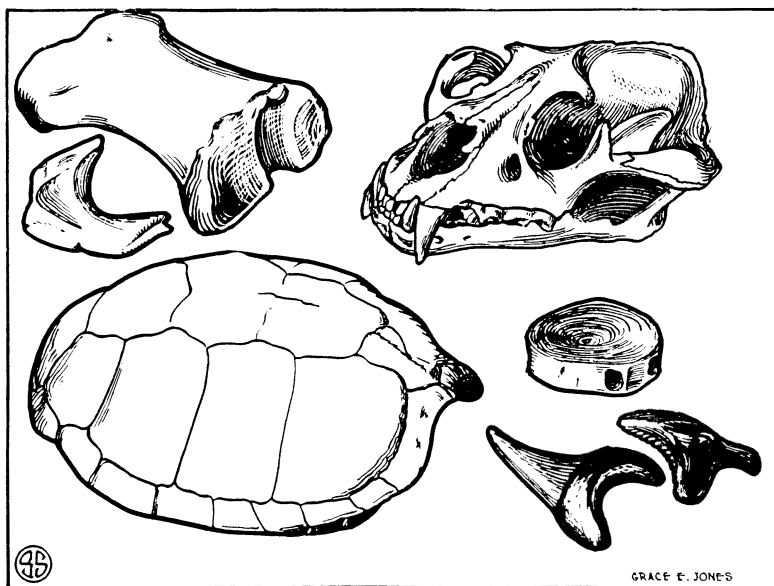


Inexpensive Summer Fun

Bones, Turtle Shells Make Attractive Collection

(Last of a series of 12 articles.)



BONES, turtle shells and other discarded animal parts are very nice things to collect—though they sometimes encounter unsympathetic family opposition. If they haven't been lying in the woods until they are thoroughly bleached there may be reasonable basis for such opposition, but if they are really nice and clean and white, objection has really no basis but prejudice. If your bones will pass the nose-test, that ought to be sufficient.

Of course, there is a certain limit imposed by size. If you come upon the well-bleached skull of a long-gone horse or cow, it is a bit large, perhaps, to have indoors. But there will surely be some place outside where it may be kept. And the really interesting skulls of smaller things—rabbits and squirrels, cats and dogs—can very properly claim house room. So can such things as vertebrae and the smaller limb-bones.

In some parts of the country, especially in the East and the Rocky Mountain regions, where there are deer, antlers are fairly easy to find. Every male deer grows and sheds a pair every year, so that for each buck's lifetime there will be anywhere from four to eight or ten pairs of antlers. In the few places where

there are elk and moose, their larger antlers are specially proud prizes. It is rare, however, to find a perfect moose antler—porcupines chew them up.

Much easier to find are the shells of turtles. In all except the driest parts of the country, these interesting little reptiles are very numerous. Their shells, as the solidest part of them, last longest after their inhabitants have departed this life. You'll have to watch your collection, though, if you have any turtle shells; they make such handy ash-trays!

Another type of reptilian relic that is fairly easy to come by is snake skins. These, like deer antlers, are shed periodically, so that every snake will produce several skins during its lifetime. They will always be somewhat rumped and disordered, like the discarded garments they are. (Incidentally, it's bad manners as well as bad business policy to kill snakes; they are very useful animals, paying for their place in the world by killing vermin.)

The bones you find are not always necessarily of animals that died only a year or two ago. There are places, fairly well scattered over the country where fossil bones and teeth embedded in earth but not yet petrified, are washed out in

creek banks, shore bluffs, gullies, etc. In peat bogs, where ditches are being cut, you will often find wood, roots, leaves, and other plant remains. They will be dark brown or black, but otherwise will look as though they had been dropped there only a few months ago, instead of many thousands of years.

For more information about collecting skulls and bones and a list of books and pamphlets on the subject, send us a postcard with your name and address. Ask for Bulletin 12. Address Science News Letter, 2101 Constitution Ave., Washington, D. C.

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PHYSICS

Science Has Own Atomic "Eleven" of Particles

FOOTBALL season is at hand. Already potential "All-Americans" are being mentioned in the press from this year's crop of players. Little-realized but vastly more important than any All-American football team is the "eleven" of fundamental particles which form the building blocks out of which all matter is composed.

For the right side of the atomic "line" three of the basic atoms in the universe are nominated. At right end is Hydrogen; light, mobile and fast. At right tackle is the potent and massive "heavy hydrogen" known as Deuterium. At right guard you could place the still more massive and heavy Helium atom.

At the left end of the line there would be the Proton, hydrogen's electrically-charged brother. At left tackle would be Deuterium's ionized counterpart, the deuteron particle. And at left guard would be the familiar Alpha particle, electrically-charged nucleus of the helium atom.

As on most good football teams, a fast, rather light center would be used. Here the newest particle of all is nominated. On your scoresheet it can have no name since it has not yet been named and indeed was only reported a year or so ago by Drs. Carl Anderson and Seth Neddermeyer of the California Institute of Technology and by Drs. J. C. Street and E. C. Stevenson of Harvard University.

The atomic backfield could consist of a quarterback "ghost", the neutrino; yet unbound but whose presence is indicated in all modern atomic theories. At right halfback and left halfback, respectively, you could place the electron and positron; the versatile, basic particles exactly identical in weight but differing in electrical charge. And at fullback, with plenty of weight and a keen ability