



A CRITICAL MOMENT.—From a Painting by L. Knaus.

## AN OUTDOOR STUDY.

The pursuit of botany ought to be ranked as an out-door sport. While not possessing the attraction of a game in which skill wins, it is yet more nearly allied to hunting and fishing than to piano-playing or any in-door study. It furnishes an impulse to and interest in many a tramp by forest and stream. It has this in its favor too, that when one has made his 'bag,' or 'string,' no timid bird or helpless fish has been sacrificed, and no pain has been inflicted to give the botanist a holiday. His delight when he comes upon a rare find, a beautiful fern or orchid, is fully equal to that of the mad rider who wins 'the brush,' or the patient angler who takes the biggest fish.

I shall never forget the beautiful sight which rewarded a desperate climb up steep, pathless rocks, through a tangle of bushes, to where a broad level spot was covered with the prickly-pear cactus in full bloom. There they lay, the great yellow beauties, drinking in the sunlight—a scene I had supposed possible only on the Western prairies.

It surely is no mean ambition to wish to know the names of things we see. An intelligent writer on politico-economic subjects, who is fond of riding, said recently:

"It is a great drawback on my pleasure in the parks and in the country that I don't know the plants and flowers which I see."

There are two ways of finding out such things. One is to ask some one who knows (not always easy), and the other is to analyze the flower, and 'trace' it in the manual one's self. The first method may be likened to the 'pony' style of translating a foreign language.

Independent investigation always wins its own reward; never more so than in the

study of plants. Besides the joy of success, one who can always answer the question, 'What is it?' becomes quite an oracle among his friends, and gets credit for having taken more trouble than is actually the case. For (and this is one of the points I wish to emphasize) botany is the easiest of all the sciences, and can be engaged in without a teacher.

Is it not a sin and shame that country people, who live the year round among the lavishments of nature, are as a rule so indifferent to them? The farmer's wife knows that catnip is good for tea; but there is a curious little pimpernel growing in her garden which shuts its petals on the approach of bad weather, and which she has never seen. The farmer knows the wild-carrot for a useless weed, the corn-flower for a yellow daisy, but he does not know the trees of the road-side, much less the shrubs. One, a practical, shrewd man, told me that the dwarf sumac (*Rhus copallina*) was the poison sumac. For more than seventy years he had lived in northern New Jersey, and been afraid to touch this innocent bush. Two of the six species of sumac are to be ranked among the dangerous and criminal classes of plants, and should be studied in order to be avoided. Like other evils, they are seductive, especially in their gorgeous autumn dress; but the cloven hoof can be seen after reference to the manual. The poison dogwood, or elder, or sumac, as it is variously called, is a tall shrub growing in swamps. Its bark is grayish; its leaf stems are red.

The poison-ivy, a vine with three leaflets (often mistaken for the Virginia-creeper, which has five leaflets), frequent road sides, and cluster about fence posts and trunks of trees. Many farmers don't 'bother' with

it, but let it grow, a constant menace to barefooted boys and ignorant pedestrians. The blossoms of these venomous species are axillary, that is, grow in the angle formed by the stem and branch. The berries are white. If you find a sumac with terminal flowers and red berries, it is as safe to handle as a buttercup.

The lover of curious things will be amply rewarded by a study of flowers. Under the microscope even common weeds become interesting, and a discovery of the habits of some plants is like a peep into wonderland.

Pluck the small round-leaved sundew (*Drosera rotundi folia*). The hairy and sticky leaves grow in a tuft at the base. Under the microscope the hairs are transformed into numberless bristles tipped with purple jewels. Small sorry insects are caught among these ruby glands, which close over them like tentacles, and entangle them and imprison them with purple threads. Inside the glands an extraordinary activity is aroused. A purple fluid, akin to the gastric juice of our stomachs, is digesting and assimilating the insect food. This innocent-looking plant, with its modest flower responding only to sunshine, is carnivorous, and thrives upon animal food.

Hardly less wonderful are the bladder-worts which grow in the neighboring pond. The plants float upon the surface of the water by means of countless little bags full of air, joined to the sea-weedlike leaves. The ripe seed falls to the bottom, takes root, and grows there in soil. When the flowering time arrives, the bladders fill with air (who can tell how?), buoy the plant upwards, dragging it, roots and all, to the surface, in order that the flower may breathe air and sunshine.

While it is not claimed that botany, like Greek or mathematics, can produce mental brawn, yet it certainly does cultivate close observation, prolonged attention to minutiae, a habit of comparison and deductive reasoning—all mental qualities worth possessing.—*Harper's Bazar*.

## GEOGRAPHY IN SOUTH AMERICA.

Boston is a noble and famous city, but there are millions of people in the world who have never heard of it. Mr. N. H. Bishop, a boy of seventeen or eighteen years, was travelling across the pampas of South America in company with some natives of the Argentine Republic.

Having said, perhaps a little proudly, that he was from Boston, he afterward overheard this conversation between two of his fellow travellers:

"Where is Bostron?" asked one.

"Bostron is in France, to be sure," replied the other.

"That cannot be. France is a great way off, and has not got any moon; and the gringo told me the other night that there is a moon in Bostron, and North America is in the same place."

"Fool!" exclaimed Number One.

"North America is in England, the country where the gringos live that tried to take Buenos Ayres."—*Youth's Companion*.

WHEN YOU MAKE a mistake don't look back at it long. Take the reason of the thing into your mind and then look forward. Mistakes are lessons of wisdom. The past cannot be changed. The future is yet in your power.—*Hugh White*.