BOTANY

NATURE RAMBLINGS

Autumn Woods

➤ A RAMBLE through the woods at any season of the year is wine for the soul. An autumn ramble is sheer champagne.

It is a heady intoxicant whether gulped by the lungful while tramping, dog at heel, or whether sipped by the precious thimbleful while reclining easefully in a porch rocker.

The chief ingredients of this giddy mixture are known to all. The profuse brilliance of multi-colored leaves thrill even the most jaded. And after the leaves have fallen, and turned brown, every civilized community in the land is fragrant with the smell of burning leaves. A parfumier who could capture this indefinable and incomparable scent and put it up in bottles at so much the ounce would make his fortune. "Burnt Passion" would not be too lurid a name for it.

But leaves brilliant and leaves burnt are only the gross ingredients. The autumn recipe is a masterly concoction rendered subtle with pinches and dashes of sight, sound and seasoning.

It is not only the tilled field that comes to autumn harvest. The autumn woods are a cornucopia of nuts, fruits, seeds and berries. There is hazel nut and hickory nut, and fox-grape, wild plum and paw-paw. The flamboyant flowering dogwood hangs out clusters of scarlet berries to give pleasure to man and winter groceries to the white-footed mouse. The doomed chestnut is still to be seen at rare intervals, even though the chestnut blight has all but wiped it out in this country. Botanists take hope from these hardy lonely survivors that perhaps a resistant strain will develop either in the wild or in the tree-nursery. Then perhaps the delicious sweet chestnut wrapped in its characteristic prickly burr, will become plentiful once more.

The observant eye will notice one bloom when all the other trees and plants are long past flowering. This is the witch hazel which flowers late in September or October. When all the other trees are decked out in the traditional fall raiment, the witch hazel shrub is just putting out its blooms. It waits until its leaves have turned a golden yellow, sometimes even until it has shed them entirely, to burst forth in stemless clusters of yellow flowers, each with four long narrow petals. A little later when this floral display is over, the witch hazel adds a percussion instrument to the fall orchestra of sound. The petals fall off, and the pod dries, and suddenly with a snapping, popping sound the witch hazel flings its seeds to a distance of 10 or 15 feet.

All these sights and sounds and smells are part of nature's preparations for winter. For nature they are merely practical, for man sheerly beautiful. Autumn is intoxicating, and each year is a vintage year.

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ARCHAEOLOGY

Ancient Ax-Heads Made Of Bone Discovered

➤ DISCOVERY of ancient bone ax-heads that led stone age man on the banks of the Nile to invent a better kind of stone ax, copied from the bone ones, is reported by Dr. A. J. Arkell of London's University College Department of Egyptology.

This new chapter in how the ax with a handle came to be developed was unearthed at the Neolithic archaeological site of Esh Shaheinab on the west bank of the Nile, excavated by the Sudan Government Antiquities Service this year.

Eleven polished bone ax-heads, ranging from the eight to three inches in length, were found. They were made from long bones of the hippopotamus, rhinoceros, elephant and perhaps other animals. Fragments of 65 other axes were found. All had been given a sharp cutting edge by rubbing on sandstone grinders used by the ancient men for grinding red ochre, favorite coloring material for decorating themselves.

Along with the bone ax-heads, many stone-axes were discovered in the same hearth layer of soil representing many campfires. The stone tools were generally smaller although some were the same size as the bone ones.

Dr. Arkell in his communication to the British journal, NATURE (Oct. 1), explains that the hunters of the large animals probably first used large splinters of the animal bones for hacking meat off their kill. The next step was to fit the splinter into a wooden handle, making a more efficient hacking tool.

That was the invention of the ax. They naturally tried the new tool on wood, perhaps in hollowing out dug-out canoes and for making spear-throwers. But when the bone ax was not strong enough to cut any but the softest woods, they copied the bone ax in stone.

Thus the chipped and partly polished stone ax-head of the Neolithic age was invented.

A notched fish-hook made from a bivalve shell was also discovered at the same site.

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BOTANY-CHEMISTRY

Pine Tree Has Its Spring in the Fall

➤ SPRING has come in the fall to an astonished pine tree which was given a chemical treatment in June.

Typical spring growth in a certain type of wood cell, known as tracheid, was found 10 weeks after a few crystals of heteroauxin had been put in a hole bored in a branch.

Heteroauxin is a plant growth promoter known to chemists as indole 3-acetic acid. Its season-speeding effect was reported by D. A. Fraser of the Forest Insect Laboratory, Sault Ste. Marie, Ont. When the branch in which the crystals were placed was examined, cells of spring wood growth were found.

The annual rings by which a tree's age is calculated are told by the contrasting appearance between spring and summer growth. Getting typical spring growth in the fall is one of the results of a series of experiments designed to increase knowledge of a tree's growth.

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