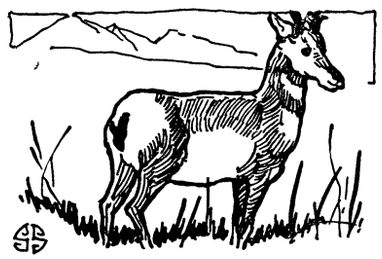
NATURE

By Frank Thone



Pronghorn

ALREADY the tide of spring travel to the National Parks is setting full and strong. The first comers in such places as Rocky Mountain National Park, Yellowstone National Park and its new neighbor Grand Teton National Park, are reaping the reward reserved for early birds, in splendid opportunities for observing animals. For now the herds of game are still in the lowlands, but later, when the big rush of tourists is on, they will be out of sight up the mountains, where they find better pasture and freedom from insects and automobiles.

One of the choicest of all our native animals, which can be seen all along the Lamar river road in the Yellowstone, is the pronghorn. It is sometimes called the American antelope, but although it is as graceful as any old-world antelope it really is not a member of that family. It stands by itself, the one species constituting not only a genus but a family. If it ever had any close relatives they disappeared long ago.

The pronghorn came very near disappearing itself, so far as that goes. When the shameless and senseless butchery of the bison was on during the latter part of the nineteenth century, the pronghorn had to dine out of the same bitter dish, and when we came to our wits again it was even nearer extinction than the buffalo. It is protected now, but even yet it is not certain whether it can stage a strong comeback such as the bison has. There are a few hundred specimens in the Yellowstone, and a considerably larger number in small herds scattered through the Great Basin country to the west. Furthermore, some fairly hopeful experiments are being conducted in getting them started in waste lands capable of supporting them.

Science News-Letter, June 28, 1930

Space as Sole Carrier of Reality

Physics

"SPACE will finally survive as the sole carrier of reality."

So Prof. Albert Einstein predicted to the Second World Power Conference in Berlin. To the audience of two thousand which assembled to hear his address, Prof. Einstein was introduced as "the Newton of the present day."

Prof. Einstein traced the evolution of man's ideas of the constitution of the universe from the days of the old Euclidean geometry which gave a notion of space based on the relations of bodies in connection with each other.

Descartes was the first to introduce space as the general container of the universe, Prof. Einstein declared. The picture of space as seen by Newton did suffice, he said, to describe physical relations until Maxwell introduced his field theory of electromagnetic waves upon which the whole of modern electrical development has been based.

The fact that electromagnetism acts at a distance made the conception and notion of an ether necessary. But, Prof. Einstein, destroyer of the necessity for an ether, explained:

"By means of the relativity theory space loses its generality and its structure must be regarded as changeable. There is analogously to Reimann's geometry a mathematical space structure possible wherein metric continuity and direction are united in a four-dimensional reality."

Space was originally derived from physical bodies. This space has annihilated the ether and time. Prof. Einstein is now engaged in the formulation of newly developed generalizations which promise to annihilate fields of force, corpuscle and material particles in such a way that the fundamental stuff of the universe will prove to be, not matter as previously supposed, but space itself.

Science News-Letter, June 28, 1930

Multiple Ailerons

Ornithology

WHEN men first began to dream of flying like birds (which they have done ever since the legendary Daedalus) they watched the flight of birds, hoping to catch their trick and learn to imitate them. The many-faceted Leonardo used to spend hours and days watching and sketching pigeons. And when at last the Wrights led the way into the air they avoided the tragic fate of Icarus and kept their balance on their unstable supporting medium because they had seen how birds use their flexible wing-tips in coördination with their tails to maintain themselves on an even keel or to turn and bank as they will. The flexing wing-tips of the early Wright models, succeeded by the little auxiliary hinged planes we call ailerons, are man's efforts to build himself wings that are really like those of the birds.

The coming of the great sport of gliding, as distinguished from aviation, is bringing new attention to details and refinements of maneuvering which the powerfully engined airplane can afford to overlook, or which at its higher speed it cannot adopt.

The most successful of gliding birds are the condors, and their relatives the vultures and buzzards. They hang aloft for hours, with scarcely a flap of their wings, even climbing to great heights by cleverly taking advantage of rising currents of air.

One thing notable about the silhouette of a condor or vulture as seen from underneath is the way he stretches out the long, stiff feathers of his wing-tip, like the fingers of a hand. Most other birds keep these balancing feathers close together. If you will watch the flight of a buzzard with a pair of field glasses, you will see that sometimes he makes a delicate adjustment of position by the shift of a single feather, or by a ripple-like sequential movement of the feathers one after the other. In effect, he has not one aileron but half-a-dozen or more on each wing-tip, separate yet coördinated. There may be something in this system worth the study of our growing group of glider enthusiasts.

The condor shown on the cover of this week's SCIENCE NEWS-LETTER is a mounted bird, that soars motionless in the artificial heavens of the great bird dome of the American Museum of Natural History in New York City.

Science News-Letter, June 28, 1930