), but merely from its similarity of odor. This is evolved in consequence of any friction, such as results from rubbing the leaves between the hands, or riding among the bushes. Indeed the plant emits its characteristic aroma even when undisturbed, but not in so exaggerated a degree. It is the scent of "wormwood," which is the true English title of the so called wild sage. Its botanical name is *Artemisia*, bestowed in honor of Artemis or Diana. There are many species found upon the Great Plains and in the Interior Basin (*filifolia*, *cana*, *tridentata*, etc.). The species *tridentata* is what I purpose to describe. The specific name means simply "three-toothed," and has reference to the dentated apex of the wedge-shaped leaves.

The plant belongs not to the mints, suggestive of cooling beverages and savory sauces, but to the composites, or great order in which we find the dandelion, the asters, and the sunflowers. The inconspicuous blossoms are densely panicked. The leaves are not green, but silvery or ashy in color. They are borne on scraggy stems, rising, generally, from large and wide-spreading roots. These roots are spirally twisted, and unravel, as it were, like the strands of a rope. They are much used for firewood in this barren section, where little other fuel presents itself. They make a warm fire, but burn much too rapidly. As the supply, however, is inexhaustible, this fault is of no great consequence. They are even used at times in mills and smelting works, where it is impossible to obtain wood.

After careful inquiry I am led to the conclusion that no one has ever seen a *young* sage brush. Even the most confident settler becomes involved in his account when persist-

ently questioned, and cannot tell when or where he noticed the phenomenon. All the specimens met with, and their name is legion, look as if they had been produced, not only mature, but aged; as if they were coeval with the mountains and plains upon which they are found. To the deficiency of chlorophyl in the plant is to be attributed its generally wretched appearance, which is increased by the tendency which the brittle twigs evince to break into snags and prickles.

. Where the plant grows to a height of from six to ten feet, as it occasionally does, it is indicative of good soil, and generally of water or moisture present at certain seasons. If it is then uprooted, and vegetables planted in its place, they thrive most abundantly. All that is wanting to much of the apparently sterile soil is the necessary rain to refresh it. Perseverance in systematic irrigation has, in some places, recovered the desert and caused it to "blossom like the rose." The *artemisia* scorns the alkali flats, and in such localities is succeeded by the wretched grease-wood (*Obione canescens*), and various chenopodiums and other salt loving plants. Some of these are most uninviting and indescribable in appearance. To the traveller they are the synonyms of abomination.

The sage brush grows in clumps, usually separated a few feet from each other. Often it surmounts a mound of sand five or six feet in height. These elevations, rising above the general surface of the plain, dot it in every direction, and one may ride among them for days together. It would appear that the plants mark the original level of the plateau, and that the earth around has been eroded where it was not bound by their interlacing roots. Whether the wind or rain, for it does rain here at times, has been the most potential agent in producing this effect, I am not prepared to affirm. In any other country one would unhesitatingly declare in favor of the latter. Here, however, the wind is almost equally powerful in transforming the face of nature.

In early spring many herbs, and even delicate flowers, may be found among the sage brushes. Some of these plants are exceedingly curious in appearance. Among them are numerous species of the difficult genus *Eriogonum*; *Astragalus* and *Dalea* are also frequent, with *Bigelovia*, *Linosyris*, and other species of compositæ. Beneath the artemisia burrow innumerable frisky lizards, chipmunks, and rabbits (*Lepus callotis*). The latter have the uncomplimentary adjective, "jackass" prefixed to their name, which is a pointed reference to the length of their ears. Then there is the cowardly coyoté, always semi-translucent with hunger. Besides these four-footed creatures, the sage hen is frequently seen, one of the dainties of the traveller's table. One never recovers from his surprise that there should be so much life where apparently there is so little to support it. It is said that the animals live upon each other; but there must be unity to start from, and what that unity finds to sustain it is most questionable.

The artemisia covers the greater part of the Interior Basin between the Sierra Nevada and the Rocky Mountains. It is found from Idaho and Montana to the confines of Mexico. It grows, not only upon the plains and lowlands, but upon the mountains to an altitude of seven or eight thousand feet. In travelling one is rarely out of sight of it. Above is the clear sky; below, and on all sides, the omnipresent sage.

The uses of the plant it must be confessed are limited. Its first and most obvious purpose is to serve as a substitute for fuel. The word substitute is used advisedly. It cannot be dignified by the name of fuel, but does very well in the absence of anything better, and is pined for when, as often happens, there is nothing as good. Rough fences are sometimes made of the uprooted shrubs, or miry places in the highway filled up with them and then covered with earth. Stock will feed upon it when nothing else is obtainable, as doubtless will the Indians, who are not at all particular as

to diet. Whatever may be its actual purpose in nature's economy, it has a good effect whether intended or not, viz., to cause an appreciation of the "greenwood tree." After living amidst the sage for a year, an elm or an oak becomes a wonder, the giant Sequoia of California a miracle. Arbor-escence, which custom has made familiar to us from childhood, becomes suddenly a mystery, and ever afterwards we cherish all trees with especial fondness, and are thankful to the kind fortune which allots us a home with other surroundings than the forlorn artemisia.

THE DRIVERS.

BY DR. G. A. PERKINS.

A VERY few hours' residence in the tropical regions of Africa brings one into a very undesirable familiarity with that extensive tribe of insects, the ants, some species of which are found in all parts of the world, but which are greatly multiplied in the tropical regions of the globe. Africa, it is believed, can boast of a greater variety than any other land. Their name here is legion. They are everywhere; out of doors and in doors; in your food and in your bed, determined to share both. They are of all sizes; some so small that they pass easily between the threads of common muslin, and even insinuate themselves into your watch as it hangs in your chamber; others measure nearly an inch in length. The habits and food of the different species differ greatly. Some, as the Termites, called White ants (which however are not true ants, but Neuropterous insects), eat vegetable matter exclusively, destroying our houses, furniture and clothing; others are carnivorous; others feed upon sugar or the sweet juices of plants. Any one of the many species, found in so great abundance,